FACILITY ADDRESS | EPA ID#

43. VENTURE MFG — OHD982625261
3949 DAYTON PARK DR
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

44. VENTURE MFG CO — OHD986967925
3616 DAYTON PARK DR
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

48. WALL COLMONOY — OHD004243689
5251 WEBSTER ST
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

149. WHITEFORD TRANSPORT SYSTEMS — OHD982606840
2942 BOULDER AVE
DAYTON, OH 45414
County: MONTGOMERY

Closed non-TSD facility

---

15. YODER INDUSTRIES — OHD004277901
2520 NEEDMORE RD
DAYTON, OH 45414
County: MONTGOMERY

YODER INDUSTRIES (CONT'D)

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

141 Sites found for the area specified.

OPEN DUMP

II. REGULATORY INFORMATION
5. US EPA OPEN DUMP SITES
DAYTON
1600 WEBSTER STREET
DAYTON, OH 45404
County: MONTGOMERY

A search of the 1989 OPEN DUMP inventory of facilities that do not comply with the Environmental Protection Agency's Criteria for Classification of Solid Waste Disposal Facilities and Practices; revealed the following facilities located within the below listed city. An additional search conducted revealed the following facilities located within the below listed county for which no city location information was available: DAYTON OH

OPEN DUMP Sites

FACILITY ADDRESS	ID#
* LANDFILL SYSTEMS INC .8M W ON POWELL RD FROM RT 202 DAYTON, OH County: MONTGOMERY	

Non-Compliance : Gases

---

1 Sites found for the area specified.

0 Possibly Misidentified Sites found for the area specified.

II. REGULATORY INFORMATION
6. ERNS DATABASE

DAYTON
1600 WEBSTER STREET
DAYTON, OH 45404
County: MONTGOMERY

The Emergency Response Notification System (ERNS) is a national database used to collect information on reported releases of oil and hazardous substances. The database contains information from spill reports made to federal authorities including the EPA, the US Coast Guard, the National Response Center and the Department of Transportation.

A search of the Database records for the period of 1987 - 1991 revealed the following information regarding reported spills of oil or hazardous substances in the stated zip code area(s). Only records with spill incident location zip codes or fixed facility discharger zip codes for that city are included. Also included are sites with incomplete zip code information that are listed as being located within the search city. There are additional records in the database with inadequate location information that are not included in this report.

Zipcode: 45404

ERNS Sites

	FACILITY ADDRESS	SPILL DATE
160.	Case Number: 08029 Spill Location : 1600 WEBSTER ST	06/17/1988

Spill Time	:	10:15 A.M.
Source/Agency	:	National Response Center
Discharger Name	:	ORF, DOUG
Discharger Org.	:	CHRYSLER CORP/ACUSTAR DAYTON*
Discharger Add.	:	1600 WEBSTER ST
	:	DAYTON, OH 45404
Discharger Phone	:	513-224-2467
Material Spilled	:	100.00 GAL CUTTING OIL
Source of Spill	:	Fixed Facility
Medium Affected	:	Water
Waterway Affected	:	GREAT MIAMI RIVER
Damages	:	Less than $50,000 in Property Damage
Notification	:	State/Local Authority

160.	Case Number: 12055 Spill Location : 1600 WEBSTER ST	08/31/1988

Spill Time	:	5:30 A.M.

ORF, DOUG (CONT'D)

Source/Agency	:	National Response Center
Discharger Name	:	ORF, DOUG
Discharger Org.	:	ACUSTAR DAYTON THERMAL PRODUCTS
Discharger Add.	:	1600 WEBSTER ST
	:	DAYTON, OH 45404
Discharger Phone	:	513-224-2467
Material Spilled	:	40.00 GAL LUBE OIL
Source of Spill	:	Fixed Facility
Medium Affected	:	Land
Waterway Affected	:	STORM DRAIN, GREAT MIAMI RIVER
Damages	:	Less than $50,000 in Property Damage
Notification	:	State/Local Authority

Case Number: 15224 11/09/1988
160. Spill Location :
1600 WEBSTER ST

Spill Time	:	6:05 A.M.
Source/Agency	:	National Response Center
Discharger Name	:	ORF, DOUG
Discharger Org.	:	CHRYSLER CROP ASTROSTAR
Discharger Add.	:	1600 WEBSTER ST
	:	DAYTON, OH 45404
Discharger Phone	:	513-224-2467
Material Spilled	:	35.00 GAL HYDRAULIC OIL
Source of Spill	:	Fixed Facility
Medium Affected	:	Water
Waterway Affected	:	STROM DRAIN/GREAT MIAMI RIVER
Damages	:	Less than $50,000 in Property Damage
Notification	:	State/Local Authority

Case Number: 15560 11/16/1988
160. Spill Location :
1600 WEBSTER STREET

Spill Time	:	1.00:20 P.M.
Source/Agency	:	National Response Center
Discharger Name	:	ORF, DOUGLAS
Discharger Org.	:	ACUSTAR DAYTON THERMAL PRODUCTS
Discharger Add.	:	1600 WEBSTER STREET
	:	DAYTON, OH 45404
Discharger Phone	:	513-224-2467
Material Spilled	:	500.00 GAL PAINT SLUDGE,W/CHROMIUM
Source of Spill	:	Highway
Medium Affected	:	Water
Waterway Affected	:	CONCRETE DRIVEWAY & INTO STORM SEWER

FACILITY ADDRESS SPILL DATE

ORF, DOUGLAS (CONT'D)

Damages : Less than $50,000 in Property Damage
Notification : State/Local Authority

Case Number: 13181 09/24/1988
* Discharger Location :
PO BOX 175

Spill Time : 3:00 P.M.
Source/Agency : National Response Center
Discharger Name : BIRK, THOMAS
Discharger Org. : ECOLOTEC
Discharger Add. : PO BOX 175
: DAYTON, OH 45404
Discharger Phone : 513-254-9990
Material Spilled : 0.00 UNK FLAMMABLE LIQ PAINT MATERIAL
: 0.00 UNK ANTI-FREEZE
: 0.00 UNK WASTE CEMENT ADHESIVE
Source of Spill : Fixed Facility
Medium Affected : Air
Waterway Affected : AIR RELEASE
Damages : Less than $50,000 in Property Damage
Notification : State/Local Authority

* Not able to locate facility using available information.

Case Number: 14385 10/13/1988
* Discharger Location :
POB 81

Source/Agency : National Response Center
Discharger Name : DUPIUS, PHILLIP
Discharger Org. : ENROSREV MIDWEST
Discharger Add. : POB 81
: DAYTON, OH 45404
Discharger Phone : 513-254-2346
Material Spilled : 0.00 UNK TRANSFORMER OIL
Source of Spill : Fixed Facility
Medium Affected : Land
Waterway Affected : GROUND
Damages : Less than $50,000 in Property Damage
Notification : State/Local Authority

* Not able to locate facility using available information.

6 ERNS sites found for the area specified.

MISIDENTIFIED RECORDS SEARCH

The following sites, located in the search city, have inadequate or incomplete zip code information in the database records and may be located near the subject property:

ERNS Misidentified Sites

FACILITY ADDRESS	SPILL DATE

Case Number: 17878 — 10/10/1989

* Spill Location :
5263 BURKHART RD
DAYTON OH
County: MONTGOMERY

Spill Time	:	10:00 A.M.
Source/Agency	:	National Response Center
Discharger Org.	:	NIK'S PAINTING
Discharger Add.	:	5263 BURKHART RD
	:	DAYTON, OH
Discharger Phone	:	0
Material Spilled	:	0.00 UNK PAINT THINNER
	:	0.00 UNK KEROSENE
Source of Spill	:	Fixed Facility
Medium Affected	:	Water
Waterway Affected	:	WELL WATER
Damages	:	Less than $50,000 in Property Damage

* Not able to locate facility using available information.

Case Number: 20711 — 09/01/1989

* Spill Location :
SPRINGFIELD ST.
DAYTON OH
County: MONTGOMERY

Spill Time	:	12:00 P.M.
Source/Agency	:	National Response Center
Discharger Org.	:	ECOLOTECH
Discharger Add.	:	SPRINGFIELD ST.
	:	DAYTON, OH
Discharger Phone	:	0
Material Spilled	:	0.00 UNK HAZARDOUS CHEMICALS
Source of Spill	:	Fixed Facility
Medium Affected	:	Water
Waterway Affected	:	LAND AND NEARBY RIVER
Damages	:	Less than $50,000 in Property Damage

* Facility does not appear to be within the area of interest.

ERNS Misidentified Sites

FACILITY ADDRESS	SPILL DATE

2 ERNS misidentified sites found for the area specified.

MISIDENTIFIED SITES

III. MISIDENTIFIED SITES
DAYTON
1600 WEBSTER STREET
DAYTON, OH 45404
County: MONTGOMERY

Aside from the databases searched in section II of this Report, EPA records also contain sites and facilities which cannot be located in those databases because they are misidentified in the EPA records or lack sufficient information to identify the sites correctly. EAI Environmental Data Systems is designed to search these miscellaneous records for misidentified or incorrectly catalogued sites and facilities in the area specified.

Although this search may identify additional sites or facilities on or near the subject property, there is no guarantee that all such sites contained in the miscellaneous records have been identified.

The EAI systems search of the EPA miscellaneous records identified the following sites or facilities which appear to be located on or near the subject property.

Misidentified - FINDS Sites

FACILITY ADDRESS	EPA ID#
* KILGO ENTERPRISES 5874 GERMANTON PIKE DAYTON, OH 99999 Region: 05 EPA Responsible Office(s): Pesticides and TSCA Enforcement System, Office of Pesticides and Toxic Substances Program ID # : OHD980899942 Superfund - Hazardous Waste-Superfund Program ID # : OHD980899942	OHD980899942

1 Total Misidentified sites found for the area specified

* Facility does not appear to be within the area of interest.

THE STATE REPORT

REPORT PROPERTY ADDRESS:

DAYTON
1600 WEBSTER STREET
DAYTON, OHIO 45404
County: MONTGOMERY

TABLE OF CONTENTS

I. STATE DATABASE INFORMATION

1. State Priority List

I. STATE DATABASE INFORMATION
DAYTON
1600 WEBSTER STREET
DAYTON, OHIO 45404
County: MONTGOMERY
1. State Priority List

The Ohio Environmental Protection Agency, Corrective Actions Section compiles a master list of identified sites or sources of environmental problems. A review of the Unregulated Sites Master List revealed the following facilities located within the 45404 and 45414 zip code areas, Montgomery County, Ohio.

	EPA ID # OHIO EPA ID #	FACILITY NAME/LOCATION
65.	OHD000608588 557-1081	Environmental Processing Services 416 Leo St. Dayton, OH 45404 Montgomery County
159.	OHD986966489 557-1002	Mike Sells 333 Leo Street Dayton, OH 45404 Montgomery County
29.	OHD081594293 557-0540	Montgomery Co Incinerator - North Plt. 6589 Webster St Dayton, OH 45414 Montgomery County
117.	OHD980611875 557-0583	North San Ldfl Inc 200 E Valleycrest Dr Dayton, OH 45404 Montgomery County
25.	OHD071272512 557-1000	Sherwin Williams Warehouse 3671 Dayton Park Dr Dayton, OH 45414 Montgomery County

I. STATE DATABASE INFORMATION
DAYTON
1600 WEBSTER STREET
DAYTON, OHIO 45404
County: MONTGOMERY
I. State Priority List

	EPA ID # OHIO EPA ID #	FACILITY NAME/LOCATION
16.	OHD004774345 557-0423	IWS Liquid Waste, Inc. 3975 Wagoner Ford Rd. Dayton, OH 45414 Montgomery County
*	OHD98089942 557-0977	Kilga Enterprises 5874 Germantown Pike Dayton, OH 45414 Montgomery County

* Facility does not appear to be within the area of interest.

7 Sites found for the area specified.

0 Possibly Misidentified Sites found for the area specified.

APPENDIX B

Analytical Results of Groundwater Samples Collected at the Facility

LOU:

PER YOUR REQUEST OF GEORGE HIGGS, ATTACHED IS OUR MOST RECENT ANALYSIS OF MATERIAL FROM THE POST HOLE IN BLDG. 40B.

DOUG ORF

ACUSTAR
A CHRYSLER MOTORS COMPANY

FACSIMILE MESSAGE

TO FAX NO.: 841 - 6730

ATTENTION OF: LOU BLAIR

COMPANY NAME: ACUSTAR

FROM FAX NO.: (513) 224-2915

CHRYSLER TIE LINE NO: 8-848-2915

NAME: DOUG ORF

COMPANY: ACUSTAR DAYTON THERMAL PROD.
DAYTON OHIO

PAGE 1 OF 4

DATE: 11/6/89

DAYTON THERMAL PRODUCTS DIVISION

MGS:vkr
11/86
Rev. 07/87

P O BOX 1209, DAYTON OHIO 45401

HOWARD LABS INC REPORT LAB # 89-09-D63

RECEIVED: 09/27/89

10/25/89 15:37:31

CLIENT CHRYSLER SAMPLES 2
COMPANY Chrysler Corporation
FACILITY Power Train Division

REPORT Chrysler Corporation (5407)
TO 1600 Webster Street
Dayton, Ohio 45404

ATTEN John Lion

WORK ID Building 40B - #9-27-89-01
TAKEN 09/27/89
TRANS Delivered
TYPE Aqueous
P.O. # A-874306188-B Supplier 36273
INVOICE under separate cover

PREPARED HOWARD LABORATORIES, INC.
BY 3601 South Dixie Drive
P.O. Box 349
Dayton, OH 45449
PHONE 513-294-6856 FAX # 294-7816

Karen K Woolum
CERTIFIED BY

CONTACT J ANDREJCIO

Results of samples submitted for analysis are enclosed. When inquiring, please reference "LAB #". Samples will be discarded 30 days following report unless advised otherwise.
OHIO EPA CERTIFICATION: CHEMICAL 4074 BACTERIOLOGICAL 857

SAMPLE IDENTIFICATION

01 Hole in Floor by Stairway
02 Blanks

HOWARD LABS INC TEST CODES and NAMES used on this report

VOAMSC GC/MS SCAN TOTAL VOLATILES

AGE 2 HOWARD LABS INC REPORT LAB # 89-09-063

ECEIVED: 09/27/89 Results by Sample

AMPLE ID Hole in Floor by Stairway FRACTION 01A TEST CODE VOAMSC NAME GC/MS SCAN TOTAL VOLATILES

Date & Time Collected 09/27/89 Category

DATA FILE E5203 VERIFIED BY KGM

DATE INJECTED 10/11/89 ANALYST KH

COMPOUND	RESULT	UNITS	
Chloroethane	85.9	ug/L	0.0859 ppm
1,1-Dichloroethane	132.0	ug/L	0.132 ppm
cis-1,2-Dichloroethene	65.1	ug/L	0.0651 ppm
1,1,1-Trichloroethane	2.60	ug/L	0.0026 ppm
Trichloroethene	8.35	ug/L	0.0085 ppm
Method Detection Limit	<2.50	ug/L	

The following are inter-laboratory QA/QC results for SW-846 Method 8240.

COMPOUND	RESULT	CODE
1,2-dichloroethane-d4	77.0 %	S1V
toluene-d6	93.0 %	S2V
bromofluorobenzene	109.0 %	S3V

CODE SV - Surrogate compound for QC check.

HOWARD LABS INC REPORT LAB # 89-09-D63

RECEIVED: 09/27/89

Results by Sample

SAMPLE ID Blanks FRACTION 02A TEST CODE VOAMSC NAME GC/MS SCAN TOTAL VOLATILES

Date & Time Collected not specified Category

DATA FILE E5198

DATE INJECTED 10/11/89 ANALYST KH

VERIFIED BY KGM

COMPOUND	RESULT	UNITS
No volatile compounds were detected with a detection limit of <0.5 ug/L		

The following are inter-laboratory QA/QC results for SW-846 Method 8240.

COMPOUND	RESULT	CODE
1,2-dichloroethane-d4	80.0 %	S1V
toluene-d6	96.2 %	S2V
bromofluorobenzene	105.0 %	S3V

CODE SV - Surrogate compound for QC check.

OhioEPA
State of Ohio Environmental Protection Agency
Southwest District Office
40 South Main Street
Dayton, Ohio 45402
(513) 449-6357

copy sent to
Lou Blair
Don Rembiski
George Higgs

Richard F. Celeste
Governor

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME: DOUG ORF, ENV. COORDINATOR

FROM: KATHY FOX, OEPA

TOTAL NUMBER OF PAGES INCLUDING THIS COVER: 9

DATE: 1/11/90

IF YOU DO NOT RECEIVE ALL OF THE PAGES AND/OR ANY PROBLEMS ARISE DURING TRANSMISSION, PLEASE CONTACT US AS SOON AS POSSIBLE AT (513) 449-6357.

APPROVED TO TELECOPY: Thomas A. Winston
THOMAS A. WINSTON

Received: 11/29/89

KEMRON REPORT
12/12/89 10:28:15

Work Order # M9-11-290

REPORT TO: Ohio EPA DSHWM
P.O. Box 1049
Columbus, OH 43266-0149

ATTEN: Art Coleman

CLIENT: OEPA 56664 SAMPLES: 4
COMPANY: Ohio EPA
FACILITY: 1800 Watermark Dr.
Columbus, Ohio 43215

WORK ID: K891127-1/Acustar
TAKEN: BN/KF
TRANS: Fed Ex
TYPE:
P.O. #: 598339/072689
INVOICE: under separate cover

PREPARED BY: KEMRON ENVIRONMENTAL SERVICES
109 STARLITE PARK
MARIETTA, OHIO 45750

ATTEN:
PHONE: (614) 373-4071

CERTIFIED BY: David L. Benjamin

CONTACT: H BUSKIRK

ALL WORK PERFORMED IN ACCORDANCE WITH STANDARD METHODOLOGY.

SAMPLE IDENTIFICATION

01	K891127-1-3A
02	K891127-1-3B
03	K891127-1-1A
04	K891127-1-1B

TEST CODES and NAMES used on this report

AG	Silver, Total
AS	Arsenic, Total
BA	Barium, Total
CD	Cadmium, Total
CR	Chromium, Total
HG	Mercury, Total
M8240	Volatile Organics
PB FU	Lead, Total
SE	Selenium, Total

RECEIVED
DEC 26 1989

kemron

KEMRON REPORT

Work Order # M9-11-290

Received: 11/29/89

Results by Sample

BLDG 50 well

SAMPLE ID K891127-1-3A

SAMPLE # 01 FRACTIONS: A

Date & Time Collected 11/27/89 10:10:00 Category WATER

AG	<0.01 mg/l Ag	AS	<0.004 mg/l As	BA	0.14 mg/l Ba	CD	<0.01 mg/l Cd	CR	<0.02 mg/l Cr	HG	<0.0005 mg/l Hg
PB_FU	0.01 mg/l Pb	SE	<0.004 mg/l Se								

RECEIVED

DEC 26 1989

Kemron

Received: 11/29/89

KEMRON REPORT
Results by Sample

Work Order # M9-11-290

SAMPLE ID K891127-1-3B

FRACTION 02A TEST CODE M8240 NAME Volatile Organics
Date & Time Collected 11/27/89 10:12:00 Category WATER

ANALYST: PJK FILE #: 20E9160
INSTRMT: FINN_2 INJECTED: 11/29/89 FACTOR: 1 UNITS: ug/L VERIFIED: RJW

CAS#	COMPOUND	RESULT	DET LIMIT
74-87-3	Chloromethane	BDL	10
74-83-9	Bromomethane	BDL	10
75-01-4	Vinyl chloride	BDL	10
75-00-3	Chloroethane	BDL	10
75-09-2	Methylene chloride	BDL	5
67-64-1	Acetone	BDL	10
75-15-0	Carbon disulfide	BDL	5
75-35-4	1,1-Dichloroethene	BDL	5
75-34-3	1,1-Dichloroethane	BDL	5
540-59-0	1,2-Dichloroethene (total)	BDL	5
67-66-3	Chloroform	BDL	5
107-06-2	1,2-Dichloroethane	BDL	5
78-93-3	2-Butanone	BDL	10
71-55-6	1,1,1-Trichloroethane	BDL	5
56-23-5	Carbon tetrachloride	BDL	5
108-05-4	Vinyl acetate	BDL	10
75-27-4	Bromodichloromethane	BDL	5
78-87-5	1,2-Dichloropropane	BDL	5
10061-01-5	cis-1,3-Dichloropropene	BDL	5
79-01-6	Trichloroethene	BDL	5
124-48-1	Dibromochloromethane	BDL	5
79-00-5	1,1,2-Trichloroethane	BDL	5
71-43-2	Benzene	BDL	5
10061-02-6	trans-1,3-Dichloropropene	BDL	5
110-75-8	2-Chloroethyl vinyl ether	BDL	10
75-25-2	Bromoform	BDL	5
591-78-6	2-Hexanone	BDL	10
108-10-1	4-Methyl-2-pentanone	BDL	10
127-18-4	Tetrachloroethene	BDL	5
108-88-3	Toluene	BDL	5
79-34-5	1,1,2,2,-Tetrachloroethane	BDL	5
108-90-7	Chlorobenzene	BDL	5

RECEIVED
DEC 26 1989
Protection Ag
DISTRI

KEMRON

Received: 11/29/89

KEMRON REPORT
Results by Sample

Work Order # M9-11-290
Continued From Above

SAMPLE ID K891127-1-3B

FRACTION 02A TEST CODE M8240 NAME Volatile Organics
Date & Time Collected 11/27/89 10:12:00 Category WATER

CAS#	COMPOUND	RESULT	DET LIMIT
100-41-4	Ethyl benzene	BDL	5
100-42-5	Styrene	BDL	5
1330-20-7	Xylenes (Total)	BDL	5

SURROGATES

1,2-Dichloroethane-d4	93	% Recovery
Toluene-d8	101	% Recovery
p-Bromofluorobenzene	104	% Recovery

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

RECEIVED
DEC 26 1989
Environmental Division
DISTO...

Kemron
KEMRON ENVIRONMENTAL SERVICES

KEMRON REPORT

Work Order # M9-11-290

Received: 11/29/89

Results by Sample

Boiler House Well

SAMPLE ID K891127-1-1A

SAMPLE # 03 FRACTIONS: A

Date & Time Collected 11/27/89 10:58:00 Category WATER

AG	<0.01 mg/l Ag	AS	<0.004 mg/l As	BA	0.13 mg/l Ba	CD	<0.01 mg/l Cd	CR	<0.02 mg/l Cr	HG	<0.0005 mg/l Hg
PB_FU	<0.005 mg/l Pb	SE	<0.004 mg/l Se								

RECEIVED
DEC 26 1989
Environmental Protection Ag

Kemron

Received: 11/29/89

KEMRON REPORT
Results by Sample

Work Order # M9-11-290

SAMPLE ID K891127-1-1B FRACTION 04A TEST CODE M8240 NAME Volatile Organics
Date & Time Collected 11/27/89 11:00:00 Category WATER

ANALYST: PJK FILE #: 20E9162
INSTRMT: FINN_2 INJECTED: 11/29/89 FACTOR: 1 UNITS: ug/L VERIFIED: RJW

CAS#	COMPOUND	RESULT	DET LIMIT
74-87-3	Chloromethane	BDL	10
74-83-9	Bromomethane	BDL	10
75-01-4	Vinyl chloride	22	10
75-00-3	Chloroethane	BDL	10
75-09-2	Methylene chloride	BDL	5
67-64-1	Acetone	BDL	10
75-15-0	Carbon disulfide	BDL	5
75-35-4	1,1-Dichloroethene	98	5
75-34-3	1,1-Dichloroethane	17	5
540-59-0	1,2-Dichloroethene (total)	130	5
67-66-3	Chloroform	BDL	5
107-06-2	1,2-Dichloroethane	BDL	5
78-93-3	2-Butanone	BDL	10
71-55-6	1,1,1-Trichloroethane	670	5
56-23-5	Carbon tetrachloride	BDL	5
108-05-4	Vinyl acetate	BDL	10
75-27-4	Bromodichloromethane	BDL	5
78-87-5	1,2-Dichloropropane	BDL	5
10061-01-5	cis-1,3-Dichloropropene	BDL	5
79-01-6	Trichloroethene	510	5
124-48-1	Dibromochloromethane	BDL	5
79-00-5	1,1,2-Trichloroethane	BDL	5
71-43-2	Benzene	BDL	5
10061-02-6	trans-1,3-Dichloropropene	BDL	5
110-75-8	2-Chloroethyl vinyl ether	BDL	10
75-25-2	Bromoform	BDL	5
591-78-6	2-Hexanone	BDL	10
108-10-1	4-Methyl-2-pentanone	BDL	10
127-18-4	Tetrachloroethene	550	5
108-88-3	Toluene	BDL	5
79-34-5	1,1,2,2,-Tetrachloroethane	BDL	5
108-90-7	Chlorobenzene	BDL	5

RECEIVED
DEC 26 1989

Received: 11/29/89

KEMRON REPORT
Results by Sample

Work Order # M9-11-290
Continued From Above

SAMPLE ID K891127-1-1B

FRACTION 04A TEST CODE M8240 NAME Volatile Organics
Date & Time Collected 11/27/89 11:00:00 Category WATER

CAS#	COMPOUND	RESULT	DET LIMIT
100-41-4	Ethyl benzene	BDL	5
100-42-5	Styrene	BDL	5
1330-20-7	Xylenes (Total)	BDL	5

SURROGATES

1,2-Dichloroethane-d4	101	% Recovery
Toluene-d8	99	% Recovery
p-Bromofluorobenzene	102	% Recovery

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

RECEIVED
DEC 26 1989

KEMRON

Received: 11/29/89

KEMRON REPORT
Test Methodology

Work Order # M9-11-290

TEST CODE AG NAME Silver, Total

EPA Method 200.7 (ICP) or 272.1 (AA - Direct Aspiration)

TEST CODE AS NAME Arsenic, Total

EPA Method 206.3 (AA Vapor Hydride)

TEST CODE BA NAME Barium, Total

EPA Method 200.7 - (ICAP) or 208.1 (AA - Direct Aspiration)

TEST CODE CD NAME Cadmium, Total

EPA Method 200.7 (ICP) or 213.1 (AA - Direct Aspiration)

TEST CODE CR NAME Chromium, Total

EPA Method 200.7 (ICP) or 218.1 (AA - Direct Aspiration)

TEST CODE HG NAME Mercury, Total

EPA Method 245.1 (Cold Vapor)

TEST CODE M8240 NAME Volatile Organics

EPA Method 8240 Volatile Organics - Purge and Trap

TEST CODE PB_FU NAME Lead, Total

EPA Method 239.2 AA Graphite Furnace

RECEIVED
DEC 26 1989

kemron

ACUSTAR - DAYTON PLANT

Telecopier Cover Sheet

Date: 1/5/90

1/8/90 Talked to Don Blair - need a same plan Does not want to bore test holes

To: DON REMBOSKI

Telefax Number: 822-7922

Telephone Number: 876-5455

Total Pages Including Cover: 8

1-5-90 Don Rembowski says we have to let them come in + retest. Cathy Fox requested that we let them come in to retest. Their results showed detectable levels for VOCs

Ron Pick Dayton Water

From: DOUG ORF

Neal Hogley will call

Telephone Number: 848-2467

Notes/Comments: Analytical Results from (2) wells for Boiler Feed Water. These were split samples from Ohio EPA inspection. What are the standards? Please review and contact me. Ohio EPA has not contacted us with their results yet.

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

12-27-89

PAGE 1

DATE RECEIVED: 11-28-89

SAMPLE NO.	SAMPLE DESCRIPTION	DATE TAKEN	
7051	Well #3 - Bldg 50	11-27-89	1007
Alkalinity, Total (CaC03)		221	mg/L
Chloride		74	mg/L
COD		<10	mg/L
Conductivity		801	umhos/cm
Nitrogen, Nitrate+Nitrite		<0.02	mg/L
pH		7.65	S.U.
Phosphorus, Total		0.04	mg/L
Solids, Suspended		2	mg/L
Sulfate		71	mg/L
Mercury		<0.0002	mg/L
Arsenic		0.008	mg/L
Barium		0.271	mg/L
Cadmium		<0.001	mg/L
Chromium, Total		<0.005	mg/L
Lead		0.019	mg/L
Selenium		0.007	mg/L
Silver		<0.001	mg/L

John Andrejcio
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

12-27-89

DATE RECEIVED: 11-28-89

VOLATILE COMPOUNDS

METHOD 8240

Benzene	<2.5	ug/L
Bromodichloromethane	<2.5	ug/L
Bromoform	<2.5	ug/L
Bromomethane	<2.5	ug/L
Carbon tetrachloride	<2.5	ug/L
Chlorobenzene	<2.5	ug/L
2-Chloroethyl vinyl ether	<150.0	ug/L
Chloroform	<2.5	ug/L
Chloromethane	<2.5	ug/L
Dibromochloromethane	<2.5	ug/L
o-Dichlorobenzene	<2.5	ug/L
m-Dichlorobenzene	<2.5	ug/L
p-Dichlorobenzene	<2.5	ug/L
1,1-Dichloroethane	<2.5	ug/L
1,2-Dichloroethane	<2.5	ug/L
1,1-Dichloroethene	<2.5	ug/L
trans-1,2-Dichloroethene	<2.5	ug/L
1,2-Dichloropropane	<2.5	ug/L
cis-1,3-Dichloropropene	<2.5	ug/L
trans-1,3-Dichloropropene	<2.5	ug/L
Ethyl benzene	<2.5	ug/L
Methylene chloride	<2.5	ug/L
1,1,2,2-Tetrachloroethane	<2.5	ug/L
Tetrachloroethene	<2.5	ug/L
Toluene	<2.5	ug/L
1,1,1-Trichloroethane	<2.5	ug/L
1,1,2-Trichloroethane	<2.5	ug/L
Trichloroethene	<2.5	ug/L
Trichlorofluoromethane	<2.5	ug/L
Vinyl chloride	<2.5	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

12-27-89

DATE RECEIVED: 11-28-89

SAMPLE NO.	SAMPLE DESCRIPTION	DATE TAKEN	
7052	Well #2 - Boiler House	11-27-89	1056

Alkalinity, Total (CaC03)	259	mg/L
Chloride	203	mg/L
COD	<10	mg/L
Conductivity	1,280	umhos/cm
Nitrogen, Nitrate+Nitrite	0.24	mg/L
pH	7.30	S.U.
Phosphorus, Total	0.03	mg/L
Solids, Suspended	1	mg/L
Sulfate	82	mg/L
Mercury	<0.0002	mg/L
Arsenic	<0.0025	mg/L
Barium	0.251	mg/L
Cadmium	<0.001	mg/L
Chromium, Total	<0.005	mg/L
Lead	<0.005	mg/L
Selenium	0.009	mg/L
Silver	<0.001	mg/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

12-27-89

DATE RECEIVED: 11-28-89

VOLATILE COMPOUNDS

METHOD 8240

Benzene	<2.5	ug/L
Bromodichloromethane	<2.5	ug/L
Bromoform	<2.5	ug/L
Bromomethane	<2.5	ug/L
Carbon tetrachloride	<2.5	ug/L
Chlorobenzene	<2.5	ug/L
2-Chloroethyl vinyl ether	<150.0	ug/L
Chloroform	<2.5	ug/L
Chloromethane	<2.5	ug/L
Dibromochloromethane	<2.5	ug/L
o-Dichlorobenzene	<2.5	ug/L
m-Dichlorobenzene	<2.5	ug/L
p-Dichlorobenzene	<2.5	ug/L
1,1-Dichloroethane	15.9	ug/L
1,2-Dichloroethane	<2.5	ug/L
1,1-Dichloroethene	53.8	ug/L
trans-1,2-Dichloroethene	3.0	ug/L
1,2-Dichloropropane	<2.5	ug/L
cis-1,3-Dichloropropene	<2.5	ug/L
trans-1,3-Dichloropropene	<2.5	ug/L
Ethyl benzene	<2.5	ug/L
Methylene chloride	<2.5	ug/L
1,1,2,2-Tetrachloroethane	<2.5	ug/L
Tetrachloroethene	107.0	ug/L
Toluene	<2.5	ug/L
1,1,1-Trichloroethane	217.0	ug/L
1,1,2-Trichloroethane	<2.5	ug/L
Trichloroethene	116.0	ug/L
Trichlorofluoromethane	<2.5	ug/L
Vinyl chloride	14.0	ug/L

John Andrejcio
Project Manager

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

12-27-89

PAGE 5

DATE RECEIVED: 11-28-89

SAMPLE NO.	SAMPLE DESCRIPTION	DATE TAKEN
7053	Blanks	

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

12-27-89

DATE RECEIVED: 11-28-89

VOLATILE COMPOUNDS

METHOD 8240

Benzene	<0.5	ug/L
Bromodichloromethane	<0.5	ug/L
Bromoform	<0.5	ug/L
Bromomethane	<0.5	ug/L
Carbon tetrachloride	<0.5	ug/L
Chlorobenzene	<0.5	ug/L
2-Chloroethyl vinyl ether	<30.	ug/L
Chloroform	<0.5	ug/L
Chloromethane	<0.5	ug/L
Dibromochloromethane	<0.5	ug/L
o-Dichlorobenzene	<0.5	ug/L
m-Dichlorobenzene	<0.5	ug/L
p-Dichlorobenzene	<0.5	ug/L
1,1-Dichloroethane	<0.5	ug/L
1,2-Dichloroethane	<0.5	ug/L
1,1-Dichloroethene	<0.5	ug/L
trans-1,2-Dichloroethene	<0.5	ug/L
1,2-Dichloropropane	<0.5	ug/L
cis-1,3-Dichloropropene	<0.5	ug/L
trans-1,3-Dichloropropene	<0.5	ug/L
Ethyl benzene	<0.5	ug/L
Methylene chloride	<0.5	ug/L
1,1,2,2-Tetrachloroethane	<0.5	ug/L
Tetrachloroethene	<0.5	ug/L
Toluene	<0.5	ug/L
1,1,1-Trichloroethane	<0.5	ug/L
1,1,2-Trichloroethane	<0.5	ug/L
Trichloroethene	<0.5	ug/L
Trichlorofluoromethane	<0.5	ug/L
Vinyl chloride	<0.5	ug/L

John Andrejcio
Project Manager

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ADDITIONAL VOLATILE COMPOUNDS DETECTED FOR SAMPLE 7052

cis-1,2-Dichloroetnene	87.6 ug/L

OhioEPA
State of Ohio Environmental Protection Agency
Southwest District Office
40 South Main Street
Dayton, Ohio 45402
(513) 449-6357

Richard F. Celeste
Governor

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME: DOUG ORF, ACCUSTAR 224-2915 (Local)

FROM: KATHY FOX, OEPA/SWDO

TOTAL NUMBER OF PAGES INCLUDING THIS COVER: 8

DATE: 2/21/90

IF YOU DO NOT RECEIVE ALL OF THE PAGES AND/OR ANY PROBLEMS ARISE DURING TRANSMISSION, PLEASE CONTACT US AS SOON AS POSSIBLE AT (513) 285-6357.

APPROVED TO TELECOPY: Thomas A. Winston
THOMAS A. WINSTON

6 found

DOUG - WON'T BE ABLE TO CALL TODAY; WILL GIVE YOU A CALL NO LATER THAN FRIDAY.

KATHY

Ohio EPA Analysis

Received: 01/12/90

KEMRON REPORT
01/16/90 12:54:28

Work Order # WO-01-124

REPORT TO: Ohio EPA DSHWM
P.O. Box 1049
Columbus, OH 43266-0149

ATTEN: Art Coleman

CLIENT: OEPA 56664 SAMPLES: 2
COMPANY: Ohio EPA
FACILITY: 1800 Watermark Dr.
Columbus, Ohio 43215

WORK ID: K90111-3/Accustar
TAKEN: Fox
TRANS: Fed Ex
TYPE:
P.O. #: 598339/072689
INVOICE: under separate cover

PREPARED BY: KEMRON ENVIRONMENTAL SERVICES
109 STARLITE PARK
MARIETTA, OHIO 45750

ATTEN:
PHONE: (614) 373-4071

CERTIFIED BY: Leslie J. Lytle

CONTACT: H BUSKIRK

ALL WORK PERFORMED IN ACCORDANCE WITH STANDARD METHODOLOGY.

SAMPLE IDENTIFICATION

01 K90111-3 Accustar #1
02 K90111-3 Accustar #2

TEST CODES and NAMES used on this report

M8240 Volatile Organics

RECEIVED
OHIO EPA
JAN 19 1990
DIV. of SOLID & HAZ. WASTE MGT.

KEMRON ENVIRONMENTAL SERVICES

Received: 01/12/90

KEMRON REPORT
Results by Sample

Work Order # N0-01-124

SAMPLE ID K90111-3 Accustar #1 FRACTION 01A TEST CODE M8240 NAME Volatile Organics
Date & Time Collected 01/11/90 10:27:00 Category LIQUID

ANALYST: WSN FILE #: 30E3072
INSTRMT: FINN_3 INJECTED: 01/12/90 FACTOR: 1 UNITS: ug/L VERIFIED: RJW

CAS#	COMPOUND	RESULT	DET LIMIT
74-87-3	Chloromethane	BDL	10
74-83-9	Bromomethane	BDL	10
75-01-4	Vinyl chloride	12	10
75-00-3	Chloroethane	BDL	10
75-09-2	Methylene chloride	** 28	5
67-64-1	Acetone	BDL	10
75-15-0	Carbon disulfide	BDL	5
75-35-4	1,1-Dichloroethene	59	5
75-34-3	1,1-Dichloroethane	12	5
540-59-0	1,2-Dichloroethene (total)	BDL	5
67-66-3	Chloroform	BDL	5
107-06-2	1,2-Dichloroethane	BDL	5
78-93-3	2-Butanone	BDL	10
71-55-6	1,1,1-Trichloroethane	670	5
56-23-5	Carbon tetrachloride	BDL	5
108-05-4	Vinyl acetate	BDL	10
75-27-4	Bromodichloromethane	BDL	5
78-87-5	1,2-Dichloropropane	BDL	5
10061-01-5	cis-1,3-Dichloropropene	BDL	5
79-01-6	Trichloroethene	590	5
124-48-1	Dibromochloromethane	BDL	5
79-00-5	1,1,2-Trichloroethane	BDL	5
71-43-2	Benzene	BDL	5
10061-02-6	trans-1,3-Dichloropropene	BDL	5
110-75-8	2-Chloroethyl vinyl ether	BDL	10
75-25-2	Bromoform	BDL	5
591-78-6	2-Hexanone	BDL	10
108-10-1	4-Methyl-2-pentanone	BDL	10
127-18-4	Tetrachloroethene	BDL	5
108-88-3	Toluene	BDL	5
79-34-5	1,1,2,2,-Tetrachloroethane	BDL	5
108-90-7	Chlorobenzene	BDL	5

RECEIVED
OHIO EPA
JAN 19 1990
DIV. of SOLID & HAZ. WASTE MGT.

KEMRON ENVIRONMENTAL SERVICES

Received: 01/12/90

KEMRON REPORT
Results by Sample

Work Order # N0-01-124
Continued From Above

SAMPLE ID K90111-3 Accustar #1

FRACTION 01A TEST CODE M8240 NAME Volatile Organics
Date & Time Collected 01/11/90 10:27:00 Category LIQUID

CAS#	COMPOUND	RESULT	DET LIMIT
100-41-4	Ethyl benzene	BDL	5
100-42-5	Styrene	BDL	5
1330-20-7	Xylenes (Total)	BDL	5

SURROGATES

1,2-Dichloroethane-d4	100	% Recovery
Toluene-d8	104	% Recovery
p-Bromofluorobenzene	93	% Recovery

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY
** = FOUND IN BLANK AT 6 ug/L

RECEIVED
OHIO EPA
JAN 19 1990
DIV. of SOLID & HAZ. WASTE MGT.

KEMRON
ENVIRONMENTAL SERVICES

Received: 01/12/90

KEMRON REPORT
Results by Sample

Work Order # N0-01-124

SAMPLE ID K90111-3 Accustar #2 FRACTION 02A TEST CODE M8240 NAME Volatile Organics
Date & Time Collected 01/11/90 10:30:00 Category LIQUID

ANALYST: WSN FILE #: 30B3073
INSTRMT: FINN_3 INJECTED: 01/12/90 FACTOR: 1 UNITS: ug/L VERIFIED: RJW

CAS#	COMPOUND	RESULT	DET LIMIT
74-87-3	Chloromethane	BDL	10
74-83-9	Bromomethane	BDL	10
75-01-4	Vinyl chloride	12	10
75-00-3	Chloroethane	BDL	10
75-09-2	Methylene chloride	** 26	5
67-64-1	Acetone	BDL	10
75-15-0	Carbon disulfide	BDL	5
75-35-4	1,1-Dichloroethene	59	5
75-34-3	1,1-Dichloroethane	12	5
540-59-0	1,2-Dichloroethene (total)	BDL	5
67-66-3	Chloroform	BDL	5
107-06-2	1,2-Dichloroethane	BDL	5
78-93-3	2-Butanone	BDL	10
71-55-6	1,1,1-Trichloroethane	670	5
56-23-5	Carbon tetrachloride	BDL	5
108-05-4	Vinyl acetate	BDL	10
75-27-4	Bromodichloromethane	BDL	5
78-87-5	1,2-Dichloropropane	BDL	5
10061-01-5	cis-1,3-Dichloropropene	BDL	5
79-01-6	Trichloroethene	570	5
124-48-1	Dibromochloromethane	BDL	5
79-00-5	1,1,2-Trichloroethane	BDL	5
71-43-2	Benzene	BDL	5
10061-02-6	trans-1,3-Dichloropropene	BDL	5
110-75-8	2-Chloroethyl vinyl ether	BDL	10
75-25-2	Bromoform	BDL	5
591-78-6	2-Hexanone	BDL	10
108-10-1	4-Methyl-2-pentanone	BDL	10
127-18-4	Tetrachloroethene	BDL	5
108-88-3	Toluene	BDL	5
79-34-5	1,1,2,2,-Tetrachloroethane	BDL	5
108-90-7	Chlorobenzene	BDL	5

RECEIVED
OHIO EPA
JAN 19 1990
DIV. of SOLID & HAZ. WASTE MG

KEMRON
ENVIRONMENTAL SERVICES

FEB 21 '90 10:33 5 1 3 4 4 9 6 2 4 9 PAGE.05

Received: 01/12/90

KEMRON REPORT
Results by Sample

Work Order # N0-01-124
Continued From Above

SAMPLE ID K90111-3 Accustar #2 FRACTION 02A TEST CODE M8240 NAME Volatile Organics
Date & Time Collected 01/11/90 10:30:00 Category LIQUID

CAS#	COMPOUND	RESULT	DET LIMIT
100-41-4	Ethyl benzene	BDL	5
100-42-5	Styrene	BDL	5
1330-20-7	Xylenes (Total)	BDL	5

SURROGATES

1,2-Dichloroethane-d4	104	% Recovery
Toluene-d8	107	% Recovery
p-Bromofluorobenzene	92	% Recovery

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

RECEIVED
OHIO EPA
JAN 19 1990
DIV. of SOLID & HAZ. WASTE MGT.
KEMRON
ENVIRONMENTAL SERVICES

Received: 01/12/90

KEMRON REPORT
Test Methodology

Work Order # N0-01-124

TEST CODE M8240 NAME Volatile Organics

EPA Method 8240 (SW-846)

FEB 21 '90 10:33 5 1 3 4 4 9 6 2 4 9 PAGE.07

RECEIVED
OHIO EPA
JAN 19 1990
DIV. of SOLID & HAZ. WASTE MGT.

KEMRON
ENVIRONMENTAL SERVICE

ChesterLab
A Division of
TheChesterEngineers
4990 Grand Avenue
Pittsburgh, PA 15225
Phone (412)-260-5700

Laboratory Analysis Report
For
CHRYSLER MOTORS
ACUSTAR
DAYTON, OHIO

Report Date: 01/19/90

ANALYSES

Source	BOILER HOUSE WELL PUMP OUTLET S.P. #1,#2,#3,#4
Log Number 90-	00282
Date Collected	1/11/90
Time Collected	10:30 A.M.
Date Received	1/12/90
ACROLEIN, UG/L	<10
ACRYLONITRILE, UG/L	<10
BENZENE, UG/L	<10
BROMOFORM, UG/L	<10
CARBON TETRACHLORIDE, UG/L	<10
CHLOROBENZENE, UG/L	<10
CHLORODIBROMOMETHANE, UG/L	<10
CHLOROETHANE, UG/L	<10
2-CHLOROETHYLVINYL ETHER, UG/L	<10
CHLOROFORM, UG/L	<10
DICHLOROBROMOMETHANE, UG/L	<10
1,1-DICHLOROETHANE, UG/L	13
1,2-DICHLOROETHANE, UG/L	<10
1,1-DICHLOROETHYLENE, UG/L	85
1,2-DICHLOROPROPANE, UG/L	<10
cis-1,3-DICHLOROPROPENE, UG/L	<10
trans-1,3-DICHLOROPROPENE, UG/L	<10
ETHYLBENZENE, UG/L	<10
METHYL BROMIDE, UG/L	<10
METHYL CHLORIDE, UG/L	<10
METHYLENE CHLORIDE, UG/L	<10
1,1,2,2-TETRACHLOROETHANE, UG/L	20
TETRACHLOROETHYLENE, UG/L	<10
TOLUENE, UG/L	79
1,2-TRANS-DICHLOROETHYLENE, UG/L	132

330020

* Unless otherwise noted, analyses are in accordance with the methods and procedures outlined and approved by the Environmental Protection Agency and conform to quality assurance protocol.
* "Less-than" (<) values are indicative of detection limit.

JAN 19 '90 14:41

Laboratory Analysis Report
For
CHRYSLER MOTORS
ACUSTAR
DAYTON, OHIO

Report Date: 01/19/90

ANALYSES
(Continued)

SOURCE	BOILER HOUSE WELL PUMP OUTLET S.P. #1,#2,#3,#4
Log Number 90-	00282
Date Collected	1/11/90
Time Collected	10:30 A.M.
Date Received	1/12/90
1,1,1-TRICHLOROETHANE, UG/L	714
1,1,2-TRICHLOROETHANE, UG/L	<10
TRICHLOROETHYLENE, UG/L	646
VINYL CHLORIDE, UG/L	12

350020

* Unless otherwise noted, analyses are in accordance with the methods and procedures outlined and approved by the Environmental Protection Agency and conform to quality assurance protocol.
* "Less-than" (<) values are indicative of detection limit.

ACUSTAR - DAYTON PLANT

Telecopier Cover Sheet

Date: 4/6/90
6/8/90

To: LOU BLAIR

Telefax Number: 841-6821

Telephone Number: 841-6711

Total Pages Including Cover: 7

From: DOUG ORF

Telephone Number: 242-2467

Notes/Comments: Analysis from Boiler House well, hole in floor - Bldg 40 B & drum collections from hole in floor - Bldg 40 B. Had to go off Boiler House well on 3/14/90 - holding ruptured Tank is being repaired so we can go back on line

SUPPLY COMPANY

Industrial & Commercial Supplies / PIPE, VALVES, FITTINGS, FIXTURES

WAREHOUSES	2640 Lefferson Rd. MIDDLETOWN, OHIO 45042	615 West 9th St. MUNCIE, INDIANA 47307

PHONES	Middletown, Ohio (513) 422-3674	Muncie, Indiana (317) 289-7747	Dayton, Ohio (513) 222-7117

MIAMI CONSERV. 223-1271 WILL PROVIDE RAINFALL DATA

POST HOLE LOG

ITEM				
1	1990			
2	1-29*	2 1/2 GAL	4-6	5 Qts.
3	1-30*	1 1/2 GAL.	4-9	15 GAL.
4	1-31*	1 1/2 GAL	4-10	3 GAL.
5	2-1*	1 GAL	4-11	2 GAL.
6	2-2*	1 GAL	4-12	2 GAL.
7	2-6	1 1/2 GAL	4-17	2 GAL.
8	2-7	1 GAL	4-18	1 GAL.
9	2-8	1 GAL	4-19	2 1/2 GAL.
10	2-9	3/4 GAL	4-23	2 GAL.
11	2-13	1 GAL	4-24	1 GAL.
12	2-15	1 GAL	5-11	24 GAL. New Drum
13	2-19	1/2 GAL.	5-17	5 GAL.
14	2-22	1/2 GAL		
15	2-23	1/4 GAL		
16	2-26	1/4 GAL		
17	2-27	1/4 GAL		
18	2-28	1/4 GAL		
19	3-2	1/4 GAL		
20	4-3	9 GAL		
21	4-4	1 GAL		
22	4-5	1 GAL		
23				
24				

*Indicates SAMPLE NOT SAVED

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21021

PAGE 1

Sample Description: 3-6-90-01 Boiler House Well

Date Taken: 03-06-90

Date Received: 03-06-90

VOLATILE COMPOUNDS

METHOD 8240

Acetone	<10.	ug/L
Benzene	<5.	ug/L
Bromodichloromethane	<5.	ug/L
Bromoform	<5.	ug/L
Bromomethane	<5.	ug/L
2-Butanone	<10.	ug/L
Carbon disulfide	<5.	ug/L
Carbon tetrachloride	<5.	ug/L
Chlorobenzene	<5.	ug/L
Chloroethane	<5.	ug/L
Chloroform	<5.	ug/L
Chloromethane	<5.	ug/L
2-Chloroethyl vinyl ether	<300.	ug/L
Dibromochloromethane	<5.	ug/L
1,1-Dichloroethane	23.2	ug/L
1,2-Dichloroethane	<5.	ug/L
1,1-Dichloroethene	219.	ug/L
1,2-Dichloroethene(Total)	115.3	ug/L
1,2-Dichloropropane	<5.	ug/L
cis-1,3-Dichloropropene	<5.	ug/L
trans-1,3-Dichloropropene	<5.	ug/L
Ethyl benzene	<5.	ug/L
2-Hexanone	<10.	ug/L
Methylene chloride	<5.	ug/L
4-Methyl-2-pentanone	<5.	ug/L
Styrene	<5.	ug/L
1,1,2,2-Tetrachloroethane	<5.	ug/L
Tetrachloroethene	405.	ug/L
Toluene	<5.	ug/L
1,1,1-Trichloroethane	633.	ug/L
1,1,2-Trichloroethane	<5.	ug/L
Trichloroethene	452.	ug/L
Vinyl acetate	<5.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21021

PAGE 2

Sample Description: 3-6-90-01 Boiler House Well

Date Taken: 03-06-90

Date Received: 03-06-90

Vinyl chloride	~~28.8~~	ug/L
Xylenes, Total	<5.	ug/L

John Andreicio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7818

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21022

PAGE 3

Sample Description: 3-6-90-02 Hole in Floor

Date Taken: 03-06-90

Date Received: 03-06-90

VOLATILE COMPOUNDS

METHOD 8240

Acetone	212.	ug/L
Benzene	<10.	ug/L
Bromodichloromethane	<10.	ug/L
Bromoform	<10.	ug/L
Bromomethane	<10.	ug/L
2-Butanone	25.	ug/L
Carbon disulfide	<10.	ug/L
Carbon tetrachloride	<10.	ug/L
Chlorobenzene	<10.	ug/L
Chloroethane	1810.	ug/L
Chloroform	<10.	ug/L
Chloromethane	<10.	ug/L
2-Chloroethyl vinyl ether	<600.	ug/L
Dibromochloromethane	<10.	ug/L
1,1-Dichloroethane	606.	ug/L
1,2-Dichloroethane	<10.	ug/L
1,1-Dichloroethene	<10.	ug/L
1,2-Dichloroethene(Total)	348.	ug/L
1,2-Dichloropropane	<10.	ug/L
cis-1,3-Dichloropropene	<10.	ug/L
trans-1,3-Dichloropropene	<10.	ug/L
Ethyl benzene	<10.	ug/L
2-Hexanone	<20.	ug/L
Methylene chloride	<10.	ug/L
4-Methyl-2-pentanone	44.	ug/L
Styrene	<10.	ug/L
1,1,2,2-Tetrachloroethane	<10.	ug/L
Tetrachloroethene	<10.	ug/L
Toluene	<10.	ug/L
1,1,1-Trichloroethane	12.5	ug/L
1,1,2-Trichloroethane	<10.	ug/L
Trichloroethene	15.5	ug/L
Vinyl acetate	<10.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21022

PAGE 4

Sample Description: 3-6-90-02 Hole in Floor

Date Taken: 03-06-90

Date Received: 03-06-90

Vinyl chloride	<10.	ug/L
Xylenes, Total	<10.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21023

Sample Description: 3-6-90-03 Drum by Hole

Date Taken: 03-06-90

Date Received: 03-06-90

VOLATILE COMPOUNDS

METHOD 8240

Acetone	<10.	ug/L
Benzene	<5.	ug/L
Bromodichloromethane	<5.	ug/L
Bromoform	<5.	ug/L
Bromomethane	<5.	ug/L
2-Butanone	<10.	ug/L
Carbon disulfide	<5.	ug/L
Carbon tetrachloride	<5.	ug/L
Chlorobenzene	<5.	ug/L
Chloroethane	277.	ug/L
Chloroform	<5.	ug/L
Chloromethane	<5.	ug/L
2-Chloroethyl vinyl ether	<300	ug/L
Dibromochloromethane	<5.	ug/L
1,1-Dichloroethane	<5.	ug/L
1,2-Dichloroethane	<5.	ug/L
1,1-Dichloroethene	<5.	ug/L
1,2-Dichloroethene(Total)	106.	ug/L
1,2-Dichloropropane	<5.	ug/L
cis-1,3-Dichloropropene	<5.	ug/L
trans-1,3-Dichloropropene	<5.	ug/L
Ethyl benzene	<5.	ug/L
2-Hexanone	<10.	ug/L
Methylene chloride	<5.	ug/L
4-Methyl-2-pentanone	<5.	ug/L
Styrene	<5.	ug/L
1,1,2,2-Tetrachloroethane	<5.	ug/L
Tetrachloroethene	6.1	ug/L
Toluene	<5.	ug/L
1,1,1-Trichloroethane	5.3	ug/L
1,1,2-Trichloroethane	<5.	ug/L
Trichloroethene	<5.	ug/L
Vinyl acetate	<5.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21023

PAGE 6

Sample Description: 3-6-90-03 Drum by Hole

Date Taken: 03-06-90

Date Received: 03-06-90

Vinyl chloride	<5.	ug/L
Xylenes, Total	<5.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21022

PAGE 3

Sample Description: 3-6-90-02 Hole in Floor

Date Taken: 03-06-90

Date Received: 03-06-90

VOLATILE COMPOUNDS

METHOD 8240

Acetone	212.	ug/L
Benzene	<10.	ug/L
Bromodichloromethane	<10.	ug/L
Bromoform	<10.	ug/L
Bromomethane	<10.	ug/L
2-Butanone	25.	ug/L
Carbon disulfide	<10.	ug/L
Carbon tetrachloride	<10.	ug/L
Chlorobenzene	<10.	ug/L
Chloroethane	1810.	ug/L
Chloroform	<10.	ug/L
Chloromethane	<10.	ug/L
2-Chloroethyl vinyl ether	<600.	ug/L
Dibromochloromethane	<10.	ug/L
1,1-Dichloroethane	606.	ug/L
1,2-Dichloroethane	<10.	ug/L
1,1-Dichloroethene	<10.	ug/L
1,2-Dichloroethene(Total)	348.	ug/L
1,2-Dichloropropane	<10.	ug/L
cis-1,3-Dichloropropene	<10.	ug/L
trans-1,3-Dichloropropene	<10.	ug/L
Ethyl benzene	<10.	ug/L
2-Hexanone	<20.	ug/L
Methylene chloride	<10.	ug/L
4-Methyl-2-pentanone	44.	ug/L
Styrene	<10.	ug/L
1,1,2,2-Tetrachloroethane	<10.	ug/L
Tetrachloroethene	<10.	ug/L
Toluene	<10.	ug/L
1,1,1-Trichloroethane	12.5	ug/L
1,1,2-Trichloroethane	<10.	ug/L
Trichloroethene	15.5	ug/L
Vinyl acetate	<10.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21022

PAGE 4

Sample Description: 3-6-90-02 Hole in Floor

Date Taken: 03-06-90

Date Received: 03-06-90

Vinyl chloride	<10.	ug/L
Xylenes, Total	<10.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21023

PAGE 5

Sample Description: 3-6-90-03 Drum by Hole

Date Taken: 03-06-90

Date Received: 03-06-90

VOLATILE COMPOUNDS

METHOD 8240

Acetone	<10.	ug/L
Benzene	<5.	ug/L
Bromodichloromethane	<5.	ug/L
Bromoform	<5.	ug/L
Bromomethane	<5.	ug/L
2-Butanone	<10.	ug/L
Carbon disulfide	<5.	ug/L
Carbon tetrachloride	<5.	ug/L
Chlorobenzene	<5.	ug/L
Chloroethane	277.	ug/L
Chloroform	<5.	ug/L
Chloromethane	<5.	ug/L
2-Chloroethyl vinyl ether	<300	ug/L
Dibromochloromethane	<5.	ug/L
1,1-Dichloroethane	<5.	ug/L
1,2-Dichloroethane	<5.	ug/L
1,1-Dichloroethene	<5.	ug/L
1,2-Dichloroethene(Total)	106.	ug/L
1,2-Dichloropropane	<5.	ug/L
cis-1,3-Dichloropropene	<5.	ug/L
trans-1,3-Dichloropropene	<5.	ug/L
Ethyl benzene	<5.	ug/L
2-Hexanone	<10.	ug/L
Methylene chloride	<5.	ug/L
4-Methyl-2-pentanone	<5.	ug/L
Styrene	<5.	ug/L
1,1,2,2-Tetrachloroethane	<5.	ug/L
Tetrachloroethene	6.1	ug/L
Toluene	<5.	ug/L
1,1,1-Trichloroethane	5.3	ug/L
1,1,2-Trichloroethane	<5.	ug/L
Trichloroethene	<5.	ug/L
Vinyl acetate	<5.	ug/L

John Andrejcio
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21023

Sample Description: 3-6-90-03 Drum by Hole

Date Taken: 03-06-90

Date Received: 03-06-90

Vinyl chloride	<5.	ug/L
Xylenes, Total	<5.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21024

Sample Description: Blanks

Date Taken: 03-06-90

Date Received: 03-06-90

VOLATILE COMPOUNDS

METHOD 8240

Acetone	<2.	ug/L
Benzene	<1.	ug/L
Bromodichloromethane	<1.	ug/L
Bromoform	<1.	ug/L
Bromomethane	<1.	ug/L
2-Butanone	<2.	ug/L
Carbon disulfide	<1.	ug/L
Carbon tetrachloride	<1.	ug/L
Chlorobenzene	<1.	ug/L
Chloroethane	<1.	ug/L
Chloroform	<1.	ug/L
Chloromethane	<1.	ug/L
2-Chloroethyl vinyl ether	<60.	ug/L
Dibromochloromethane	<1.	ug/L
1,1-Dichloroethane	<1.	ug/L
1,2-Dichloroethane	<1.	ug/L
1,1-Dichloroethene	<1.	ug/L
1,2-Dichloroethene(Total)	<1.	ug/L
1,2-Dichloropropane	<1.	ug/L
cis-1,3-Dichloropropene	<1.	ug/L
trans-1,3-Dichloropropene	<1.	ug/L
Ethyl benzene	<1.	ug/L
2-Hexanone	<2.	ug/L
Methylene chloride	<1.	ug/L
4-Methyl-2-pentanone	<1.	ug/L
Styrene	<1.	ug/L
1,1,2,2-Tetrachloroethane	<1.	ug/L
Tetrachloroethene	<1.	ug/L
Toluene	<1.	ug/L
1,1,1-Trichloroethane	<1.	ug/L
1,1,2-Trichloroethane	<1.	ug/L
Trichloroethene	<1.	ug/L
Vinyl acetate	<1.	ug/L

John Andrejcio
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21024

Sample Description: Blanks

Date Taken: 03-06-90

Date Received: 03-06-90

Vinyl chloride	<1.	ug/L
Xylenes, Total	<1.	ug/L

John Andrejcio
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21021

PAGE 1

Sample Description: 3-6-90-01 Boiler House Well

Date Taken: 03-06-90

Date Received: 03-06-90

VOLATILE COMPOUNDS

METHOD 8240

Acetone	<10.	ug/L
Benzene	<5.	ug/L
Bromodichloromethane	<5.	ug/L
Bromoform	<5.	ug/L
Bromomethane	<5.	ug/L
2-Butanone	<10.	ug/L
Carbon disulfide	<5.	ug/L
Carbon tetrachloride	<5.	ug/L
Chlorobenzene	<5.	ug/L
Chloroethane	<5.	ug/L
Chloroform	<5.	ug/L
Chloromethane	<5.	ug/L
2-Chloroethyl vinyl ether	<300.	ug/L
Dibromochloromethane	<5.	ug/L
1,1-Dichloroethane	23.2	ug/L
1,2-Dichloroethane	<5.	ug/L
1,1-Dichloroethene	219.	ug/L
1,2-Dichloroethene(Total)	115.3	ug/L
1,2-Dichloropropane	<5.	ug/L
cis-1,3-Dichloropropene	<5.	ug/L
trans-1,3-Dichloropropene	<5.	ug/L
Ethyl benzene	<5.	ug/L
2-Hexanone	<10.	ug/L
Methylene chloride	<5.	ug/L
4-Methyl-2-pentanone	<5.	ug/L
Styrene	<5.	ug/L
1,1,2,2-Tetrachloroethane	<5.	ug/L
Tetrachloroethene	405.	ug/L
Toluene	<5.	ug/L
1,1,1-Trichloroethane	633.	ug/L
1,1,2-Trichloroethane	<5.	ug/L
Trichloroethene	452.	ug/L
Vinyl acetate	<5.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-02-90

Sample No.: 21021

PAGE 2

Sample Description: 3-6-90-01 Boiler House Well

Date Taken: 03-06-90

Date Received: 03-06-90

Vinyl chloride	28.8	ug/L
Xylenes, Total	<5.	ug/L

John Andrejcio
Project Manager

ACUSTAR - DAYTON PLANT

Telecopier Cover Sheet

Date: 3/9/90

To: LOU BLAIR

Telefax Number: 841-6730

Telephone Number: 841-6711

Total Pages Including Cover: 6

From: DOUG ORE

Telephone Number: 848-2467

Notes/Comments: ANALYTICAL RESULTS FROM BOILER HOUSE WELL AND POST HOLE IN BLDG. 40-B TWO WEEKS AFTER OPERATING BOILER HOUSE WELL AND AFTER DAILY DRAINING OF HOLE

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

Doug
Lab results
3-9-90
cc J Lion

ANALYTICAL REPORT

MAR 0 9 199

03-08-90

CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

Sample No.: 19162

PAGE 1

POST HOLE BLDG. 40-B

Sample Description: 2-20-90-01 Hole by Stairway

Date Taken: 02-20-90

Date Received: 02-20-90

VOLATILE COMPOUNDS

METHOD 8240

Acetone	2290.	ug/L
Benzene	<2.5	ug/L
Bromodichloromethane	<2.5	ug/L
Bromoform	<2.5	ug/L
Bromomethane	<2.5	ug/L
2-Butanone	540.	ug/L
Carbon disulfide	<2.5	ug/L
Carbon tetrachloride	<2.5	ug/L
Chlorobenzene	<2.5	ug/L
Chloroethane	238.	ug/L
Chloroform	<2.5	ug/L
Chloromethane	<2.5	ug/L
2-Chloroethyl vinyl ether	<150.	ug/L
Dibromochloromethane	<2.5	ug/L
1,1-Dichloroethane	144.	ug/L
1,2-Dichloroethane	15.3	ug/L
1,1-Dichloroethene	5.	ug/L
1,2-Dichloroethene(Total)	191.	ug/L
1,2-Dichloropropane	<2.5	ug/L
cis-1,3-Dichloropropene	<2.5	ug/L
trans-1,3-Dichloropropene	<2.5	ug/L
Ethyl benzene	8.3	ug/L
2-Hexanone	108.	ug/L
Methylene chloride	<2.5	ug/L
4-Methyl-2-pentanone	<5.	ug/L
Styrene	<2.5	ug/L
1,1,2,2-Tetrachloroethane	<2.5	ug/L
Tetrachloroethene	7.2	ug/L
Toluene	4.9	ug/L
1,1,1-Trichloroethane	29.	ug/L
1,1,2-Trichloroethane	<2.5	ug/L
Trichloroethene	23.	ug/L
Vinyl acetate	<5.	ug/L

John Andrejcio
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

03-08-90

CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

Sample No.: 19162

POST HOLE BLDG. 40-B

Sample Description: 2-20-90-01 Hole by Stairway

Date Taken: 02-20-90

Date Received: 02-20-90

Vinyl chloride	<2.5	ug/L
Xylenes, Total	57.8	ug/L

John Andrejcio
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ADDITIONAL VOLATILE COMPOUNDS DETECTED THAT ARE NOT LISTED AS PRIORITY POLLUTANTS

Sample 19162 POST HOLE BLDG. 40-B

Additional Mixed Aromatics	718.	ug/L
2-Propanol	52.	ug/L
1,1,2-Trichloro-1,2,2-Trifluoro-Ethane	117.	ug/L
1,4-Dioxane	368.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Doug
Lab reports
3-9-90

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

MAR 0 9 199

03-08-90

CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

Sample No.: 19162

PAGE 1

Sample Description: 2-20-90-01 Hole by Stairway

Date Taken: 02-20-90

Date Received: 02-20-90

VOLATILE COMPOUNDS

METHOD 8240

Acetone	2290.	ug/L
Benzene	<2.5	ug/L
Bromodichloromethane	<2.5	ug/L
Bromoform	<2.5	ug/L
Bromomethane	<2.5	ug/L
2-Butanone	540.	ug/L
Carbon disulfide	<2.5	ug/L
Carbon tetrachloride	<2.5	ug/L
Chlorobenzene	<2.5	ug/L
Chloroethane	238.	ug/L
Chloroform	<2.5	ug/L
Chloromethane	<2.5	ug/L
2-Chloroethyl vinyl ether	<150.	ug/L
Dibromochloromethane	<2.5	ug/L
1,1-Dichloroethane	144.	ug/L
1,2-Dichloroethane	15.3	ug/L
1,1-Dichloroethene	5.	ug/L
1,2-Dichloroethene(Total)	191.	ug/L
1,2-Dichloropropane	<2.5	ug/L
cis-1,3-Dichloropropene	<2.5	ug/L
trans-1,3-Dichloropropene	<2.5	ug/L
Ethyl benzene	8.3	ug/L
2-Hexanone	108.	ug/L
Methylene chloride	<2.5	ug/L
4-Methyl-2-pentanone	<5.	ug/L
Styrene	<2.5	ug/L
1,1,2,2-Tetrachloroethane	<2.5	ug/L
Tetrachloroethene	7.2	ug/L
Toluene	4.9	ug/L
1,1,1-Trichloroethane	29.	ug/L
1,1,2-Trichloroethane	<2.5	ug/L
Trichloroethene	23.	ug/L
Vinyl acetate	<5.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

03-08-90

CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

Sample No.: 19162

PAGE 2

Sample Description: 2-20-90-01 Hole by Stairway

Date Taken: 02-20-90

Date Received: 02-20-90

Vinyl chloride	<2.5	ug/L
Xylenes, Total	57.8	ug/L

John Andrejcio
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ADDITIONAL VOLATILE COMPOUNDS DETECTED THAT ARE NOT LISTED AS PRIORITY POLLUTANTS

Sample 19162

Additional Mixed Aromatics	718.	ug/L
2-Propanol	52.	ug/L
1,1,2-Trichloro-1,2,2-Trifluoro-Ethane	117.	ug/L
1,4-Dioxane	368.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

03-08-90

CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

Sample No.: 19163

BOILER HOUSE WELL

Sample Description: 02-20-90-02 Boiler Well

Date Taken: 02-20-90

Date Received: 02-20-90

VOLATILE COMPOUNDS

METHOD 8240

Acetone	13.4	ug/L
Benzene	<2.5	ug/L
Bromodichloromethane	<2.5	ug/L
Bromoform	3.5	ug/L
Bromomethane	<2.5	ug/L
2-Butanone	<5.	ug/L
Carbon disulfide	<2.5	ug/L
Carbon tetrachloride	<2.5	ug/L
Chlorobenzene	<2.5	ug/L
Chloroethane	<2.5	ug/L
Chloroform	5.	ug/L
Chloromethane	<2.5	ug/L
2-Chloroethyl vinyl ether	<150.	ug/L
Dibromochloromethane	5.6	ug/L
1,1-Dichloroethane	7.3	ug/L
1,2-Dichloroethane	<2.5	ug/L
1,1-Dichloroethene	21.1	ug/L
1,2-Dichloroethene(Total)	54.	ug/L
1,2-Dichloropropane	<2.5	ug/L
cis-1,3-Dichloropropene	<2.5	ug/L
trans-1,3-Dichloropropene	<2.5	ug/L
Ethyl benzene	<2.5	ug/L
2-Hexanone	<5.	ug/L
Methylene chloride	<2.5	ug/L
4-Methyl-2-pentanone	<5.	ug/L
Styrene	<2.5	ug/L
1,1,2,2-Tetrachloroethane	<2.5	ug/L
Tetrachloroethene	<2.5	ug/L
Toluene	<2.5	ug/L
1,1,1-Trichloroethane	85.	ug/L
1,1,2-Trichloroethane	<2.5	ug/L
Trichloroethene	71.	ug/L
Vinyl acetate	<5.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

03-08-90

CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

Sample No.: 19163

PAGE 4

BOILER HOUSE WELL

Sample Description: 02-20-90-02 Boiler Well

Date Taken: 02-20-90

Date Received: 02-20-90

Vinyl chloride	<2.5	ug/L
Xylenes, Total	<2.5	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

03-08-90

CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

Sample No.: 19163

Sample Description: 02-20-90-02 Boiler Well

Date Taken: 02-20-90

Date Received: 02-20-90

VOLATILE COMPOUNDS

METHOD 8240

Acetone	13.4	ug/L
Benzene	<2.5	ug/L
Bromodichloromethane	<2.5	ug/L
Bromoform	3.5	ug/L
Bromomethane	<2.5	ug/L
2-Butanone	<5.	ug/L
Carbon disulfide	<2.5	ug/L
Carbon tetrachloride	<2.5	ug/L
Chlorobenzene	<2.5	ug/L
Chloroethane	<2.5	ug/L
Chloroform	5.	ug/L
Chloromethane	<2.5	ug/L
2-Chloroethyl vinyl ether	<150.	ug/L
Dibromochloromethane	5.6	ug/L
1,1-Dichloroethane	7.3	ug/L
1,2-Dichloroethane	<2.5	ug/L
1,1-Dichloroethene	21.1	ug/L
1,2-Dichloroethene(Total)	54.	ug/L
1,2-Dichloropropane	<2.5	ug/L
cis-1,3-Dichloropropene	<2.5	ug/L
trans-1,3-Dichloropropene	<2.5	ug/L
Ethyl benzene	<2.5	ug/L
2-Hexanone	<5.	ug/L
Methylene chloride	<2.5	ug/L
4-Methyl-2-pentanone	<5.	ug/L
Styrene	<2.5	ug/L
1,1,2,2-Tetrachloroethane	<2.5	ug/L
Tetrachloroethene	<2.5	ug/L
Toluene	<2.5	ug/L
1,1,1-Trichloroethane	85.	ug/L
1,1,2-Trichloroethane	<2.5	ug/L
Trichloroethene	71.	ug/L
Vinyl acetate	<5.	ug/L

John Andrejcio
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

03-08-90

CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

Sample No.: 19163

PAGE 4

Sample Description: 02-20-90-02 Boiler Well

Date Taken: 02-20-90

Date Received: 02-20-90

Vinyl chloride	<2.5	ug/L
Xylenes, Total	<2.5	ug/L

John Andreicio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

03-08-90

CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

Sample No.: 19164

Sample Description: Blanks

Date Taken:

Date Received: 02-20-90

VOLATILE COMPOUNDS

METHOD 8240

Acetone	<1.	ug/L
Benzene	<0.5	ug/L
Bromodichloromethane	<0.5	ug/L
Bromoform	<0.5	ug/L
Bromomethane	<0.5	ug/L
2-Butanone	<1.	ug/L
Carbon disulfide	<0.5	ug/L
Carbon tetrachloride	<0.5	ug/L
Chlorobenzene	<0.5	ug/L
Chloroethane	<0.5	ug/L
Chloroform	<0.5	ug/L
Chloromethane	<0.5	ug/L
2-Chloroethyl vinyl ether	<30.	ug/L
Dibromochloromethane	<0.5	ug/L
1,1-Dichloroethane	<0.5	ug/L
1,2-Dichloroethane	<0.5	ug/L
1,1-Dichloroethene	<0.5	ug/L
1,2-Dichloroethene(Total)	<0.5	ug/L
1,2-Dichloropropane	<0.5	ug/L
cis-1,3-Dichloropropene	<0.5	ug/L
trans-1,3-Dichloropropene	<0.5	ug/L
Ethyl benzene	<0.5	ug/L
2-Hexanone	<1.	ug/L
Methylene chloride	<0.5	ug/L
4-Methyl-2-pentanone	<1.	ug/L
Styrene	<0.5	ug/L
1,1,2,2-Tetrachloroethane	<0.5	ug/L
Tetrachloroethene	<0.5	ug/L
Toluene	<0.5	ug/L
1,1,1-Trichloroethane	<0.5	ug/L
1,1,2-Trichloroethane	<0.5	ug/L
Trichloroethene	<0.5	ug/L
Vinyl acetate	<1.	ug/L

John Andrejcio
Project Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

03-08-90

CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

Sample No.: 19164

PAGE 6

Sample Description: Blanks

Date Taken:

Date Received: 02-20-90

Vinyl chloride	<0.5	ug/L
Xylenes, Total	<0.5	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

Copy sent to Joe Blair 4/23/90

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-09-90

Sample No.: 18560

PAGE 1

Sample Description: Boiler House Well

Date Taken: 02-13-90 1130

Date Received: 02-13-90

VOLATILE COMPOUNDS

METHOD 8240

Acetone	<20.	ug/L
Benzene	<10.	ug/L
Bromodichloromethane	<10.	ug/L
Bromoform	<10.	ug/L
Bromomethane	<10.	ug/L
2-Butanone	<20.	ug/L
Carbon disulfide	<10.	ug/L
Carbon tetrachloride	<10.	ug/L
Chlorobenzene	<10.	ug/L
Chloroethane	<10.	ug/L
Chloroform	<10.	ug/L
Chloromethane	<10.	ug/L
2-Chloroethyl vinyl ether	<600.	ug/L
Dibromochloromethane	<10.	ug/L
1,1-Dichloroethane	29.	ug/L
1,2-Dichloroethane	<10.	ug/L
1,1-Dichloroethene	178.	ug/L
1,2-Dichloroethene(Total)	170.	ug/L
1,2-Dichloropropane	<10.	ug/L
cis-1,3-Dichloropropene	<10.	ug/L
trans-1,3-Dichloropropene	<10.	ug/L
Ethyl benzene	<10.	ug/L
2-Hexanone	<20.	ug/L
Methylene chloride	<10.	ug/L
4-Methyl-2-pentanone	<10.	ug/L
Styrene	<10.	ug/L
1,1,2,2-Tetrachloroethane	<10.	ug/L
Tetrachloroethene	451.	ug/L
Toluene	<10.	ug/L
1,1,1-Trichloroethane	785.	ug/L
1,1,2-Trichloroethane	<10.	ug/L
Trichloroethene	606.	ug/L
Vinyl acetate	<10.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-09-90

Sample No.: 18560

PAGE 2

Sample Description: Boiler House Well

Date Taken: 02-13-90 1130

Date Received: 02-13-90

Vinyl chloride	14.	ug/L
Xylenes, Total	<10.	ug/L

John Andrejcio
Project Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Dayton Division
3601 South Dixie Drive
Dayton, OH 45439
Tel: (513) 294-6856
Fax: (513) 294-7816

Formerly: Howard Laboratories, Inc.

ANALYTICAL REPORT

Doug Orf
CHRYSLER CORPORATION
1600 Webster Street
Dayton OH 45404

04-09-90

Sample No.: 18561

Sample Description: Blanks

Date Taken: NA

Date Received: 02-13-90

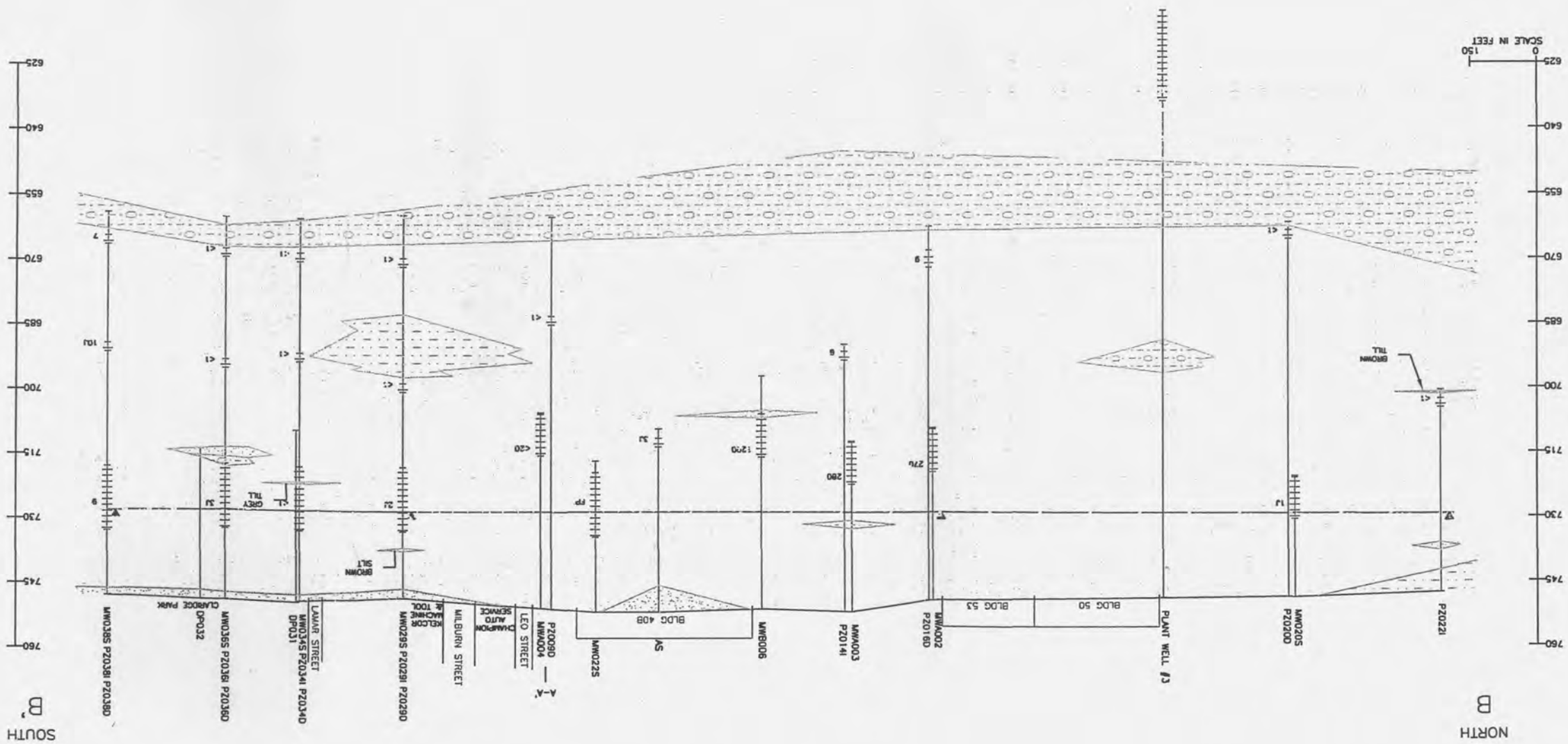
VOLATILE COMPOUNDS

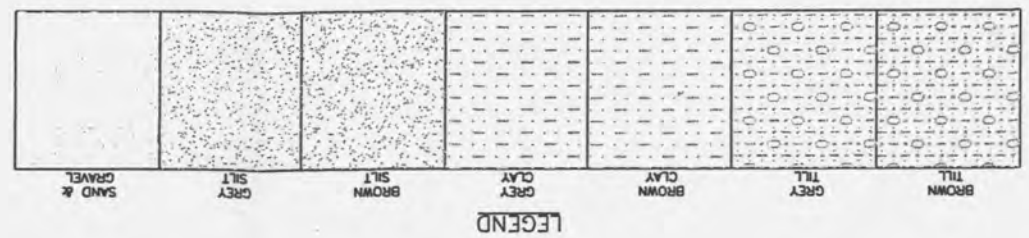
METHOD 8240

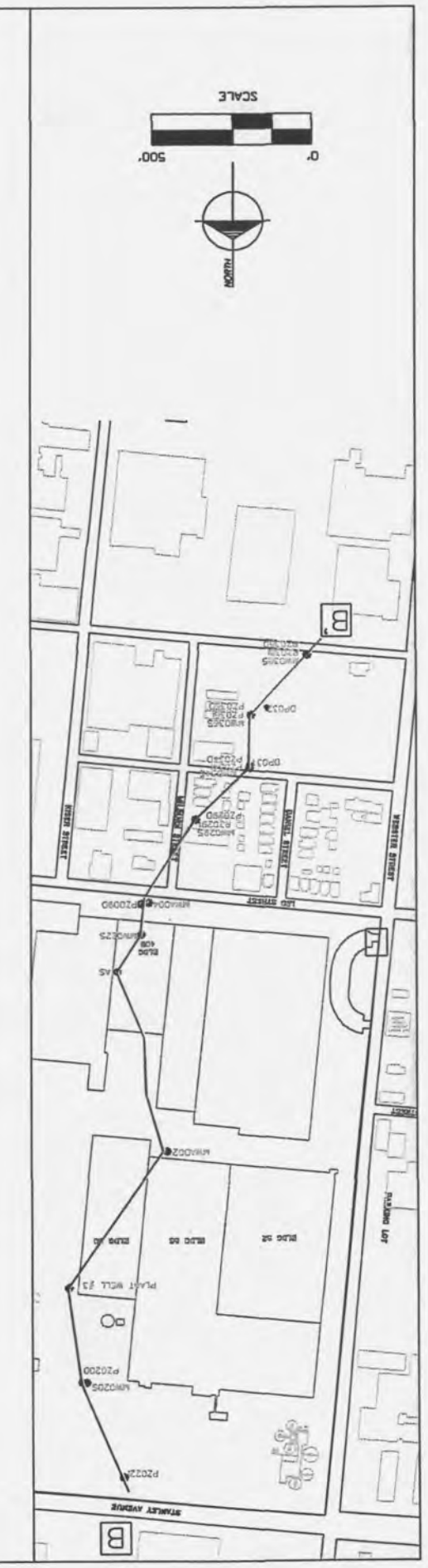
TOX-HALOGENATED VOLATILES

Acetone	<2.	ug/L
Benzene	<1.	ug/L
Bromodichloromethane	<1.	ug/L
Bromoform	<1.	ug/L
Bromomethane	<1.	ug/L
2-Butanone	<2.	ug/L
Carbon disulfide	<1.	ug/L
Carbon tetrachloride	<1.	ug/L
Chlorobenzene	<1.	ug/L
Chloroethane	<1.	ug/L
Chloroform	<1.	ug/L
Chloromethane	<1.	ug/L
2-Chloroethyl vinyl ether	<60	ug/L
Dibromochloromethane	<1.	ug/L
1,1-Dichloroethane	<1.	ug/L
1,2-Dichloroethane	<1.	ug/L
1,1-Dichloroethene	<1.	ug/L
1,2-Dichloroethene(Total)	<1.	ug/L
1,2-Dichloropropane	<1.	ug/L
cis-1,3-Dichloropropene	<1.	ug/L
trans-1,3-Dichloropropene	<1.	ug/L
Ethyl benzene	<1.	ug/L
2-Hexanone	<2.	ug/L
Methylene chloride	<1.	ug/L
4-Methyl-2-pentanone	<1.	ug/L
Styrene	<1.	ug/L
1,1,2,2-Tetrachloroethane	<1.	ug/L
Tetrachloroethene	<1.	ug/L
Toluene	<1.	ug/L
1,1,1-Trichloroethane	<1.	ug/L
1,1,2-Trichloroethane	<1.	ug/L

John Andrejcio
Project Manager

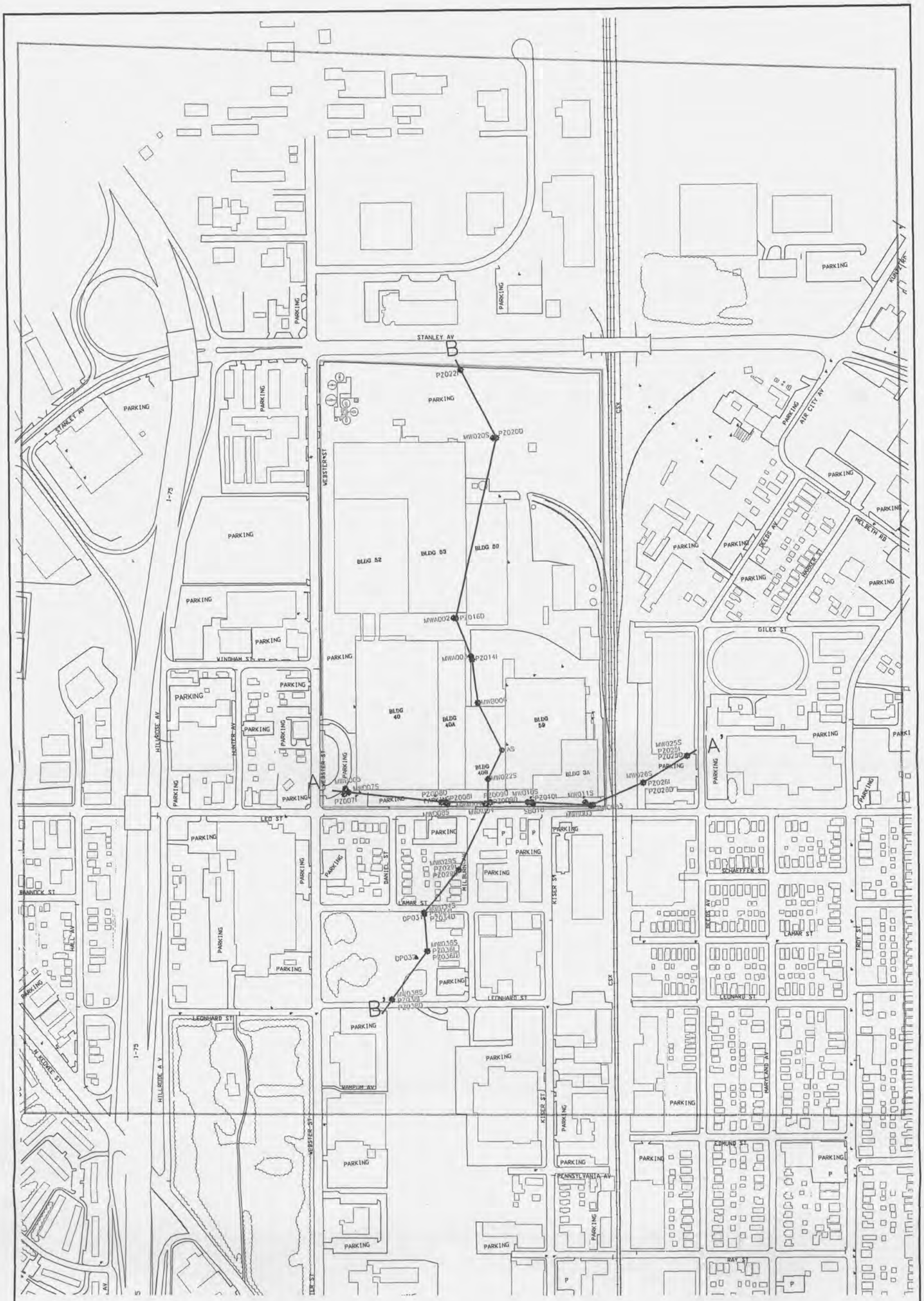






SOURCE: LBG DRAWING 3CH041 AND 3CH044

EARTHTECH A TYCO INTERNATIONAL LTD. COMPANY 4135 TECHNOLOGY PARKWAY, STERLING, MICHIGAN 32083			SITE SPECIFIC NORTH-SOUTH GEOLOGICAL CROSS-SECTION DAYTON THERMAL PRODUCTS SITE DAYTON, OHIO
DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME:
CHECKED BY: MA	DATE: JAN. 23, 2003	SCALE: ------	CROSS NS



LEGEND

— - PROPERTY LINE

— - $\frac{1}{4}$ MILE OFFSET FROM PROPERTY LINE

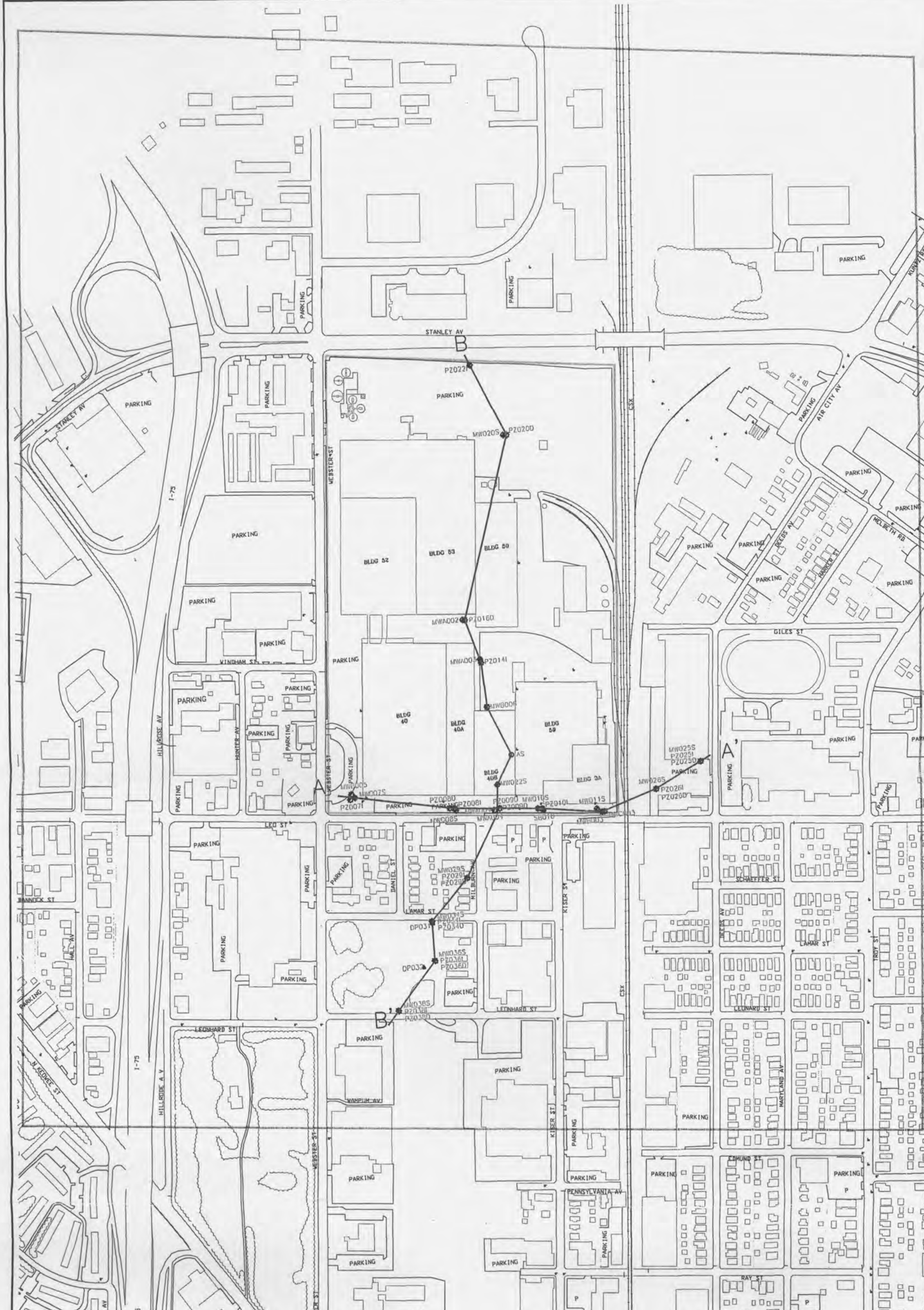
NORTH

0' 400'

SCALE

SOURCE: LBG DRAWING 3CHDA141, 3CHDA14K AND STANELY & 75

EARTH TECH A tyco INTERNATIONAL LTD. COMPANY 4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083		SITE SPECIFIC GEOLOGICAL CROSS-SECTION LOCATOR MAP DAYTON THERMAL PRODUCTS SITE DAYTON, OHIO	
DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME:
CHECKED BY: MA	DATE: JAN. 23, 2003	SCALE: ------	CROSS SECTION LOCATOR



LEGEND

— PROPERTY LINE

— $\frac{1}{4}$ MILE OFFSET FROM PROPERTY LINE

0' 400'

SCALE

SOURCE: LBG DRAWING 3CHDA141, 3CHDA14K AND STANLEY & 75

EARTH TECH

A tyco INTERNATIONAL LTD. COMPANY

4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083

SITE SPECIFIC
GEOLOGICAL CROSS-SECTION
LOCATOR MAP

DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME:
CHECKED BY: MA	DATE: JAN. 23, 2003	SCALE: ------	CROSS SECTION LOCATOR

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: Chrysler Corporation WELL NO.: MW-7S PAGE: 1 OF 1 PAGES

EPA Region 5 Records Ctr.
349869

SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 30.3 to 20.3 feet below grade
DATE COMPLETED: November 11, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 20.3 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 Quartz Sand **SETTING:** 30 to 17.7 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 17.7 to 16.2 feet below grade
OBSERVER: Dave Strand	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade
ELEVATION OF RP: 750.50	**STATIC WATER LEVEL:** 25.7 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 750.18	**DURATION:** ~60 minutes **VOLUME:** ~100 gallons

REMARKS: MW-7S is located just west of the southwest corner of Building 40 next to existing well MWB-5.

S:\TECH\3CHRY\DAYTON\HYDROGEO\MW-7SGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	5	Augered, silt and fine sand; trace gravel and cobbles; light brown, dry.	
5	7	No return, pounding a rock.	
10	12	Silt and fine sand with medium to coarse sand and gravel; trace cobbles; brown; dry.	0.5
20	22	Sand, fine to coarse; little silt; brown; damp.	0.5
25	27	Sand, fine to coarse; trace clay, silt and fine gravel; brown; saturated at 25 feet.	0.7
30	32	Sand, fine to coarse; trace gravel; brownish-gray; saturated.	3.1
		End of Boring: Total depth augered = 30 feet. Total depth split spooned = 32 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** PZ-7I **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 55.4 to 53.4 feet below grade
DATE COMPLETED: November 11-12, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 53.4 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 Quartz Sand **SETTING:** 55 to 46.3 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 46.3 to 41.3 feet below grade
OBSERVER: Dave Strand	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade
ELEVATION OF RP: 750.12	**STATIC WATER LEVEL:** 25.7 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump **DURATION:** ~60 minutes **VOLUME:** ~100 gallons
ELEVATION OF TOP OF PVC CASING: 749.90	
REMARKS: PZ-7I is located just west of the southwest corner of Building 40 next to existing well MWB-5.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ-7IGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	40	Augered, see geologic log for MW-7S for geology description to 32 feet below grade.	
40	42	Gravel, very coarse, with cobbles; little fine to coarse sand and gravel; gray; saturated.	1.3
50	52	As above with some fine to medium sand; brownish-gray; saturated.	
55	57	As above.	0.2
		End of Boring: Total depth augered = 55 feet. Total depth split spooned = 57 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** MW-8S **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 29 to 19 feet below grade
DATE COMPLETED: November 24, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 19 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand **SETTING:** 28 to 17 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (X) Not applicable	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 17 to 16 feet below grade
OBSERVER: Mark Hemstreet	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade.
ELEVATION OF RP: 750.44	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 750.25	**DURATION:** ~60 minutes **VOLUME:** ~100 gallons
REMARKS: MW-8S is located in the south parking lot along the south property line south of Building 40 and Building 40A.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\MW8SGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	28	See geologic log for PZ-8D for geology description.	
		End of boring. Total depth augered = 28 feet. Total depth split spooned = Not applicable.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** PZ-8I **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 38.4 to 36.4 feet below grade
DATE COMPLETED: November 18, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 36.4 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand **SETTING:** 40 to 34.3 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (X) Not applicable	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 34.3 to 33.3 feet below grade
OBSERVER: Mark Hemstreet	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade.
ELEVATION OF RP: 750.51	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 749.94	**DURATION:** ~60 minutes **VOLUME:** ~100 gallons
REMARKS: PZ-8I is located in the south parking lot along the south property line south of Building 40 and Building 40A.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ8IGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	40	See geologic log for PZ-8D for geology description.	
		End of boring. Total depth augered = 40 feet. Total depth split spooned = Not applicable.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO:** PZ-8D **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO:** 10 **SETTING:** 78.7 to 76.7 feet below grade
DATE COMPLETED: November 17, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 76.7 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 80 to 74 feet below grade
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets
OBSERVER: Mark Hemstreet	**SETTING:** 74 to 73 feet below grade
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade.
ELEVATION OF RP: 750.25	**STATIC WATER LEVEL:** 20 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 749.84	**DURATION:** ~60 minutes **VOLUME:** ~100 gallons

REMARKS: PZ-8D is located in the south parking lot along the south property line south of Building 40 and Building 40A.

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ8DGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	10	Augered.	
10	12	Sand, medium; trace gravel; brown; moist.	6.8
20	22	No recovery, pounding a rock.	
25	27	Sand, medium; little gravel; brown; saturated.	77
35	37	Sand, medium; little coarse sand; some gravel; brown; saturated.	276
45	47	Sand, medium to coarse, and gravel; brown; saturated.	15
55	57	Sand, coarse, and gravel; unsorted; brownish-gray; saturated.	8.9
65	67	Sand, medium; brown; saturated; sample appeared to be slough.	6.9
75	77	As above; sample appeared to be slough.	35
80	82	Sand, medium; little coarse sand; appears to be slough.	35
		End of boring. Total depth augered = 80 feet. Total depth split spooned = 82 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO:** PZ-9D **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO:** 10 **SETTING:** 67.6 to 65.6 feet below grade
DATE COMPLETED: November 19-20, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 65.6 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand **SETTING:** 89 to 65 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 65 to 64 feet below grade
OBSERVER: Mark Hemstreet	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade.
ELEVATION OF RP: 751.19	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 750.82	**DURATION:** ~60 minutes **VOLUME:** ~100 gallons

REMARKS: PZ-9D is located in the south parking lot along the south property line south of Building 40B by existing well MWA-4.

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ9DGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	10	Augered.	
10	12	Sand and gravel; unsorted; brown; dry.	5.9
20	22	Silt, sand and gravel; unsorted; brown; gray staining; moist.	77
25	27	Sand, fine; little medium sand; brown; saturated.	96
30	32	Sand, medium; brown, saturated.	221
40	42	Sand, medium; trace gravel; brown; saturated.	545
45	47	Sand, medium; trace coarse sand and gravel; brown; saturated.	729
50	52	Sand, medium to coarse; little gravel; brown; saturated.	386
55	57	Silt and sand; cobble in tip of spoon; brown; saturated.	469
60	62	Sand, coarse; brown; saturated.	199
65	67	Sand, coarse, and gravel; unsorted; brown; saturated.	122
70	72	Silt, sand, gravel, and cobbles; little clay; grayish; saturated.	83
80	82	Sand and gravel; little cobbles; gray; saturated.	22
82	89	Augered; driller thought "TILL" was encountered due to hard drilling.	
89	91	Sand and gravel; appears to be slough.	70
		End of boring. Total depth drilled = 89 feet. Total depth split spooned = 91 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** MW-10S **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 29.4 to 19.4 feet below grade
DATE COMPLETED: November 25, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 19.4 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 Quartz Sand **SETTING:** 30 to 17.4 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (X) Not applicable	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 17.4 to 15.4 feet below grade
OBSERVER: Dave Strand	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 751.63	**STATIC WATER LEVEL:** 23 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 751.32	**DURATION:** ~60 minutes **VOLUME:** ~100 gallons

REMARKS: MW-10S is located in the south parking lot along the south property line approximately 20 feet south of the southwest corner of Building 3A.

S:\TECH\3CHRY\DAYTON\HYDROGEO\MW10SGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	30	Augered; see geologic log for PZ-10I for geology description.	
		End of Boring. Total depth augered = 30 feet. Total depth split spooned = Not applicable.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** PZ-10I **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 49.9 to 47.9 feet below grade
DATE COMPLETED: November 24, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 47.9 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 Quartz Sand **SETTING:** 52 to 41.9 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 41.9 to 39.9 feet below grade
OBSERVER: Dave Strand	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 751.76	**STATIC WATER LEVEL:** 23 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 751.34	**DURATION:** ~60 minutes **VOLUME:** ~100 gallons

REMARKS: PZ-10I is located in the south parking lot along the south property line approximately 20 feet south of the southwest corner of Building 3A.

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ10IGEO.LOG

DEPTH FEET FROM	TO	DESCRIPTION	PID READINGS (ppm)
0	10	Augered.	
10	12	Sand, fine; some medium sand; trace cobbles; brown; dry.	4.1
20	22	Till; clay with sand and gravel dispersed in the clay matrix; brown; turns gray at 21.5 feet; dry; trace water on top of Till. The Till is approximately 4 feet thick.	2.1
30	32	Sand, fine to medium; trace coarse sand; trace clay and silt; brown; saturated.	479
40	42	Sand, fine to coarse; trace silt; brown; saturated.	489
50	52	Sand, fine to medium; trace coarse; trace clay and silt; brown; saturated.	568
		End of Boring: Total depth augered = 50 feet. Total depth split spooned = 52 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** MW-11S **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 29.1 to 19.1 feet below grade
DATE COMPLETED: November 24, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 19.1 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand **SETTING:** 28 to 16 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 16 to 15 feet below grade
OBSERVER: Mark Hemstreet	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade
ELEVATION OF RP: 751.84	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 751.50	**DURATION:** ~60 minutes **VOLUME:** ~100 gallons

REMARKS: MW-11S is located near the southeast corner of Building 3A and in the southeast corner of the property near existing wells MWB-3 and MWC-3.

S:\TECH\3CHRY\DAYTON\HYDROGEO\MW11SGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	10	Augered.	
10	12	Sand and gravel; unsorted; brown; dry.	3.0
20	22	Till; silty clay with some gravel; gray-brown; moist.	2.4
28	30	Sand, medium to coarse; and gravel; brown; saturated.	43.4
		End of Boring: Total depth augered = 28 feet. Total depth split spooned = 30 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** PZ-12I **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 57.9 to 55.9 feet below grade
DATE COMPLETED: November 19, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 55.9 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 60 to 52.8 feet below grade
SAMPLING METHOD: Split Spoon (X) Not applicable	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets
OBSERVER: Dave Strand	**SETTING:** 52.8 to 50.8 feet below grade
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 751.56	**STATIC WATER LEVEL:** 23 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 751.16	**DURATION:** 50 minutes **VOLUME:** 90 gallons

REMARKS: PZ-12I is located approximately 15 feet south of existing well MWA-6 located just south of SILO #2 near the northeast corner of Building 3A.

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ12IGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	60	See geologic log for PZ-12D for geology description.	
		End of Boring: Total depth augered = 60 feet. Total depth split spooned = Not applicable.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO:** PZ-12D **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO:** 10 **SETTING:** 84.5 to 82.5 feet below grade
DATE COMPLETED: November 18, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 82.5 to 0 feet below grade **SAND PACK SIZE & TYPE:** Natural Formation
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 85 to 72.4 feet below grade
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets
OBSERVER: Dave Strand	**SETTING:** 72.4 to 69.4 feet below grade
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade.
ELEVATION OF RP: 751.51	**STATIC WATER LEVEL:** 22.8 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 751.15	**DURATION:** 30 minutes **VOLUME:** 80 gallons

REMARKS: PZ-12D is located approximately 20 feet south of existing well MWA-6 located just south of SILO #2 near at the northeast corner of Building 3A

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ12DGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	5	Augered; silty-clay with little gravel and cobbles; brown; moist.	1.3
10	12	Sand and gravel, fine to coarse; little cobbles; brown; dry.	6.3
20	22	As above.	
30	32	As above to 31 feet; then Sand, medium to coarse; trace fine sand; little fine to coarse gravel; brown; saturated.	63
40	42	As above with 3-inch fine sand layer at 41 feet; brown; saturated.	138
45	47	Sand, fine to medium; little coarse sand; brown; saturated.	67
50	52	Gravel, very coarse; some fine to coarse gravel; little cobbles; little fine to coarse sand; trace clay and silt; brown; saturated.	45
55	57	Sand, fine to medium; little coarse sand; very coarse gravel in spoon tip; brown; saturated.	11.3
60	62	Gravel, very coarse; trace fine to medium sand; brown; saturated; trace gray clay in tip.	9.8
65	67	Sand and gravel, fine to very coarse; trace clay and silt; brown; saturated.	3.1
70	72	As above.	3.0
75	77	As above.	4.0
80	82	As above with trace clay and silt in tip of spoon; gray.	3.1
85	87	As above to 86.5 feet; then Till; clay; trace silt, sand and gravel in matrix; gray; damp.	2.9
		End of boring. Total depth augered = 85 feet. Total depth split spooned = 87 feet	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** PZ-13I **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 47.8 to 45.8 feet below grade
DATE COMPLETED: November 14-15, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 45.8 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand **SETTING:** 48 to 43 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 43 to 42 feet below grade
OBSERVER: Mark Hemstreet	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade
ELEVATION OF RP: 750.85	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 750.54	**DURATION:** ~60 minutes **VOLUME:** ~100 gallons
REMARKS: PZ-13I is located near the southwest corner of Building 39 near existing well MWA-5.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ13IGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	10	Augered.	
10	12	Sand and gravel; little silt; unsorted; brown; dry.	1.0
20	22	Sand and gravel; unsorted; brown; dry.	3.9
30	32	Sand, medium to coarse; little gravel; unsorted; brown; saturated.	36
40	42	Sand, fine; brown; saturated.	15
48	50	Till; clay and gravel; gray; dry; hard.	2
		End of boring. Total depth drilled = 48 feet. Total depth split spooned = 50 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO:** PZ-14I **PAGE:** 1 OF 1 PAGES
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO:** 10 **SETTING:** 59.9 to 57.9 feet below grade
DATE COMPLETED: November 19-20, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 57.9 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 Quartz Sand **SETTING:** 60 to 55.9 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 55.9 to 53.9 feet below grade
OBSERVER: Dave Strand	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 751.82	**STATIC WATER LEVEL:** 24 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 751.36	**DURATION:** ~ 60 minutes **YIELD:** ~100 gallons
REMARKS: PZ-14I is located near existing well MWA-3 located along the northeast side of Building 40A.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ14IGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	5	Augered; silt, sand, gravel and cobbles; brown; dry.	0.9
10	12	Pounding a rock, minor recovery.	9.5
20	22	Sand and gravel, fine to coarse; little silt; trace cobbles; brown; dry.	19.8
30	32	Sand and gravel, fine to coarse; trace silt; trace cobbles; brown; saturated near 24 feet.	150
40	42	Sand, fine to medium; little coarse sand; some silt; trace gravel; brown; saturated.	61
50	52	Sand and gravel, fine to very coarse; trace cobbles; trace clay; brown; saturated.	42
55	57	Sand, fine; little medium sand to 56.4 feet; then Gravel with some fine to coarse sand; grayish-brown; saturated.	50
60	62	Sand and gravel, fine to coarse; trace cobbles; grayish-brown; saturated.	21
		End of boring. Total depth augered = 60 feet. Total depth split spooned = 62 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** MW-15S **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 29.5 to 19.5 feet below grade
DATE COMPLETED: November 22, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 19.5 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 30 to 15.9 feet below grade
SAMPLING METHOD: Split Spoon (X) Not applicable	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets
OBSERVER: Dave Strand	**SETTING:** 15.9 to 14.4 feet below grade
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout Hole Plug 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 746.76	**STATIC WATER LEVEL:** 20 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 746.35	**DURATION:** 30 minutes **VOLUME:** 115 gallons

REMARKS: MW-15S is located in the northwest corner of the handicap parking area located on the southwest corner of the main plant entrance along Webster Street.

S:\TECH\3CHRY\DAYTON\HYDROGEO\MW15SGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	30	Augered; see geologic log for PZ-15I for geology description.	
		End of Boring: Total depth augered = 30 feet. Total depth split spooned = Not applicable.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO:** PZ-15I **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO:** 10 **SETTING:** 50.1 to 48.1 feet below grade
DATE COMPLETED: November 22, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 48.1 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 50 to 43.9 feet below grade
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets
OBSERVER: Dave Strand	**SETTING:** 43.9 to 41.9 feet below grade
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 747.03	**STATIC WATER LEVEL:** 20 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 746.76	**DURATION:** ~60 minutes **YIELD:** ~100 gallons

REMARKS: PZ-15I is located in the northwest corner of the handicap parking area located on the southwest corner of the main plant entrance along Webster Street.

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ15IGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	10	Augered; 0.8 foot brown topsoil then Sand and gravel, fine to coarse; some cobbles.	
10	12	Sand and gravel, fine to very coarse; trace cobbles; brown; dry.	3.1
20	22	Gravel, fine to very coarse; some fine to very coarse sand; trace cobbles; trace clay and silt; brown; saturated at 20 feet.	1.8
30	32	As above to 31 feet; then Sand, fine; little medium sand; little silt; trace clay; brown; saturated.	3.9
40	42	Gravel, very coarse; some fine to coarse gravel; trace coarse sand; brown; saturated.	3.1
50	52	Sand fine to coarse; little silt; brown; saturated. Bottom 4-inches are Silt; trace clay; brown; moist.	1.6
		End of boring. Total depth augered = 50 feet. Total depth split spooned = 52 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO:** PZ-16D **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO:** 10 **SETTING:** 80.9 to 76.9 feet below grade
DATE COMPLETED: November 15-17, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 76.9 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 85 to 70.9 feet below grade
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets
OBSERVER: Dave Strand	**SETTING:** 70.9 to 60.9 feet below grade
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade.
ELEVATION OF RP: 749.28	**STATIC WATER LEVEL:** 21 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 748.76	**DURATION:** 35 minutes **VOLUME:** 20 gallons

REMARKS: PZ-16D is located near existing well MWA-2 located at the southwest corner of Building 50 and southeast corner of Building 53.

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ16DGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	5	Augered; Sand, gravel, and cobbles with clay; brown; dry.	281
10	12	As above.	18.5
20	22	Sand, medium to coarse; trace fine sand; little fine to coarse gravel; trace fine cobbles; brown; damp.	169
30	32	Sand and gravel; fine to coarse; trace fine cobbbles; brown; saturated at 21 feet.	129
40	42	Sand, medium to coarse; little fine sand to 41.5 feet; then Gravel; medium to coarse; little fine gravel; little fine to coarse sand; brown; saturated.	177
50	52	Gravel, coarse with fine cobbles; little fine to coarse sand; brown; saturated.	31
55	57	As above with trace silt.	12.9
60	62	As above with trace clay.	29
70	72	As above except bottom 3 inches are clayey with sand and gravel; gray; saturated.	10.8
75	77	Gravel, very coarse; bottom 4 inches are clayey sand and gravel; gray; moist.	26
85	87	Clayey sand, fine to coarse; gray; saturated to 86 feet; then Clayey silt; gray; moist.	1.0
		End of boring. Total depth augered = 85 feet. Total depth split spooned = 87 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO:** PZ-17I **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO:** 10 **SETTING:** 57.7 to 55.7 feet below grade
DATE COMPLETED: December 3, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 55.7 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand **SETTING:** 57 to 52.5 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (X) Not applicable	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 52.5 to 50.5 feet below grade
OBSERVER: Mike Bratrud	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade.
ELEVATION OF RP: 750.99	**STATIC WATER LEVEL:** 22.7 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 750.66	**DURATION:** 45 minutes **VOLUME:** 65 gallons
REMARKS: PZ-17I is located approximately 30 feet east of the drum storage area between Buildings 47 and 50.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ17IGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	57	See geologic log for PZ-17D for geology description.	
		End of boring . Total depth augered = 57 feet. Total depth split spooned = Not applicable.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO:** PZ-17D **PAGE:** 1 OF 1 PAGES
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO:** 10 **SETTING:** 84.3 to 82.3 feet below grade
DATE COMPLETED: December 2-3, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 82.3 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 85 to 79.2 feet below grade
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets
OBSERVER: Mike Bratrud	**SETTING:** 79.2 to 77.2 feet below grade
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade.
ELEVATION OF RP: 750.89	**STATIC WATER LEVEL:** 24 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 750.58	**DURATION:** 30 minutes **VOLUME:** 30 gallons
REMARKS: PZ-17D is located approximately 30 feet east of the drum storage area between Buildings 47 and 50.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ17DGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	10	Augered; Sand and gravel, fine to coarse; some cobbles; trace silt; brown; dry.	
10	12	As above.	9.5
12	20	Sand, gravel and cobbles, fine to coarse; cobbles up to 4-inches in diameter; brown.	
20	22	Sand, medium to coarse, and fine to coarse gravel; some cobbles; little fine sand; brown; dry.	25.5
30	32	Sand, medium to coarse; some fine to medium gravel; some small cobbles; little fine sand; brown; saturated.	155
40	42	Sand, medium to coarse, and fine to coarse gravel; few small cobbles; brown, saturated to 41.8 feet; then Clay and fine to coarse sand; little gravel; small cobble; tan; saturated; hard.	101
50	52	Sand, coarse, and fine to coarse gravel; some fine to medium sand; brown; saturated.	51
60	62	Sand, fine to coarse; some fine to coarse gravel; some clay and silt; little cobbles; brown; saturated; very tight and dense.	15.6
70	72	Silty sand, fine to coarse; some fine to medium gravel; little coarse gravel; trace cobbles; brown; saturated; very dense.	14.2
80	82	As above except gray.	1.4
85	87	Till; Clay with silt, sand and gravel in clay matrix, fine to coarse; little cobbles; gray.	0.8
		End of boring. Total depth augered = 85 feet. Total depth split spooned = 87 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** MW-18S **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 29.6 to 19.6 feet below grade
DATE COMPLETED: November 14, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 19.6 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand **SETTING:** 30 to 17.7 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade. **SETTING:** 17.7 to 0 feet below grade
OBSERVER: Dave Strand	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 751.92	**STATIC WATER LEVEL:** 23.5 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 751.57	**DURATION:** ~60 minutes **YIELD:** ~100 gallons

REMARKS: MW-18S is located near existing wells MWB-2 and MWC-2 along the railroad spur on the east property line northeast of Building 47.

S:\TECH3CHRY\DAYTON\HYDROGEO\MW18SGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	10	Sand and gravel, very fine to very coarse with cobbles up to 4-inches in diameter; brown; dry.	
10	12	As above.	2.0
20	22	As above.	1.4
25	27	Sand, fine to medium; some coarse sand; little fine to coarse gravel; trace cobbles; brown; saturated at 25 feet.	13.8
27	30	Augered.	
		End of boring. Total depth augered = 30 feet. Total depth split spooned = 27 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** MW-19S **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 23.4 to 13.4 feet below grade
DATE COMPLETED: November 13, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 13.4 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 Quartz Sand **SETTING:** 25 to 11.3 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (X) Not applicable	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 11.3 to 9.3 feet below grade
OBSERVER: Mark Hemstreet	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade.
ELEVATION OF RP: 748.01	**STATIC WATER LEVEL:** 20 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 747.64	**DURATION:** 50 minutes **VOLUME:** 15 gallons
REMARKS: MW-19S is located approximately 300 feet south and 50 feet west of the northeast corner of the property.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\MW19SGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	25	See geologic log for PZ-19I for geology description.	
		End of boring. Total depth augered = 25 feet. Total depth split spooned = Not applicable.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** PZ-19I **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 62.2 to 60.2 feet below grade
DATE COMPLETED: November 12, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 60.2 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 62 to 58.3 feet below grade
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets
OBSERVER: Mark Hemstreet	**SETTING:** 58.3 to 56.3 feet below grade
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade
ELEVATION OF RP: 747.89	**STATIC WATER LEVEL:** 21 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 747.52	**DURATION:** 100 minutes **VOLUME:** 70 gallons

REMARKS: PZ-19I is located approximately 300 feet south and 50 feet west of the northeast corner of the property

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ19IGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	5	Augered.	
5	7	Sand, medium to coarse; some gravel; unsorted; brown; dry.	0.0
10	12	Sand and gravel; unsorted; trace clay; brown.	0.0
20	22	Sand, medium to coarse, and gravel; unsorted; brown; saturated.	0.0
30	32	Sand, medium to coarse; some gravel; unsorted; brown; saturated.	0.0
40	42	Sand, medium, grading to coarse sand; brown; saturated.	1.0
50	52	Sand, medium; little coarse sand; trace gravel; brown; saturated.	1.1
60	62	Sand, fine to medium; trace coarse sand; trace clay; brown; moist.	0.0
		End of boring. Total depth augered = 60 feet. Total depth split spooned = 62 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** MW-20S **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 27.8 to 17.8 feet below grade
DATE COMPLETED: November 12, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 17.8 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 Quartz Sand **SETTING:** 27 to 16 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 16 to 12 feet below grade
OBSERVER: Dave Strand	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 748.59	**STATIC WATER LEVEL:** 21.7 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 748.24	**DURATION:** 30 minutes **VOLUME:** 30 gallons
REMARKS: MW-20S is located approximately 130 feet east of the northeast corner of Building 53.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\MW20SGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	5	Augered. Sand, gravel, cobbles with some silt; gray; dry.	0.3
10	12	As above; brown.	1.0
20	22	Sand, fine to medium; little coarse sand; trace gravel; brown; saturated at 21.7 feet.	1.4
25	27	Sand, fine to coarse; trace gravel; brown; saturated.	1.3
		End of boring. Total depth augered = 27 feet. Total depth split spooned = 27 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO:** PZ-20D **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO:** 10 **SETTING:** 84.9 to 82.9 feet below grade
DATE COMPLETED: November 13-14, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 82.9 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 Quartz Sand **SETTING:** 85 to 80 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 80 to 78 feet below grade
OBSERVER: Dave Strand	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade.
ELEVATION OF RP: 748.47	**STATIC WATER LEVEL:** 21.7 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 748.18	**DURATION:** 45 minutes **VOLUME:** 30 gallons
REMARKS: PZ-20D is located approximately 130 feet east of the northeast corner of Building 53.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ20DGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	27	Augered; see geologic log for MW-20S for geology description to 27 feet below grade.	
30	32	Sand, medium to coarse; little fine sand; brown; saturated.	
40	42	Sand and gravel; some cobbles; brown; saturated.	1.0
50	52	As above with layers of sand, medium; some fine to coarse sand; brown; saturated.	2.3
60	62	Sand, and gravel; trace cobbles; trace silt; brown; saturated.	5.8
65	67	As above.	2.4
70	72	As above.	2.1
80	82	As above.	1.1
86	87	Till; clay; little silt, sand, and gravel dispersed unevenly in clay matrix; gray; damp.	2.4
		End of boring. Total depth augered = 86 feet. Total depth split spooned = 87 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: Chrysler Corporation WELL NO.: PZ-21I PAGE: 1 OF 1 PAGES
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 54.5 to 52.5 feet below grade
DATE COMPLETED: November 13, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 52.5 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 60 to 51 feet below grade
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets
OBSERVER: Mark Hemstreet	**SETTING:** 51 to 50 feet below grade
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade
ELEVATION OF RP: 751.14	**STATIC WATER LEVEL:** 20 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 750.74	**DURATION:** 20 minutes **VOLUME:** 30 gallons

REMARKS: PZ-21I is located in the northeast corner of the property near existing well MWB-4.

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ21IGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	10	Augered.	
10	12	No recovery, pushing a rock.	
20	22	Sand, medium; trace gravel; brown; moist.	0.0
30	32	Sand, medium to coarse, and gravel; unsorted; brown; saturated.	0.0
40	42	Sand, medium to coarse; trace fine sand; little gravel; brown; saturated.	0.2
50	52	Sand, medium; brown; saturated.	0.2
60	62	Sand, medium to coarse, and gravel; trace silt; unsorted; brown; moist.	0.8
62	70	Augered; augers have walked, hole is crooked.	
		End of boring. Total depth augered = 70 feet. Total depth split spooned = 62 feet.	
		Due to the angle of the hole, the well was set in a new hole drilled to 60 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO:** PZ-22I **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO:** 10 **SETTING:** 44.6 to 42.6 feet below grade
DATE COMPLETED: November 20-21, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 42.6 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand **SETTING:** 45 to 35.9 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 35.9 to 32.9 feet below grade
OBSERVER: Dave Strand	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 747.40	**STATIC WATER LEVEL:** 20.5 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 747.03	**DURATION:** 120 minutes **VOLUME:** 70 gallons
REMARKS: PZ-22I is located in the wastewater treatment plant parking lot along the north property line near the midpoint of the property.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\PZ22IGEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	10	Augered; Clay and cobbles to 5 feet; then silt, sand, gravel, and cobbles; brown; dry.	0.3
10	12	Silt, sand, and gravel, fine to coarse; little cobbles; brown, dry.	2.1
20	22	As above to 21.5 feet; then Sand, fine to medium; brown; saturated.	1.3
30	32	As above to 31 feet; then Sand and gravel, fine to coarse; trace cobbles; brown; saturated.	1.6
40	42	As above with trace silt.	4.3
45	47	Sand, fine to medium; brown; saturated; to 46 feet; then Till; clay with little fine to coarse sand and gravel dispersed in the clay matrix; brown; dry; to 46.3 feet; then Sand and gravel; fine to coarse; brown; saturated.	3.5
		End of boring. Total depth augered = 45 feet. Total depth split spooned = 47 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 24 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Heidelberg 1600 WEBSTER STREET, DAYTON, OHIO Distribution	SCREEN: 2" Sched 40 PVC DIAMETER: Deep: 88-90 Inter: 55-57 SLOT NO. 10 SETTING: Shallow: 18-33
DATE COMPLETED: 3/30/01	
DRILLING COMPANY: MOODY'S/BOWSER MORNER Dave = Driller, Nick & Don helpers	SAND PACK: #6 Silica Sand SETTING: 91-86, 57.5-53, 33.5-16
DRILLING METHOD: ROTO SONIC	CASING 2" Sched. 40 PVC
SAMPLING METHOD: Rotosonic, continuous core, 4" x 10'	SETTING: 88-0, 55-0, 18-0
OBSERVER: DVS / MCP	SEAL TYPE: Medium Bentonite Chips
REFERENCE POINT: grade	SETTING: 99-91, 86-57.5, 53-33.5
REFERENCE POINT ELEVATION: Elev. at DP017 = 750.6 / Nest 24 estimated a little higher, ~751	DEVELOPMENT: pumped ~ 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs Nest
SURFACE COMPLETION: FLUSH GRADE	WATER LEVEL: ~751 - ~725 = ~26'
REMARKS: SSW of DP017	YIELD:

Estimated

Digital photo: MVC-0355

Sampled @ 38 feet @ 14:30 Sample ID - PZ-24I 38feet

Soil quality: DP017 12-16': non-detect ; DP019 18-20': non-detect

OVM 580B

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION (751 733 18 / 751 718 33)	PID READING (ppm) feet	ppm
0	0.5	Concrete		
0.5	1.0	Sand, gravel, m-m; and asphalt; blk; wet from drilling first 6" concrete	3	0
1.0	5.0	Sand + gravel, m-m; tr. crs gvl; brn; wet from drilling	6	0
5.0	9.0	SAND, crs-vcrs, tr. f gvl; tr m gvl; brn; dry	8	1
9.0	11.0	Sand + gravel, m-f; tr. f. sand, tr. m gvl, tr. crs gvl; brn, wet	11	3
11.0	12.0	SAND, m-vcrs; lll f gvl; tr. m gvl; brn, moist	14	3
12.0	15.5	Sand + gravel, m-m; tr. crs gvl, brn, moist	18	5
15.5	19.0	Sand + gravel, f-m; tr. crs gvl, grey, dry	21	3
19.0	20.5	Silty sand + gvl, f-f; firm but crumbly; brn, dry.	24	9
20.5	21.0	SAND, f-m; tr. silt; tr. f gvl; tr. m gvl, black, moist	28	3
21.0	24.0	Sand + gravel; m-f; tr. m gvl; brn, moist	31	5
24.0	27.0	Sand + gravel; f-f; tr. m gvl, brn dry	34	10
27.0	29.0	Sand + gravel, vf-f; tr. m gvl, grey, dry.	38	41
29.0	32.0	SAND, m-vcrs; tr. f. gvl; brn, sat	41	2
32.0	35.0	Sand + gvl; m-f; brn, sat	45	0
35.0	39.0	SAND, m-vcrs, tr. f gvl; brn, sat	48	0
39.0	40.5	same as 35-39'	51	0
40.5	41.0	Sand + gvl; m-f; brn, sat	55	5
41.0	49.0	SAND vf-f; tr. m sand; brn; sat; 2-inch silty clay lense	58	4
		at 41.3 feet		
49.0	49.5	sand + gravel; crs-f; brn, sat.		

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 24 PAGE 2 OF 2 PAGES DATE: 3/30/01

	DEPTH IN FEET		GEOLOGIC DESCRIPTION	PID READING	
	FROM	TO		feet	PPM
55	49.5	57.5	GRAVEL, f; ltl crs-vcrs snd; tr. m gvl, tr. cob, brn, sat	61	0
57	57.5	58.2	SAND, v. crs; tr. f gvl; tr. f snd; brn, sat.	65	0
	58.2	58.4	GRAVEL, f-m; ltl v. crs snd, brn, sat	68	2
	58.4	59.0	SAND, m-vcrs; ltl f. gvl; brn, sat.	71	0
	59.0	66.0	Sand + gravel, m-m; brn; sat.	75	0
	66.0	68.0	GRAVEL, f-m; ltl crs-vcrs snd; tr. crs gvl; brn sat	78	0
	68.0	69.0	SAND, m; well sorted; brn, sat	81	0
	69.0	70.5	same as 68-69 feet	85	0
	70.5	73.0	sand + gvl, m-f; tr. m gvl; brn, sat	88	0
	73.0	74.0	sand + gvl, m-f; tr. m gvl; grey; sat	91	0
	74.0	75.0	SAND, crs-vcrs, grey sat	95	0
	75.0	79.0	SAND, crs-vcrs; ltl f. gvl; grey; sat	98	0
	79.0	79.5	same as 75-79		
	79.5	80.5	Sand + gravel; m-f; tr. m gvl; grey; sat		
	80.5	81.5	SAND, f-m; tr. clay; grey, sat		
	81.5	82.0	CLAY; grey, firm, moist.		
	82.0	83.0	SILT; ltl clay; some v. f snd; grey; sat		
	83.0	84.0	Silty SAND, f-m; tr. clay; grey sat		
	84.0	88.0	SAND, f-m; grey, sat		
88	88.0	88.5	Sand + gravel; crs-f; tr. m gvl; grey sat		
	88.5	89.0	Silty sand + gravel; f-f; tr. m gvl; tr. clay; grey; sat.		
90	89.0	91.5	SAND, f-crs; tr. silt; tr. m gvl; grey sat		
	91.5	93.0	Silty SAND, vf-f; tr. clay; tr. crs snd; tr. f gvl, grey; sat		
	93.0	95.5	Silty SAND, f-m; tr. f gvl; tr. m gvl; grey sat		
	95.5	99.0	TILL; firm; ltl f gvl; tr. m gvl; grey, moist		
		99.0	EOB		
			Proposed well screens — Measured Total Depths:		
			Deep: 88-90 — Deep = 92.70		
			Intermediate: 55-57 — Int = 58.05		
			Shallow: 18-33' — Shallow = 33.70		

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 25 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Heidelburg 1600 WEBSTER STREET, DAYTON, OHIO Distribution	SCREEN: 2" Sched 40 PVC DIAMETER: Deep: 88-86 Intermediate: 52-50 SLOT NO. 10 SETTING: Shallow: 33.5-18.5
DATE COMPLETED: 3/26/01, 3/27/01	SAND PACK: #6 Silica sand
DRILLING COMPANY: MOODY'S/BOWSER MORNER Dave = driller, Don & Nick helpers	SETTING: Deep: 89-84; Inter: 52.5-48, Shallow: 34-16.5
DRILLING METHOD: ROTO SONIC	CASING 2" Sched 40 PVC
SAMPLING METHOD: Roto sonic; continuous 4" core x10'	SETTING: Deep: 86-grade; Inter: 50-grade; Shallow: 18.5-grade
OBSERVER: ~~DVS~~ MCP	SEAL TYPE: Medium Bentonite chips
REFERENCE POINT: grade	SETTING: Back plugs 99-89, 84-52.5, 48-34, 16.5-2.5
REFERENCE POINT ELEVATION: DP019=751.9 DP021=751.2 > Average = ~751.5	DEVELOPMENT: pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs/Nest
SURFACE COMPLETION: FLUSH GRADE	WATER LEVEL: ~725.0 from 3/24/01 onsite fluid levels; ~26.5' below grade
REMARKS: dry-bor-MW0255-d MW0265-C	YIELD:

Digital photos MVC-0295 + MVC-0305

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION (751.5 − 733 = 18.5; 751.5 − 718 = 33.5)	OVM 5808 PID READING (ppm) feet	ppm
		0-3 feet Fill, no recovery: 0-0.3 Asphalt		
3.0	4.0	Sand + gravel; f-m; ——; grey; dry	1	8
4.0	9.0	Sand + gravel; f-f; tr. m gvl; brown; dry	3	4
9.0	10.0	Sluff of 3-4'	5	2
10.0	15.0	Sand + gravel, f-f; tr. m. gvl; tr. crs gvl; dry, brown	10	4
15.0	19.0	Sand + gvl; f-f, tr. m gvl; dry grey	14	16
19.0	20.0	same as 15-19; saturated from drilling	18	11
20.0	20.5	Sand + gvl, m-f; tr. m gvl; brown; saturated from drilling	22	1
20.5	27.0	Sand + gvl; vf-f; tr. m. gvl; gry, saturated; ltl silt.	25	2
27.0	29.0	Sand + gvl, m-f; tr. m gvl; brn; sat.	28	1
29.0	32.0	Sand + gvl; m-f; tr. m gvl; grey; sat	32	2
32.0	36.0	SAND; crs-vcrs; tr. f. gvl; brn, sat; 2-inch silt layer at 33 feet.	35	3
36.0	39.0	SAND; m-crs; brn; sat.	38	6
39.0	42.0	SAND; m-vcrs; brn; sat	42	2
42.0	47.0	SAND; crs-v.crs; brn, sat	45	5
47.0	49.0	SAND, m-v.crs; tr. f gvl; brn, sat	48	1
49.0	52.0	Sand + gravel, m-f; brn; sat	52	0
52.0	53.0	SAND f-crs; brn, sat	55	0
53.0	53.6	Silty CLAY, brn, moist	58	0
53.6	54.5	SAND, vf; w/silt; grey, wet	52	1
54.5	55.0	CLAY, stiff; grey, moist	55	

Estimated

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 25 PAGE 2 OF 2 PAGES DATE:

DEPTH IN FEET		GEOLOGIC DESCRIPTION	PID READING	
FROM	TO		feet	ppm
55.0	55.5	silty SAND; vf; grey, sat	58	3
55.5	55.8	CLAY, firm, grey, moist	62	0
55.8	56.3	silty SAND, vf; grey; sat	65	0
56.3	58.3	CLAY, firm, grey, moist	68	0
58.3	58.6	CLAY, firm, brown, moist	72	1
58.6	59.0	Sand + gravel; m-f, tr. m gvl, tr crs gvl, brn, sat.	75	1
59.0	66.0	Sand + gravel; m-f; tr. m gvl; tr. crs gvl; tr. cob, brn sat	78	0
66.0	69.0	Sand + gravel; m-f; tr. m gvl; tr. cob; brown, sat.	82	0
69.0	79.0	same as 66-69'	85	0
79.0	87.0	Sand + gravel, m-f; tr. m gvl; brown; sat; 1-inch	88	0
		oxidized layer at 84.5 and 85.5 feet bgl.	92	0
87.0	89.0	SAND; crs-vcrs; tr f gvl; grey; sat; trace amounts of	95	0
		clay on tip of drill bit. May be top of till.		
89.0	99.0	TILL, with f-m gvl; grey hard, moist		
	99.0	EOB		
		Proposed well screen depths — Measured TD's		
		Shallow: 18.5-33.5 — 33.00'		
		Intermediate: 50-52 — 51.85'		
		Deep: 86-88 — 87.45'		
		Backplug bentonite: 99-89 feet		
		No soil samples collected due to low PID readings		
		below the water table.		

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 26 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Heidelburg 1600 WEBSTER STREET, DAYTON, OHIO Distribution	SCREEN: 2" Sched 40 PVC DIAMETER: Deep: 83-81 Inter: 53-51 SLOT NO. 10 Factory slotted SETTING: Shallow: 34-32
DATE COMPLETED: 3/23/01, 3/26/01	SAND PACK: #6 Silica sand
DRILLING COMPANY: MOODY'S/BOWSER MORNER Don = driller	SETTING: Deep: 85-79 Inter: 53.5-49 Shallow: 34.5-30
DRILLING METHOD: ROTO SONIC	CASING 2" sched 40 PVC
SAMPLING METHOD: Roto sonic, continuous core 4"	SETTING: Deep: 81-grade; Inter: 51-grade; Shallow: 32-grade
OBSERVER: ~~DVS~~ MCP	SEAL TYPE: Medium Bentonite chips
REFERENCE POINT: grade - same elev. at DP043	SETTING: Back plug: 89-85, 79-53.5, 49-34.5, 30-3
REFERENCE POINT ELEVATION: @ DP043 = 751.04	DEVELOPMENT: pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs/Nest
SURFACE COMPLETION: FLUSH GRADE	WATER LEVEL: water level on plant ~725: 751-725 = ~26'
REMARKS: ~150' NNE of DP043.	YIELD:

Sample @ 50' @ 10:40 am (PZ-26I 50 feet). photos: MUC-0275 + MUC-0285

Geo: CLAY @ DP041 ~16-35, Till @ 85' @ PZ-12D, Till below 85' @ MWC-3.

Soil quality: Non-detect @ DP040; No soils sampled from DP041 or DP043.

OVM

751 / 733 / 18 — 751 / 718 / 33 — 41 / 757 / 722 / 29

DEPTH IN FEET FROM	DEPTH IN FEET TO	GEOLOGIC DESCRIPTION	5808 PID READING (ppm) Feet	PPM
0	0.3	Asphalt	2	0
0.3	2.0	Fill; sand + gravel	5	0
2.0	5.0	SILT, with f-m gvl; tr. crs gvl; Hi m. snd; wet; firm; brown	8	1
5.0	9.0	Sand + gravel; f-m; tr. crs gvl; dry; grey brn.	10	0
9.0	10.5	GRAVEL, f-m; with m-crs snd; dry; grey	14	0
10.5	15.5	Sand + gravel, m-m; dry; brown	18	6
15.5	16.5	SAND, f-m; tr. crs snd; tr. f gvl; dry; brown	20	0
16.5	19.0	Sand + gravel; vf-m; dry; grey	23	0
19.0	19.5	Silty sand + gravel, vf-m; tr. crs gvl; wet, grey with brown mot	26	0
		silt.	28	0
19.5	29.0	TILL; with f-crs gvl and m-crs snd; grey; very firm; damp.	30	0
29.0	30.5	TILL same as 19.5-29'	31	0
30.5	31.5	Silty sand + gravel; vf-m; tr. crs gvl; brown; sat	35	0
31.5	33.5	Sand + gravel, crs-f; tr. m gvl; grey-brown, sat	38	0
33.5	38.0	SAND, m-crs, tr. m. gvl; brown, sat.	41	0
38.0	39.0	SAND; crs-v.crs; some f. gvl, tr. m gvl; grey brown, sat.	45	0
39.0	43.0	SAND, crs-v.crs, some f. gvl, tr. m. gvl; brown, sat	48	1
43.0	49.0	Sand + gravel, v.crs-f; tr. m gvl; tr. crs gvl; brown, sat	50	11
49.0	53.5	same as 43-49'	53	11
53.5	54.5	Silty SAND, vf; brown, sat	56	0

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 26 PAGE 2 OF 2 PAGES DATE: 3/23 & 26/01

DEPTH IN FEET		GEOLOGIC DESCRIPTION	PID READING	
FROM	TO		Rat	PPM
54.5	56.0	Silty SAND, v.f., grey; sat, soft	58	0
56.0	57.0	CLAY; firm, grey, moist	60	5
57.0	57.3	Silty SAND, vf, soft; grey sat	63	3
57.3	57.6	CLAY, firm, grey, moist	67	3
57.6	58.0	Silty SAND, vf, soft, grey, sat	70	5
58.0	59.0	CLAY, firm, grey, moist; Trace silty, f-m gvl at bottom	74	9
		1-inch.	78	5
59.0	60.5	GRAVEL, f-m; with crs-vcrs snd; brown; sat	81	0
60.5	62.0	Sand + gravel; vcrs-f; tr. m gvl, brown, sat.	83	0
62.0	69.0	Sand + gravel; m-f; tr. m gvl; brown, sat.	84	0
69.0	71.5	Sand + gravel; vcrs-f; tr. m gvl, brown, sat	87	0
71.5	78.0	Sand + gravel, m-f; tr. m gvl; tr. crs gvl, brown sat		
78.0	78.5	Silty sand + gravel; f-f; tr. m gvl; brown; sat		
78.5	79.0	Sand + gravel, f-f, tr. m gvl, brown, sat		
79.0	80.0	same as 78.5-79.!		
80.0	83.0	Sand + gravel, m-f; tr. m gvl; grey, sat		
83.0	84.0	SAND, f-m; tr. crs snd; grey + brown mot, sat		
84.0	85.0	Sand + gravel, m-f; tr. m. gvl, tr. crs gvl, grey, sat		
85.0	89.0	SILT; w/vf. snd; firm, grey, wet.		
	89.0	EOB		
		Proposed well screen settings		
		Deep: 81-83		
		Inter: 51-53 (above intermediate clay)		
		Shallow: 32-34 (2' screen below shallow till)		
		Measured Total Depths		
		Shallow 34.10		
		Int 53.70		
		Deep 84.75		

81 – 83

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. ~~PAUL, MINNESOTA~~	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 27 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Heidelberg Winery 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: Sch 40 PVC, 2" DIAMETER: SLOT NO. 10
DATE COMPLETED: 4/2/01	SETTING: 28-33, 48-50, 81-83
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK: #6 Silica
Dave = driller, Nick & Don = helpers	SETTING: 83.5-79, 50.5-46, 33.5-26
DRILLING METHOD: ROTO SONIC	CASING 2" Sch 40 PVC
SAMPLING METHOD: Continuous 4"x10' core	SETTING: 81-0, 48-0, 28-0
OBSERVER: DVS	SEAL TYPE: Medium Bentonite chips
REFERENCE POINT: grade	SETTING: 89-83.5, 79-50.5, 46-33.5, 26-5
REFERENCE POINT ELEVATION: ~750.0 @ DP049	DEVELOPMENT: pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs / nest
SURFACE COMPLETION: FLUSH GRADE	WATER LEVEL: ~25' based on FCs (725.0 elev.)
REMARKS: Heidelberg Winery due S. of DP049 Picture MVC 036 Digital Camera, No pictures of geology	YIELD:

Estimated

GVM

No soils for lab analysis collected

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING (ppm) feet	ppm
0	0.3	Asphalt	2	0
0.3	3.0	Clay trace silt and sand; f-m; red brown; moist; no odor	4	0
3.0	9.0	Silty s & g; vf-vc; trace cobbles to 4"; brown; saturated from clay water	6	25
9.0	14.0	as above	8	1
14	19.0	TILL; Clay w/ little s & g vf-vc disseminated throughout; gray (upper 4" = brown); damp to moist; somewhat pliable; no odor	11	0
			13	0
19.0	28	as above; damp	16	2
28	29	Silty Sand; gravel; cobbles; vf-vc; gray; moist; lots of water added to hole + blowing out casing	18	2
			21	0
29	30	Sand vf-med; brown; saturated	24	0
30	32	Sand very coarse and fine gravel; brown; saturated; well sorted (fines may have washed out from drilling)	28	1
32	35.5	Sand & g; vf-vc; little cobbles to 3.5"; trace silt; brown; saturated; poorly sorted	31	3
35.5	39.0	Sand; f-m; little coarse sand; trace gravel; f-m; brown; saturated	34	4
39.0	49.0	Sand & gravel; vf-vc; Some cobbles up to 5"; brown; slightly gray 24-27	36	5
		cobble lodged in top of screen.	38	5
49.0	51	as above	42	2
51	59	TILL clay w/ trace f-c s & g disseminated throughout; gray; dry; very hard & stiff	45	7
			48	2
			52	0
			55	0

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 27 PAGE 2 OF 2 PAGES DATE: 4/2/01

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING feet/ppm
59	64	TILL as above	58 0
64	65	Sand f-m; trace coarse; gray; saturated	61 0
65	69	Sand f-c; some vcs & fine gravel locally; gray; saturated	64 0
69	79	as above also trace m-c gravel; locally more fine @	66 0
		73.5-74 and 76-77 (sand f-m)	68 0
		77-79 trace f gravel only	71 3
79	85	Sand f-c; trace vcs & fine gravel; gray saturated	75 1
85	89	TILL; clay; trace sand disseminated throughout; locally silty;	78 3
		moist; plastic;	82 0
	89	EOB	85 0
			88 0
		No soil samples collected for lab analysis	
		Shallow 28-33	
		Int 48-50	
		Deep 81-83	
		Measured Total Depths	
		Deep = 85.30	
		Int = 50.55	
		Shallow = 33.15	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 28 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS RIS 1600 WEBSTER STREET, DAYTON, OHIO Paper	SCREEN: 2" Sched 40 PVC DIAMETER: Deep: 80.5-78.5 Inter: 57-55 SLOT NO. 10
DATE COMPLETED: 3/28/01, 3/30/01	SETTING: Shallow: 39-37
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK: #6 Silica
Dave - driller, Nick & Don helpers	SETTING: 81-76, 57.5-53, 39.5-35
DRILLING METHOD: ROTO SONIC	CASING 2" Sched. 40 PVC
SAMPLING METHOD: Roto sonic continuous core, 4" x 10'	SETTING: 78.5-grade, 55-grade, 37-grade
OBSERVER: ~~DVS~~ MCP	SEAL TYPE: Medium Bentonite chips
REFERENCE POINT: grade	SETTING: Backplug: 89-81, 76-57.5, 53-39.5, 35-2.5
REFERENCE POINT ELEVATION: elevation @ DP036 = 750.5 (about 6 inches above DP036), ~751	DEVELOPMENT: pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs Nest
SURFACE COMPLETION: FLUSH GRADE	WATER LEVEL: 750.5 - 725.1 = ~25.4 ft below grade
REMARKS: south of parking lot of RIS Paper	YIELD:

Digital photos: MVC-0315 + MVC0325

Sampled soil at 41 feet. Sample ID = PZ-28I 41 feet @ 10:35 3/28/01

Soil quality: DP036 12-16' = 14 ug/kg PCE ; DP026 16-20' = non-detect.

OVM

751 − 733 = 18 ; 751 − 218 = 53

DEPTH IN FEET FROM	DEPTH IN FEET TO	GEOLOGIC DESCRIPTION	5808 PID READING (ppm) feet	ppm
0.0	4.0	SILT, with f-m gvl; brn, firm, dry: Topsoil first 2 inches	1	1
4.0	9.0	No recovery, although traces of concrete and silt from above.	3	6
9.0	17.5	Sand + gvl, m-m; tr. crs gvl; tr. silt; dry, brn.	5	1
17.5	19.0	TILL; with f-m gvl; firm, grey; moist; top 2-inches	10	1
		are brown.	14	2
19.0	29.0	No recovery; pushed cobble or concrete; although, the bit had	18	4
		about 12 inches of the same till seen at 17.5-19.0 feet	35	2
29.0	39.0	No recovery, pushed cobble. Cobble was stuck in sampling tip.	38	8
		Drove sampler to 39 feet again. Retracted and had 5	41	36
		feet of sand + gravel. This sand and gravel collapsed	45	10
		back in the hole. It is assumed that the till continues	48	12
		down to 34 feet because that was the point at which	51	12
		nothing was collapsing into the hole. Then again it could	54	8
		have been dry sand that didn't collapse but this is unlikely	58	11
		since the water table is at ~25'. The casing was at 29'.	—	
17.5	34	Estimated TILL thickness 16.5 feet. Same till as 17.5-19	feet	
34.0	34.5	SAND, f-m; brn, sat	—	
34.5	35.5	SAND, crs-vcrs; tr. f. gvl; brn, sat	—	
35.5	39.0	Sand + gravel, crs-m; brn, sat.	—	
39.0	41.0	Sand + gravel, m-f; brn, sat	—	

Estimated

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 28 PAGE 2 OF 2 PAGES DATE: 3/28 & 30/01

DEPTH IN FEET		GEOLOGIC DESCRIPTION	PID READING	
FROM	TO		feet	PPM
41.0	43.0	SAND, m-vcrs; tr. f gvl, tr. m gvl, grey; sat	62	2
43.0	45.5	Sand + gvl, vcrs-f; tr. m gvl, brown, sat	65	1
45.5	45.8	GRAVEL, f-m; ttl m-vcrs snd, brn sat	68	0
45.8	46.1	Sand + gravl, crs-f; brn, sat	72	0
46.1	46.5	GRAVEL, m; tr. m-vcrs snd; brn, sat	75	0
46.5	49.0	Sand + gravel; m-m; tr. crs gvl; brn; sat	78	0
49.0	50.5	same as 46.5-49.0.	82	0
50.5	52.0	TILL, with f-m gvl; tr. crs gvl; from same vcrs snd; brn, moist	85	0
52.0	55.5	Sand + gravel, f-f; tr. m gvl, tr. crs gvl, brn, sat.	88	0
55.5	59.0	Sand + gravel, m-f; coarsening downwards; tr. m gvl;		
		tr. crs gvl; brn, sat.		
59.0	65.5	Sand + gravel, m-f; tr. m gvl; brn, sat		
65.5	69.0	Sand + gravl, m-f, tr. m gvl, tr. crs gvl; grey, sat,		
		Grey clay in bottom 2 inches of core.		
69.0	77.0	Sand + gravel, m-f; tr. m. gvl; grey, sat		
77.0	77.5	SAND, crs-vcrs; tr. f. gvl; grey sat		
77.5	79.0	Sand + gravel, crs-m; grey; sat.		
79.0	81.0	same as 77.5-79 feet		
81.0	88.0	TILL, with f-m gvl; frm; grey; moist		
88.0	89.0	clayey sand; m-vcrs; tr. f gvl, grey, wet.		
	89.0	EOB.		
		Proposed well screens		
		Deep: 78-80', above basal till.		
		Intermediate: 55-57'		
		Shallow: 37-39', below shallow till		
		Bentonite back plug 89-81 feet		
		Rig was broken down all day 3/29/01. All drilling on 3/28/01		
		All wells set 3/30/01.		
		Measured Total Depths: Deep = 81.90 Int = 58.55 Shallow - 39.80		

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 29 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Kelcor Machine + Tool 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: Deep: 79-77 2" PVC DIAMETER: Inter: 50-48 SLOT NO. 10
DATE COMPLETED: 3/19/01, 3/20/01	SETTING: Shallow: 30-15
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK: 79-75: Deep #6 Silica
Dave: driller, Nick/Ron helpers.	SETTING: 50.5-46.5: Inter. Shallow: 30.5-13
DRILLING METHOD: ROTO SONIC	CASING 77-grade 2" PVC
SAMPLING METHOD: roto sonic, continuous 10' sleeves	SETTING: 48-grade 15-grade
OBSERVER: ~~DVS~~ MCP	SEAL TYPE: Medium bentonite chips
REFERENCE POINT: grade and DP-39 @ 7	SETTING: plug break: 89-79, 75-50.5, 46.5-30.5, 13-3'
REFERENCE POINT ELEVATION: ~748.5	DEVELOPMENT: pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs Nest
SURFACE COMPLETION: FLUSH GRADE	WATER LEVEL: south end of plant ~725 so it should be ~23' bgl
REMARKS: Near DP-39	YIELD: 3/20 depth to water in casing ~25.1'

ESTIMATED

pictures MVC-018S + MVC-019S. PID not working after 49 feet. Reading Ø "Lamp Out" and "Overrange"

Soil Quality: No soil collected from DP-39; DP-15 16-20' cis = 48 ug/kg, PCE = 33 ug/kg, TCE = 1800 D ug/kg

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	OVM PID READING (ppm) ft.	ppm
0	2.0	Silt, brown; tr. m-crs snd; v. firm; wet from drilling	2'	0
2.0	5.0	Sand + gravel; with cobbles; v.crs; brown; dry (fill)	5'	0
5.0	7.0	Sand f-v.crs; with m-crs gvl; brown; wet from drilling; tr. cob (fill)	9'	0
7.0	7.2	Concrete; broken up concrete foundation from old house @ this location		
7.2	9.0	Sand + gravel, f-m; tr. silt, wet from drilling; brown	10'	23
9.0	12	Sand + gravel, f-m; wet from drilling; brown	12'	35
12.0 ~~10.6~~	12.8 ~~11.0~~	Silt; brown, wet, tr. vcrs snd;	15'	101
12.8 ~~11.0~~	19.0	Sand, f-crs; some gravel f-m, brown; dry	18'	82
19.0	19.5	Sand + gvl; m-crs; with silt; slightly stiff until broken		
19.5	24.0	Sand + gravel; m-v.crs; saturated; water table is here somewhere as	20'	20
		calculated above; saturated from drilling; brown.	23'	48
24.0	24.4	large cobble > 4-inch diam.	25'	106
24.4	28.0	SAND; f-m; some f-crs gvl, brown, wet; coarsening with depth from 27'	29'	115
28.0	29.0	SAND; m-v.crs; tr. m. gvl; brown; wet	29.5'	90
29.0	30.0	SAND; m-crs; tr. silt; tr. m. gvl; brown; sat	32'	49
30.0	39.0	GRAVEL; f-crs; tr. cob; brown/multicolored dark grey; 1" oxidation lense sat. @ 38.5'	36'	29
39.0	45.0	GRAVEL, f-crs; tr. cob; brown/multicolored;	39'	
45.0	49.0	SAND. f-crs; tr. f gvl; brown, sat	42'	23
49.0	51.5	SAND, f-v.crs; tr. f-m gvl; brown; sat	46'	20
51.5	59	CLAY, firm; slightly moist; dark grey	49'	0

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 29 PAGE 2 OF 2 PAGES DATE: 3/19-20/09

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING
			N/A
59	66	CLAY, firm; grey; dry Note: Clay from 59-65 feet liquified.	
66	69	GRAVEL ~~with sand~~ f-m; with sand vf-vcrs; sat; brown, tr. cob.	
		Note: may have pushed a large cobble from 69-79 feet	
		because the core came up empty.	
69	79	No recovery; pushing cobble	
79	89	Pushed cobble however this time it got wedged in	
		the tip of the drill bit.	
		The driller noted that the clay ~~mus~~ might be	
		between 79 + 89 feet because something firm	
		gave the cobble enough resistance to get wedged	
		in the tip of the drill bit. This would make	
		sense compared to clay/till levels @ P2-9D and	
		NEST 34. Will plug back with bentonite 89-78.5'.	
		Proposed screen settings — Measured TD's	
		Shallow: 15-30 — 29.30'	
		Intermediate: 50-48 — 48.80'	
		Deep: 76-78' — 77.90	
		14:40 Soil sample from 28-29 feet, 115 ppm.	
		Sample ID = MW-29S 28 feet	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 30 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Amer. Legion 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: 2" Sched 40 PVC DIAMETER: Deep: 86-84 (may be a little deeper ... it sank). Inter: 52-50 SLOT NO. 10
DATE COMPLETED: 3/21/01, 3/22/01	SETTING: Shallow: 28-13
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK: #6 Silica
Dave = driller, Nick & Don = helpers	SETTING: Deep: 87-82.5; Inter: 52.5-48; Shallow: 28.5-11
DRILLING METHOD: ROTO SONIC	CASING 2" Sched. 40 PVC
SAMPLING METHOD: Roto sonic, continuous core	SETTING: Deep: 84-grade; Inter: 50-grade; Shall: 13-grade
OBSERVER: ~~DVS~~ MCP	SEAL TYPE: Medium Bentonite chips
REFERENCE POINT: grade	SETTING: Back plug 89-87, 82.5-52.5, 48-28.5; 11-2.5
REFERENCE POINT ELEVATION: 746.65 @ DP035	DEVELOPMENT: pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs/Nest
SURFACE COMPLETION: FLUSH GRADE	WATER LEVEL: ~746.65 - ~725.2 = ~21.4
REMARKS: ~3 feet from DP-35.	YIELD:

82.5 May hit basal till @80 feet based on MWB-5 + Nest 32 geologic logs.

photos MRC-0223 + MRC-0231

No soil analysis from DP-35; DP-16 = non-detect; DP-22 = non-detect; DP-16 + DP-22 PID = 0 ppm

746 − 733 = 13; 746 − 718 = 28

DEPTH IN FEET FROM	DEPTH IN FEET TO	GEOLOGIC DESCRIPTION	OVM PID READING (ppm) feet	OVM PID READING (ppm) PID
0.0	0.5	Topsoil; moist; grass; organics + roots; black	1	0
0.5	6.0	SILT; little f-m gvl; ltl m-crs snd; wet; soft; brown	3	0
6.0	9.0	Sand + gvl; f-m; brown; moist	6	0
9.0	10.5	GRAVEL, f-m; w/m-v.crs snd; brn; moist	9	0
10.5	14.0	sand + gvl; f-f; tr. m gvl; dry; brn	10	1
14.0	15.5	Silty GRAVEL; w/f-crs snd; orange-brown; moist	12	0
15.5	19.0	SAND, vf-m; tr. f. gvl; tr. cob; grey-brown; dry	15	0
19.0	22.0	Silty sand + gravel, vf-f; tr. m gvl; firm but crumbly; wet; brown	18	3
22.0	23.0	Silty SAND, vf-m; tr. m gvl; saturated; grey.	20	0
23.0	24.0	SAND; f-m; sat; grey	23	0
24.0	29.0	SAND, m-crs; tr. f-m gvl; sat; grey	25	0
29.0	38.5	SAND; crs - v.crs; tr. f. gvl; tr. cob near 38'; grey; sat	27	0
38.5	39.0	GRAVEL, f-crs; tr. cob, w/m-crs snd; grey; sat.	29	0
39.0	40.0	SILT; w f gvl; tr. m gvl; tr. cob; sat; grey	31	0
40.0	42.3	SAND, m-v.crs; tr. f gvl; sat grey	33	0
42.3	42.5	Silty SAND, vf; tr. m. sand; sat grey	36	0
42.5	49.0	SAND, m-v.crs; with f gvl; tr. m gvl; coarsening downwards	39	0
		to 49 feet; grey; sat	42	0
49.0	50.0	Sand + gvl, m-f; tr. m gvl; grey sat	45	0
50.0	51.0	GRAVEL; f-m; tr. crs gvl; tr crs snd; grey; sat	48	0

Estimated

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 30 PAGE 2 OF 2 PAGES DATE: 3/21-22/01

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING feet	ppm
51.0	57.0	Sand + gravel, crs - m; grey; sat	52	0
57.0	58.0	GRAVEL; f-m; some m-vcrs snd; grey sat.	55	0
58.0	59.0	SAND; m-vcrs; some f. gvl; grey, sat	58	0
59.0	61.0	Sand + gvl, crs-m; tr. crs gvl; grey; sat	62	0
61.0	66.5	sand + gvl; m-f; tr. m gvl, grey; sat	65	0
66.5	67.5	GRAVEL; f-m; lt. crs snd; grey; sat	68	0
67.5	69.0	Sand + gvl; m-f; tr. m gvl; grey, sat	72	0
69.0	70.5	same as 67.5-69.0	75	0
70.5	71.5	SAND, fine-m; grey, sat	78	0
71.5	77.0	SAND, m-vcrs; lt. f-m gvl, grey, sat	80	0
77.0	77.5	SAND, m-crs; grey, sat	82	0
77.5	79.0	Sand + gravel, crs-f; lt m gvl; grey; sat	85	0
79.0	87.0	Sand + gravel, crs-f; lt m gvl, tr. crs gvl; grey, sat	88	0
87.0	88.5	Silty SAND, vf-f; soft, sat, grey		
88.5	89.0	TILL, lt f gvl, stiff, grey, moist		
	89.0	EOB		
		Proposed well screen settings		
		Shallow: 13-28' within high + low water table		
		Inter: 50-52' in sand + gravel		
		Deep: 84-86' above silty sand		
		No soil samples submitted for analytical		
Total Depth from TOC: Deep = 88.20 Int = 52.40 Shallow = 28.05				
		Well sounding, feet below grade (estimated 3/26/01)		
		Deep: 87.63', Inter: 51.86', Shallow: 28.11'		
		Note: Deep well sank during installation, it is		
		partially in the silty sand and bentonite		
		backfill. This due to the weight of the PVC, letting the PVC		
		drop a few feet inside the casing (the drillers can only reach down in		

84 to 86

the casing so far because it sticks out of the ground), and the vibration while retracting the casing.

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. ~~PAUL~~, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 31 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS RIS	SCREEN: PVC 2" PVC Sch 40
1600 WEBSTER STREET, DAYTON, OHIO Paper	DIAMETER: 2" SLOT NO. 10
DATE COMPLETED: 4/3/01	SETTING: 29-34 52-54 73-75
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK: #6 silica
Dave Driller, Nick + Don = Helpers	SETTING: 75.5-71, 54.5-50, 34.5-27
DRILLING METHOD: ROTO SONIC	CASING 2" PVC Sch 40
SAMPLING METHOD: 4" x 10' Continuous	SETTING: 73-0, 52-0, 29-0
OBSERVER: DVS	SEAL TYPE: medium bentonite chips
REFERENCE POINT: grade	SETTING: 85-75.5, 71-54.5, 50-34.5, 27-5
REFERENCE POINT ELEVATION: 748.83 = DP038 (We are approx 1 foot higher)	DEVELOPMENT: pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs Nest
SURFACE COMPLETION: FLUSH GRADE	WATER LEVEL:
REMARKS: South property of RIS Paper	YIELD:

Estimated

~35' North of DP038 and 40' east of Kiser (~35 east of DP038)

Digital Camera Picture MVC-0385

Filter broke off in OVM wand. Used HNU #2

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING (ppm) Feet / ppm
0	6.0	Grass then Clay; trace silt and sand f-c; brown; damp; no odor	2 0
6.0	9.0	Silty, Sand & gravel; vf-vc; trace cobbles to 4", brown dry no odor	4 0
9.0	17.0	as above, slight odor ~16', no cobbles	6 1
17.0	19.0	Till; trace-little s&g disseminated throuout; gray; slightly pliable damp.	8 0
19.0	29.0	as above damp-moist; pliable; gravelly in tip	12 5
29	39.0	Silty Sand, gravel vf-vf; w/ cobbles up to 5" diameter; very poorly sorted	16 14
		brown; saturated;	18 5
39.0	49.0	as above	22 1
49	51.0	as above	26 1
51.	59.0	Sand; f-vc; trace fine and med gravel; 2 cobbles (3.5" x 5"); brown; satur.	31 1
		locally more fine w/ no definate bedding visible	35 1
59.0	64.0	Sand & gravel; vf-vc; gray; saturated	38 1
64.0	69.0	Sand medium; little fine, coars & very coarse; trace f-m gravel; gray; sat.	41 1
69.0	72.0	as above	45 2
72.0	76.0	Sand; very coarse; little fine to coarse; tr fine gravel; gray Sat	48 3
76.0	79.0	Same as 64-69	52 1
	*	(Had 7-8' recovery, driller thought bottom 2' may have been TILL)	56 2
79	85	Very hard drilling, Told driller to stop since he thought we were in a	58 1
		very competant Till. Could not hardly push the sampler down	61 1
		Cobble lodged in tip of spoon. Approx 1 foot of TILL squeezed around	65 1

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest-31 PAGE 2 OF 2 PAGES DATE: 4/3/01

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION feet/PID	PID READING
			68:0
79	85 cont	the cobble and into sampler. Gray Till w/ s&g	71:1
		disseminated throughout.	74:0
		Casing is run only to 79'. No need to run additional casing	77:1
		to 85' since we will run bentonite chips up to 77' (the	82:0
		suspected top of TILL.	
		Proposed Screen Settings:	
		Shallow: 29-34 = just below upper TILL	
		Intermediate: 52-54 = roughly in the middle between shallow & deep	
		Deep: 73-75 = puts us two feet above the basal TILL in	
		the event the well should drop some when pulling casing.	
		Measured Total Depths:	
		Deep = 77.45	
		Int = 55.55	
		Shallow = 34.95	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 32 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: Deep 74.5-72.5 (~74-72 per driller) 2" PVC DIAMETER: Intermediate 56-54 SLOT NO. 10 SETTING: Shallow 28-13 (~28.5-13.5 per driller)
DATE COMPLETED: 3/14-15/01	
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK: 75.5-70.5 #6 Silica (Global) SETTING: 56.5-52 28.5-11
Dave = driller, Nick = Helper, Ron = helper, Jarrod = Helper 3/15	
DRILLING METHOD: ROTO SONIC	CASING 72.5 to grade 2" PVC 54 to grade SETTING: 13 to grade
SAMPLING METHOD: Continuous 10' sleeves 3-4" diameter	
OBSERVER: DVS	SEAL TYPE: Medium Bentonite Chips (PureGold) Plug back 79-75.5 SETTING: Deep 70.5-56.5, Int 52-28.5, Shallow 11-5
REFERENCE POINT: Grade	
REFERENCE POINT ELEVATION: ~746.3 (DP028)	DEVELOPMENT: Pumped 3-5 gpm ~1.5 hrs/Nest
STICK-UP: NA	DURATION: until sediment free
SURFACE COMPLETION: FLUSH GRADE Concrete 5' on up	WATER LEVEL: S end of plant = 725.24 west to 725.09 East should be ≈ 21' based on DP elevations & gwelev @ plant Nest 32 = 726.2 ≈ 20.1' based on this nest
REMARKS: NW Corner of Claridge Park	YIELD:
	DTW = 23' ~45 min after drilling stopped

Estimated

DEPTH IN FEET FROM	TO	Soil quality of nearest Drivepoints: DP-14 TCE 28 ug/kg @ 16-20' ND 8-12'; DP-28 ND 4-8'; DP-22 ND 12-16' both field & fixed labs GEOLOGIC DESCRIPTION	PID READING (ppm) feet	PID
0	2.5'	Grass; brown clay; trace sand & silt; f-c; moist; no odor; organics/roots	1	0
2.5	9.0	Silty s & g; vf-vc; trace cobbles to 3.5"; damp to 8' then dry brown	3	0
9.0	19.0	as above	5	1
19.0	23.0	" " Too coarse to sample (can't analyze rock) Saturated; but adding water while drilling (see "WATER LEVEL" above)	8	2
23	23.5	Sand f-m; brown; saturated	10	1
23.5	27.5	Sand vf-vc and gravel; trace silt and cobbles to 3.5" brown;	14	4
27.5	28.0	Sand f-coarse; brown saturated	18	6
28.0	29.0	Sand & gravel vf-vc; trace cobbles to 3.5" ~WT	21	6
29.0	33	"	22	16
33	34	Sand; f-c; trace fine gravel; brown Saturated Lab Soil Sample *	23	16
34	39	Sand & gravel vf-vc; brown saturated	25	18
39	40.5	Sand vf-med; trace silt brown saturated	28	18
40.5	44	Gravel; f-vc; little sand vf-vc; trace cobbles to 4.5"; brown saturated	31	6
44.0	44.5	Sand f-m; trace coarse-vc; brown; saturated	34	8
44.5	45.5	Cobbles, 2 of them, one = 3.5" one = 6" w/ s & g vf-vc	38	21
45.5	49.0	Sand; coarse; little f-m-vc; trace f-c gravel; trace cobbles to 3.5"	38	17
49	53	Sand; fine to med; some coarse sand; brown saturated; coarsens w/	40	13
		depth in last 1 foot	43	27
53	55.5	As above; little fine-med gravel; trace coarse gravel; coarsens w/	46	31
		depth in last 8" or so	48	15

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 32 PAGE 2 OF 2 PAGES DATE: 3/14-16/07

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING feet/PID
55.5	56.5	Sand and gravel; vf-vc; brown; saturated	51 14
	Note:	(From 49-56.5 the entire length gradually coarsens w/ depth)	53 35
56.5	59	TILL; strg vf-vc disseminated thruout; % of clasts	55 31
		increases w/depth; cobble 4½" in end of sample; gray	58 9
		stiff; moist	61 0
59	63	Start w/another cobble 5" mixed w/ silty sand & gravel vf-vc	63 Too wet
		gray; saturated	65 Too wet
63	64	Sand fine; little med; tr coarse; gray; saturated	66 0
64	65.5	Silt and vf sand; gray; saturated	68 0
65.5	69.0	Sand vf-vc with fine gravel; little med to coarse gravel; gray; wet.	72 0
69.0	70.0	as above	75 0
7.0	71.0	Sand fine-med gray saturated	78 0
71	75.5	Sand med-coarse; trace fine and vc; trace fine gravel; gray	
		saturated; little med-vc gravel last 6"	
75.5	77.5	TILL; trace strg disseminated throut; gray; dry; v stiff; v. hard	
77.5	79.0	Silty sand & g; vf-c; trace clay; gray; saturated	
		EOB	

Bag is burst w/water above the silt

Measured Total Depths Deep = 72.85, Int = 55.25, Shallow = 27.50

Digital Camera Pictures MVC-0115 = Drill Core 0-79'

MVC-0125 = Drill Site

Clay elev ≈ [Grade Elev ~746.3 (DP028)] − [77.5 (Depth to clay)] = 668.8 (669)

Clay elev @ Nest 36 = [748.86 (DP032)] − [82 DT clay] = 666.9 (667)

" " Nest 38 = [748] − 85 = 663

" " " 33 = [748.5 DP14] − 84 = 665 = Silty clay Transition; 90 = 659 = TILL

" " " 34 = [749.77 DP31] − 82.5 = 667

Plug back to 75.5

Sand 75.5-74.5, Deep 74.5-72.5, Sand to 70.5, Bentonite to 56.5;

Sand to 56, Intermediate 56-54, shallow 28-13' allows 4' below low water table and 2' above high water Table

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 33 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Claridge Park 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: 82-80 2" PVC DIAMETER: 59.5-57.5 SLOT NO. 10 SETTING: 34.5-19.5
DATE COMPLETED: 3/7/01 - 3/8/01	SAND PACK: #6 Silica (Global)
DRILLING COMPANY: MOODY'S/BOWSER MORNER Dave / Dave driller; Nick & Pete helpers	SETTING: Deep 83-78, Int 60-55.5, Shallow 35-17.5
DRILLING METHOD: ROTO SONIC	CASING Deep 80-grade 2" PVC SETTING: Int 57.5-grade Shallow 19.5-grade
SAMPLING METHOD: Continuous 4" x 10' plastic sleeve	SEAL TYPE: Pure Gold Medium Bentonite chips
OBSERVER: DVS	SETTING: Plugback 94-83, Deep 78-60, Int 55.5-35, Shallow 17.5-5.0
REFERENCE POINT: grade	DEVELOPMENT: Pumped 3-5 gpm until sediment free
REFERENCE POINT ELEVATION: 748.5 e DPOM	DURATION: ~1.5 hrs / Nest
STICK-UP: NA	WATER LEVEL: ~23'
SURFACE COMPLETION: FLUSH GRADE Concrete 5' on up	YIELD:
REMARKS: Claridge Park Corner of Daniel & Lamar	DTW 19' 13:35 Not static
	GW elevations MW-8S = 725.25, MW-10S = 725.17, MW-11S = 725.10
	Pictures on disk MVC-0035 = Rig, MVC-0045 = drillcore to 79'

Estimated

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING (ppm) feet / PID
0	0.3	grass	2 / 0
0.3	1.5	Clay; trace silt & sand, f-c.; organics; brown; moist	4 / 1.9
1.5	9.0	silty sand; & gravel; trace cobbles up to 3"; brown; no odor poorly sorted damp	6 / 1.0
		to moist; subrounded	8 / 1.5
9.0	17.0	as above trace clay; very moist above clay below @ 17'; coarsens slightly w/ depth very poorly sorted	11 / 1.5
17.0	17.5	@ clay w/ silt sand & gravel; appeared to be consistant clay but crumbled when	15 / 19
		squeezed into material which looks like above Lab soil sample	18 / 36
17.5	19.0	Silt w/ fine sand; varved appearance; light whitish brown; dry	21 1.0
19.0	19.5	as above	24 15
19.5	21.0	see 17-17.5' (clayey sand & gravel) saturated from drilling water	27 1.4
21.0	25	gravel; v coarse; little fine-coarse gravel; trace cobbles to 3"; trace silt	31 7
		saturated (may be from driller / formation) DTW = 19' but seems high	34 5
		when look @ Nest 34 fairly well sorted	36 3
25	29	Silty Sand & gravel vf-vc; little cobbles to 3" brown saturated; last inch or so	38 2
		@ end of spoon has Sand; fine-med; brown saturated	
29	30	Sand; fine-med; trace silt; brownish gray saturated	
31	34	Sand & gravel; vf-vc; trace 3" cobbles 31-32; gray; saturated subrounded	
34	37	Clay (Till); little sand, gravel & cobbles (one = 6" diameter) disemminated throughout	
		34-34.5 oxidized brown, very hard & stiff; dry;	
		34.5-37 gray; softer & moist slightly pliable but quite firm	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 33 PAGE 2 OF 2 PAGES DATE: 3/7/01

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING
37	39	Sand f-vc; trace gravel f-c; gray saturated trace 2-3" cobbles	feet/Pid
39	45	Sand fine-med; trace coarse sand & fine gravel; fairly well sorted	41 1.0
		gray saturated	45 0.5
45	49	Gravel fine; trace f-c sand and f-m gravel and cobbles to 4"	48 1.0
		coarsens w/depth; gray saturated	51 0.5
49	50	as above	54 0.8
50	56	Sand vf-vc; trace gravel; f-c; brownish gray saturated	58 0.0
56	58.5	Sand f-m; well sorted brownish gray; saturated	61 1.0
58.5	59.0	Silty Sand & gravel; vf-vc; brownish gray saturated	64 0.9
59.0	62	Sand f-m; well sorted; brownish gray; saturated	67 0.7
62	62.5	Clay; gray damp hard & stiff; NO s&g	70 0
62.5	64.0	Gravel; m-c; trace fine; trace coarse sand; trace cobbles	73 0
		to 4½"; gray; saturated	76 0
64.0	67.0	Sand f-c; little gravel f-c; gray saturated	79 0
67.	68.0	Gravel; f-c; trace sand f-c; gray saturated	82 0
68.0	69.0	Sand as @ 64-67.	85 0
69	74.0	Gravel Coarse w/ vf-vc gravel; trace cobbles 4"; trace silt and sand	88 0
		vf-vc.	91 0
74	79	Sand coarse w/vf-vc sand; trace gravel; vf-vc; some gravel @	93 0
		77-77.5'; gray saturated	
79	82.5	Sand & gravel vf-vc; poorly sorted; gray; saturated	
82.5	83.5	Clay w/ silt sand & gravel; crumbly; gray saturated	
83.5	84	Sand f-c; gray saturated	
84.0	84.5	clayey silt; gray saturated	
84.5	85.5	Silt; soupy; gray	
85.5	86.5	Silty clayey sand f-m; trace cobbles to 4"	
86.5	88.0	silty clayey sand & gravel vf-vc; gray saturated	
88.0	89.	Silt; gray; feels moist but likely saturated, crumbles easily	
89	90	"	
90	93	Clay (Till) trace s&g throughout; damp; very hard; stiff; gray	
93	94	Silt.	

82 Sand
83 Sand
Chipt

EOB Plugged back 94-83 Measured Total Depths: Shallow = 33.95
Int = 59.35
Deep = 81.80

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 34 PAGE 1 OF PAGES 2
LOCATION: ~~DAYTON THERMAL PRODUCTS~~ Claridge Park 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: Deep 81-79' DIAMETER: Intermediate 58-56 SLOT NO. 10 slot SETTING: Shallow 31-16' 2" PVC
DATE COMPLETED: 3/6/01 - 3/7/01	
DRILLING COMPANY: MOODY'S/BOWSER MORNER Dave driller; Pete Associate driller; Nick helper	SAND PACK: #6 Silica (Global) Deep 82-77 Int 58.5-54 SETTING: Shallow 31.5-14
DRILLING METHOD: ROTO SONIC	CASING Deep 79' to grade Intermediate 56 to grade 2" PVC
SAMPLING METHOD: Continuous 20' x 3-4" plastic sleeve	SETTING: Shallow 16 to grade
OBSERVER: DVS	SEAL TYPE: Pure Gold Medium Bentonite chips
REFERENCE POINT: Grade	SETTING: Deep 77-58.5, Int = 54-31.5, Shallow 14-5' Plugged back 89-82
REFERENCE POINT ELEVATION: ~749.77 (DP-31)	DEVELOPMENT: Pumped 3-5 gpm until sed free
STICK-UP: NA	DURATION: 11:45 ~1.5 hrs/nest
SURFACE COMPLETION: FLUSH GRADE Concrete on up	WATER LEVEL: 24.2 / 749.77-24.2 = 725.57
REMARKS: Claridge Park 3/4 block east of Lamar & Daniel Streets	YIELD: 12:35 26.4 / 749.77-26.4 = 723.37 3/6/01 7AM 24.0 / 749.77-24 = 725.77

Digital Camera MVC-0015 = DVS & rig by KJV, Disk file MVC-0023 = drill core
day-bor-MW0345-C day-bor-MW0345-d

Estimated

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING (ppm)
0	0.3	Grass	feet/PPM
0.3	1.5	Clay, little sand f-coarse; brown; moist;	5' = 6.0
1.5	4.0	Sandy gravel & cobbles up to 3½"; little silt; brown; damp; no odor (poorly sorted)	7' = 2.0
4.0	9.0	as above; rounded; moist; poorly sorted	9' = 3.0
9	14	" " max cobbles = 2.5" " "	11' = 0.7
14	19	Sand; v fine-coarse; trace gravel to 1.5" diameter; little silt; poorly sorted	13' = 5.0
		damp; much finer & dryer than 9-14'	15' = 12
19	27	Sand & gravel vf-vc., trace cobbles up to 4" diameter; trace silt; brown; damp-moist (note: also adding fair amount of water to borehole while drilling)	17 = 8
			19 = 3
27	28	Clay (TILL); some s, g & c; gray; damp; hard	21 = 12
Aside	DTW = 15' but likely from water added while drilling		23: 25
28	30	Sand vf-vc; trace silt and gravel f-m; gray; saturated Lab Sample X	25 = 57
30	34	Sand; medium; little fine to coarse; trace fine gravel; gray; saturated.	28 = 22
		slightly finer 32-33'	30 0
34	39	Gravel; f-c; little sand coarse; trace f-m sand; trace cobbles to 4" diameter	33 0
		gray; saturated; becomes finer w/ depth ~38-39'	35 0
39	40	Sand, f-m; trace silt; gray; saturated	37 0
40	43	Sand coarse w/ fine gravel; some f-m sand; gray saturated	39 0.1
43	47	Sand as @ 39-40 plus trace coarse	41 0 43 0
47	49	Sand; fine; gray saturated	45 0.4 47 0 49 0

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 34 PAGE 2 OF 2 PAGES — DATE: 3/6-7/01

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION feet = PID	PID READING
			50.0
49	50	as above	53 =0
50	53	Sand vf-vc gravel & cobbles to 3"; poorly sorted; gray saturated	56 =0
53	55.5	Gravel fine - coarse; trace sand f-c; gray saturated	59=0
55.5	59	Sand f-c; trace gravel, f-c; trace cobble ~ 2" gray saturated	62-0.1
		coarsens 58-59'	65-0.4
59	61	as above	67 0
61	63	Sand, vf-vc gravel and cobbles to 5" diameter; trace silt; (poorly sorted)	69 0
		rounded; gray; saturated	71 0
63	66	as above w/o cobbles	73 0
66	69	gravel f-coarse; little sand f-c; trace silt gray saturated	75 0
69	72	Gravel f-coarse; trace sand f-c; gray saturated	77 0
72	75	Sand and gravel; f-c; trace cobbles to 3"; gray saturated	79 0
75	79	Sand fine-medium; trace coarse; trace fine gravel; gray; saturated	81 0
79	81	as above	83 0
81	82.5	Sand and gravel; fine-very coarse; gray; saturated	85 0
82.5	85.5	clay; gray saturated; mushy & soft; no coarse material	88 0
85.5	88.7	clay (Till); trace sand & gravel disseminated throughout;	
		f-coarse; gray damp; locally moist; no odor	
88.7	89	Sand & gravel w/ little clay in very end of retrieval	
		Driller thought it was material from above & we may have	
		went thru the clay into another s & g layer	
		11:45 DTW 24.2 — Measured TDs	
		12:35 DTW 26.4 — Deep = 80.85	
15	3/7	7:00 DTW 24.0 — Int = 57.20	
		Shallow = 30.85	
30			
32	End Cap	3 5/8" = 3.625"	
	2'	Screen Slotted portion = " = '	
	5'	Screen " " 51 1/2" = 4.3'	
	10'	Screen " " 112 1/2" = 9.375'	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. West 35 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Claridge Park 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: 2" Sched 40 PVC DIAMETER: Deep: 78-76 Inter: 63-61 SLOT NO. 10 SETTING: Shallow: 31-16
DATE COMPLETED: 3/20/2001 3/21/01	SAND PACK: #6 Silica sand
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SETTING: Deep: 79-73 ; Inter: 63.5-59 Shallow: 31.5-14
DRILLING METHOD: ROTO SONIC	CASING 2" Sched 40 PVC Shallow: 16 - grade
SAMPLING METHOD: Roto sonic, continuous 10' sleeves	SETTING: Deep: 76-grade, Inter: 61-grade;
OBSERVER: ~~DWB~~ MCP	SEAL TYPE: Medium Bentonite chips
REFERENCE POINT: grade	SETTING: Backplug: 89-79, 73-63.5, 59-31.5, 14-2.5
REFERENCE POINT ELEVATION: +1' + 748.2 (PP030) = ~749	DEVELOPMENT: pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION:
SURFACE COMPLETION: FLUSH GRADE	WATER LEVEL: @ MW-75 = 725.21 ; ~749 - 725.21 = ~ 24'
REMARKS: west of DP030, Digital photos MVC-0205 + MVC-0215	YIELD:

Might see clay 55-60' based on West 37 + West 32; may see till @ 90' based on West 33 or deeper as on West 37.

Note: This PID is an OVM 580B rented from Total Safety/Haeco

Soil Quality: DP030-4-8' non-detect; DP014-16-20': TCE 28 ug/kg ; DP025-12-16' ; TCE 47 ug/kg

DEPTH IN FEET		GEOLOGIC DESCRIPTION 749 - 73 = 16; 749 - 718 = 31	OVM PID READING (ppm)	
FROM	TO		feet	ppm
0	0.5	Topsoil; some organics + small roots; black; moist	1	0
0.5	9.0	Sand + gravel; v.f-v.crs; tr. cob; dry; brown	3	0
9.0	10.0	Silty sand + gravel; v.f-v.crs; tr. cob; wet from drilling; brown	6	0
10.0	19.0	Sand and gravel, v.f-crs; tr. v.crs gvl; dry; brown.	9	0
19.0	20.0	Sand + gvl; v.f-crs; tr. v.crs gvl; wet from drilling; brown	11	0
20.0	20.5	Silty sand + gvl; v.f.-crs; wet from drilling; brown	15	2
20.5	29.0	Gravel; f-m; some f-crs snd; dry; brown; 1/4-3/8" round gravel 25-29'	18	2
29.0	31.0	Gravel; f-crs; tr. v.crs snd; tr. cob; brown multicolored; sat.	20	0
31.0	33.5	Sand + Gravel; fine-med; tr. m gvl; brown; sat	25	4
33.5	37.5	SAND, coarse; well sorted; tr. f gvl; brown, sat	29	1
37.5	38.0	Sand and gvl; crs-f; brn, sat	30	1
38.0	39.0	Same as 33.5-37.5'	33	2
39.0	48.5	Sand + gvl; crs-m; with cobbles; brown; sat.	36	5
48.5	49.0	SAND, m; brn, sat, tr coarse snd	39	2
49.0	58.0	SAND; m; brn, sat;	41	5
58.0	59.0	Sand + gravel, m-f; tr. cob; brn, sat	45	5
59.0	64.5	Sand + gravel, m-m; tr. cob, brn. sat	48	1
64.5	65.0	CLAY; with f. gvl; firm, brn top 3-inch, grey bottom 3-inch, wet.	51	0
65.0	68.5	Silty sand; vf-f, w/f. gvl; tr. cob; grey; sat	53 55	0 0
68.5	69.0	CLAY with silt + f. sand; soft, grey, sat.	57 59	0 0

16'

31'

61'

63'

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: West 35 PAGE 2 OF 2 PAGES DATE: 3/21/01

DEPTH IN FEET		GEOLOGIC DESCRIPTION	PID READING	
FROM	TO		feet	PPM
69.0	72.0	CLAY, with silt + fine sand; pliable to mushy; grey; saturated	62	0
72.0	76.0	Sand + gravel; vf-f; tr. m gvl, grey, sat	65	0
76.0	77.0	SAND, f-v.crs; tr. silt; tr. f. gvl; grey; sat	68	0
77.0	79.0	Sand + gravel, m-m; tr. cob; grey; sat	71	0
—	—	Begin drilling on 3/21/01	74	0
79.0	82.5	TILL, tr. cob; tr. crs sand, tr. f gvl; grey, firm, moist	77	0
82.5	83.0	SAND; coarse; with silt; grey; moist tr. cob	79	0
83.0	86.5	TILL; with m-crs sand; tr. m gvl; grey, moist	82	0
86.5	87.0	Silty SAND; crs; tr. f. gvl; tr. cob; grey, moist	85	0
87.0	89.0	TILL; with m-v.crs sand; tr. f. gvl; tr. cob, grey moist.	89	0
	89.0	EOB		

76' - 78'

No soil samples submitted for analytical due to low PID readings.

Proposed screen settings:

Shallow: 16-31 feet

Intermediate: 61-63 feet

Deep: 76-78 feet

Measured Total Depths

Deep = 77.30

Int. = 62.40

Shallow = 30.85

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 36 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Claridge 1600 WEBSTER STREET, DAYTON, OHIO Park	SCREEN: Plugged back 89-82 2" PVC DIAMETER: Deep 81-79 Intermediate 56-54 SLOT NO. 10
DATE COMPLETED: 3/12-13/01	SETTING: Shallow 31-16
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK: Deep 82-77 Intermediate 56.5-52 #6 Silica (Global)
Dave = Driller	SETTING: Shallow 31-16
DRILLING METHOD: ROTO SONIC	CASING Deep 79-0 Intermediate 54-0 2" PVS
SAMPLING METHOD: Continuous 4" x 10' plastic sleeve	SETTING: Shallow 16-0
OBSERVER: DVS	SEAL TYPE: Pure Gold medium bentonite chips Plugged back 89-82
REFERENCE POINT: grade	SETTING: Deep 77-56.5, Int 52-31, Shallow 14-5
REFERENCE POINT ELEVATION: DP032 = 748.86	DEVELOPMENT: Pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs/nest
SURFACE COMPLETION: FLUSH GRADE Concrete 5' on up	WATER LEVEL: ~23.5' based on WL's @ the plant
REMARKS: Claridge Park, just east of DP-032 and just west of Apartment Complex west of Millburn Ave	YIELD: DTW 3/12 in Nest 34 = 24' but just got done developing wells DP-32 Soil 12-16' = ND both mobile and fixed lab DTW 3/14/01 = 22.7' Elev ~726.2

DC's OVM 5608

Calibrated to 100.7 ppm

Digital Camera
MVC-0085 = Drill core 49-89'
95 = " " 79-89'
105 = drill location

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING (ppm) feet	PID
0	0.1	grass	2	0
0.1	1.4	clay, brown; w/ organics & tree roots; trace s & g; moist; no odor	4	0
1.4	9.0	silty sand & gravel; fv-fc; trace cobbles to 3.5"; poorly sorted; brown; damp	6	0
		no odor	8	0
9.0	19.0	as above w/ 1-foot clayey/med gravel lens ~12-13'; end of recovery contains	10	2
		~0.5 mm very hard disk of s & g cemented w/ silt	14	11
19	26	as above Sprinkling - drizzle ~2:35 Lab Sample *	18	57
26	29	Sand f-c w/ fine gravel; trace m-c gravel; brown; saturated:	20	10
	Aside	DTW ~23.5' based on plant WL:	23	18
29	31	as above	26	42
31	33.5	top 6" brown, rest is gray TILL; v hard some s, g & cobbles to 5" disseminated throughout; damp	28	100
33.5	35.5	clayey silt w/ s, g, & cobbles to 5"; very soft; locally soupy; gray	30	9
35.5	37	S & g; vf-vc; trace	33	2
37.0	38.0	Sand vf-fine; gray; saturated Raining	36	1
38	39.0	Sand & g; f-vc; gray; saturated	38	1
39	44	as above w/ little cobbles to 3.5" - becomes more sandy near bottom 1'	42	1
44	49	Gravel; m-vc; trace fine gravel & vc sand; trace cobbles up to 5" diameter in upper	45	1
		2.5'; then no cobbles; gray; saturated; very coarse material	48	1
	Aside	Quit for the day		

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 36 PAGE 2 OF 2 PAGES DATE: 3/12-13/01

	DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING Feet	PID
			→ as above		
~7:40 AM	49	53	Gravel; medium; little f-vc; (resembles pea gravel); trace vc sand;	50	0
			gray; saturated;	52	0
	53	55	Sand & gravel vf-m; little cobbles to 3"; trace silt; gray; saturated	55	1
	55	59	Sand; m-c; little fine and vc; upper 1' has trace fine-med gravel	58	2
			so does lower 1'.	61	0
	59	60	as above	64	0
	60	62	Gravel m-vc w/ cobbles up to 4"; some sand vf-vc; gray saturated	66	0
	62	63.5	Sand m-vc; trace fine sand; trace fine gravel; gray; saturated	68	0
	63.5	67.0	same as 60-62	71	0
	67.0	69.0	same as 62.0-63.5	73	0
	69	71.5	same " "	75	0
	71.5	75.5	Sand vf-c; trace gravel; fv-fc; gray; saturated	78	0
	75.5	76.5	same as 60-62	81	0
	76.5	78.0	same as 71.5-75.5	83	0
	78.0	79.0	Same as 60-62 w/o cobbles	86	0
	79.0	80.0	" (pea gravel)	88	0
	80.0	82.0	Sand; medium; trace f-vc; trace fine gravel; gray saturated		
	82.0	87.0	TILL; Clay w/ s+g & cobbles disseminated throughout; gray		
			damp; very hard; v stiff; clasts make up to 30% of matrix		
9AM	87.0	89.0	Sand v.f-fine; trace med-coarse; little silt; gray; saturated		
			EOB		
			Plugging hole back w/ bentonite chips to 82'		
			Shallow screen set on top of Till @ 31'-16'		
			Intermediate screen split difference between shallow and deep = 54-56'		
			Deep screen set 1 foot above Till (79-81) which would put bottom		
			1' of screen in medium sand and top 1' in pea gravel		
			Shallow screen ~4" lower than 31' per driller		

Measured Total Depths: Deep = 80.95, Int = 55.25, Shallow = 30.85

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 37 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Claridge 1600 WEBSTER STREET, DAYTON, OHIO Park	SCREEN: Deep 99-97 2" PVC DIAMETER: Int 49-47 SLOT NO. 10
DATE COMPLETED: 3/15, 16 and 19/01	SETTING: shallow 28-13
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK: Deep 99-95 #6 silica (Global) Int 50-45
Dave: driller, Nick: helper Jarrod: helper 15th Don: Helper 16th	SETTING: shallow 28.5-11
DRILLING METHOD: ROTO SONIC	CASING Deep 97 to grade 2" PVC Int 47 to grade
SAMPLING METHOD: 10' continuous core ~3-4"	SETTING: shallow 13 to grade
OBSERVER: DVS	SEAL TYPE: Deep 95-50 Medium Bentonite chips Int 45-28.5 Global brand
REFERENCE POINT: grade	SETTING: shallow 11-5
REFERENCE POINT ELEVATION: 746.12 = DP025	DEVELOPMENT: Pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs/nest
SURFACE COMPLETION: FLUSH GRADE Concrete 5' on up	WATER LEVEL: ~20' based on surrounding data
REMARKS: SW Corner Claridge Park	YIELD: ▼ ~726 3/16

Digital Camera MVC0135 = drill core
145 = drill site facing south

Soil quality @ DP025 (nearest Geoprobe) 8-12' = 37 ug/kg TCE mobile lab EQL
12-16' = 47 ug/kg TCE Keinron

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION (*= potential sample; (*) = Lab Sample)	PID READING (ppm) Feet	PPM
0	2.0	Grass, Clay; little silt; organics upper 1'; brown; moist; no odor	1	0
2.0	4.0	Silty Sand & gravel vf-vc; trace cobbles to 4" diameter; brown damp.	3	5
4.0	9.0	as above; no odor	6	9
9.0	11.0	as above; no odor (9-19 = 5.5' recovery, hard to tell sand thickness)	8	10
11.0	13.0	Sand; f-m; damp; no odor	11	6
13.0	19.0	Same as 2-4' Vapors @ wellhead 0.0	15	4
19.0	21.0	as above; trace clay (only 5' recovery 19-29) brown, saturated (driller adding water here)	19	24 *
21.0	26.0	Gravel; f-vc; little sand vf-vc; upper 2' has trace cobbles to 4"; brown	21	24
		saturated	25	34
26	28	Sand; m-vc; (becomes finer w/ depth); trace f-m gravel; brown; saturated	28	50 *
28	29	Silt; brown; moist; (likely saturated)	31	5
29	32	A lot of water added to hole; hard to tell upper 2-3' geology (5' recovery)	35	19
29	30	Silt as @ 28-29 Jarrod dropped ~4' in mud tub hard to say how much fell out of bag	38	69 *
30	35	sand vf-vc; with f-m gravel; trace coarse; brown; saturated	41	54
35	36	sand f-m; stradeled by thin cobble layer above and below (3-4" cobbles)	43	78
36	39	Sand m-vc and gravel f-c; brown; saturated	45	99
39	40	as above (Jarrod dropped bag in mud tub again) Lab	46	121
40	41	Gravel; f-vc; trace sand vf-vc; brown; saturated Soil Sample	48	127
41	49	Sand; m-c; trace fine and vc sand; little fine-med gravel 44.5-46		
		brown saturated		

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 37 PAGE 2 OF 2 PAGES DATE: 3/15-16/01

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING Feet/PPM
49	52.5	Sand f-vc; trace fine gravel; brown satrated	51 23
52.5	53	Till; oxidized brown; trace sig disseminated Hurvart; damp; v hard/stiff	53 18
53	56	Clayey; silty; soupy; sand and gravel; vf-vc; trace cobbles	55 3
		up to 4" diameter; gray; satrrated	57 1
56	57.5	Till, gray; little silt sand and gravel; vf-coarse trace cobble to 4" damp; hard/stiff	61 2
57.5	58.0	clayey silty sand; vf-vc; trace f-m gravel	64 3
58.0	59	Till; gray; moist some s, g, vf-vc;	66 4
		1-inch fine sand @ end of recovery	68 3
59	64.5	Sand fine to medium; gray; saturated; well sorted	72 1
64.5	66.5	Sand vf-f; gray saturated well sorted	75 2
66.5	68.0	Silt; gray; satrated	78 1
68.0	69.0	Sand; f-m; gray satrrated well sorted	82 1
69.	71.5	Sand vf-coarse; gray saturated	85 2
71.5	72.0	Silt; gray; saturated	88 1
72.0	75.	Sand f-vc and gravel fine to med; gray; saturated	92 1
75	77.5	Silt; gray; upper foot soft; bottom 1.5' very firm	95 1
77.5	78.0	Sand; f-c; gray; satrrated	98 1
78.0	78.5	Silt; gray; saturated	
78.5	79.0	silty sand; f-vc; trace f gravel; gray; satrated	
79	79.5	" "	
79.5	83	Gravel; fine-med; trace coarse; little sand; f-vc; gray	
83	86.	Sand; coarse-vc; some med sand; trace vf-vc gravel; gray sat	
86	88.5	Sand & gravel vf-vc; tr cobbles to 4" gray; sat.	
88.5	89.0	Sand; fine; gray sat	
89.0	91	"	
91	99	s & g	
		Rig broke down 3/16 @ noon, Truck in to shop. Will back Monday 3/19.	
		MCP will complete supervision of installation	
		Measured Total Depths: Deep=100.90, Int=47.80, Shallow=27.80	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 38 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Claridge Park 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: 81-83 2" PVC DIAMETER: 56-58 15-20 SLOT NO. 10
DATE COMPLETED: 3/9/01 and 3/12/01	SETTING:
DRILLING COMPANY: MOODY'S/BOWSER MORNER Dave Driller, Pete helper	SAND PACK: #6 Silica Deep 85-79 SETTING: Intermediate 60-54 shallow 31-13
DRILLING METHOD: ROTO SONIC	CASING Deep 81 to grade 2" PVC Intermediate 56 to grade
SAMPLING METHOD: Continuous 4" x 10' Core	SETTING: shallow 15 to grade
OBSERVER: DVS	SEAL TYPE: Pure Gold Medium Bentonite chips Plugged back 89-85
REFERENCE POINT: grade	SETTING: Deep 79-60, Int. 54-31; Shallow 13-5'
REFERENCE POINT ELEVATION: ~748.0 DP-29 = 748.75 slightly higher than Nest 38	DEVELOPMENT: pumped 3-5 gpm until sed free
STICK-UP: NA	DURATION: ~1.5 hrs/nest
SURFACE COMPLETION: FLUSH GRADE Concrete 5' on up	WATER LEVEL: ~23' GW elevation ~725.5 @ MW-79
REMARKS: South side of Claridge Park between baseball diamond and Claridge Community Center, Digital Camera MVC-0055 = drill core of entire hole 6S = closeup of clay 85-89' 7S = drill location 15-17' and 21-23' soil samples from closest geoprobe hole were all ND	YIELD: 3/14/01 DTW = 21.5 Elev ~726.5

Estimated

DEPTH IN FEET FROM	DEPTH IN FEET TO	GEOLOGIC DESCRIPTION	PID READING (ppm) Feet / PID
0	0.2	grass	2' 1.0
0.2	1.5	clay w/ organics; tr sand f-c brown; moist; no odor	5' 2.1
1.5	9.0	Silty sand and gravel; vf-vc; trace cobbles to 4"; very poorly sorted	8' 3.2
		light brown; damp; no odor	11 2.0
9.0	19.0	as above w/o cobbles dry	13 5.0
19	23	as above saturated from drilling water; slightly clayey 19-20; 6" fining upwards sequences of gravel to sand	15 8.0
23	24.0	Sand fine-medium trace coarse; brown; moist	18 9.0
24.0	26.5	Gravel w/ silt and sand; vf-vc; 1-2" rock common brown; moist	20 0.7
26.5	29.0	Sand; m-vc; trace gravel f-m; brown; saturated; end of sample is	22 3.5
		slightly silty w/ v. coarse gravel	24 7.0
29	39	3' recovery; driller not sure what interval it would be but thought it may be	26 13
		the upper portion and the bottom portion was pushed into the formation	28 19
		due to the coarse material	33 2.6
		Gravel f-vc; some sand vf-vc; grayish-brown; saturated	36 3.9
39	41	7' recovery Sand; vf-vc; trace fine gravel; brown; saturated	41 5
41	49	Sand and gravel; vf-vc; trace 3" cobbles; brown saturated	43 10
49	56.5	as above; up to 5" cobbles cobbles stop @ 53'	45 16
56.5	59.0	Sand m-vc; trace fine; trace fine-med gravel; brown; saturated	47 26
59	65	Plastic bag ripped all material submerged in Mud Tub, driller said	50 10
		it was all 5 & 9 as above	52 28

Lab sample

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 38 PAGE 2 OF 2 PAGES DATE: 3/9 & 12/01

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING
			54 30
65	69	Gravel; vf-vc; little sand vf-vc; trace cobbles to 4" diameter	56 41
		brown saturated subrounded	58 57
69	77	No return. Driller thought we may have pushed a big cobble	65 30
77	78.5	Sand vf-vc; brown; saturated	68 32
78.5	79.0	Gravel; med-vc; one 4" cobble; saturated	78 15
79	85	No Return · chewed up cobble in spoon	86 0.7
85	89	clay; gray; somewhat plastic and pliable; moist-saturated	88 0.4
		No stg in the clay	
		EOB	
		DTW MW-7S = 24.70 750.18-24.70 = 725.48	
		Plugged back w/ bentonite 89-85'	
		Measured Total Depths:	
		Deep = 82.75	
		Int = 57.80	
		Shallow = 29.20	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 39 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Clean City Janitor 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: 18-33 2" PVC Sch 40 DIAMETER: 53-55 SLOT NO. 10
DATE COMPLETED: 4/4/01	SETTING: 76-78
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK: #6 Silica
Dave driller, Nick & Don helpers	SETTING: 78.5-74 55.5-51 33.5-16
DRILLING METHOD: ROTO SONIC	CASING: 18-0 2" PVC Sch 40
SAMPLING METHOD: 4" x 10' Continuous cores	SETTING: 53-0 76-0
OBSERVER: DVS	SEAL TYPE: medium bentonite chips
REFERENCE POINT: grade	SETTING: 89-78.5 74-55.5, 51-33.5, 16-5
REFERENCE POINT ELEVATION: 750.43 @ DP023	DEVELOPMENT: pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs/Nest
SURFACE COMPLETION: FLUSH GRADE	WATER LEVEL: historic high = 731 then shallowest BTW @ 19.5'
REMARKS: Clean City Janitor parking lot entrance	YIELD: 19' bg = high WT
Digital Camera pictures MVC-039S, 40S, 45S thru 49S	

Estimated

580B

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	OVM PID READING (ppm) Acet	PID
0	2"	asphalt	2	0
2"	1.2'	Clay; trace silt & sand & gravel vf-c; brown; moist; no odor	4	0
1.2'	9.0	Silty sand & gravel; vf-vc; trace cobbles to 4"; brown; dry; no odor	6	1
9.0	19.0	as above	8	0
19	20.0	" "	11	20
20	24.0	Silty, sandy; vf-vc; gravelly vf-f; clay; brown; trace gray mottling;	14	21
		locally compact & locally crumbly; very poorly sorted; saturated (drillers adding H_2O)	17	36
24.0	28.0	Till; trace vf-vc s & g disseminated throughout; near dry; stiff	* Collected Soil @ 19' = high WT	
28.0	29.0	Silty Sand & gravel; fv-vc; trace clay; gray; saturated; poorly sorted		
29.0	31.0	as above except brown	20	6
31.0	36.0	Sand; medium; little f to vc; trace gravel f-vc; trace 3½" cobbles; brown	24	4
36	39.0	Silty sand & gravel; vf-vc; brown; saturated	28	3
39.0	42.0	Sand Medium; little f-vc sand ~~trace f gravel~~; brown; sat	31	1
42	49.0	Silty sand & gravel; vf-vc; very poorly sorted; one 4" cobble;	34	8
		6" pea gravel lense @ 48-48.5; brown; saturated	37	9
	*	2 pictures w/ digital camera	41	4
		MVC-039S = Drill core 0-49'	44	6
		MVC-040S = Drill location looking SW	47	15
49.0	54.0	Gravel; fine; Some m-vc sand; little m-c gravel; one 6" cobble	51	2
		brown; bottom foot 53-54 turns gray and becomes much coarser	55	4

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 39 PAGE 2 OF 2 PAGES DATE: 4/4/01

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING feet/PPM
54	59	Sand; c-vc; little f-m sand; trace fine gravel; gray saturated	58 2
59	65	as above; fine-med sand @ 62-62.5 63.5-64 gray	61 0
65	69	Silty sand & gravel vf-vc; trace cobbles up to 6";	65 0
		locally very gravelly	68 0
69	73	as above; no cobbles	71 0
73	77	Sand vf-med; becomes slightly coarser bottom foot or so, gray	74 1
77	79	Silty sand & gravel; vf-vc; gray; possible till in last	77 0
		inch or so, appears to be disseminated s&g in a silt but not	81 0
		much recovery. Till estimated to be @ 84 based on other holes.	84 0
79	79.3	as above	88 0
79.3	80.0	TILL trace disseminated s&g throughout; stiff; very hard; gray; dry	
80	81.5	Silt w/ f-m sand; trace medium gravel; gray saturated	
81.5	85.0	Till; some s&g dissem throughout; gray; near dry	
85.0	86.0	Silt; trace clay; gray; moist	
86.0	87.5	Till; little s&g throughout; gray near dry	
87.5	89.0	clayey silty f-m sand; trace f-m gravel; gray; saturated	
	89	EOB	
		~11:30 done drilling	
		Measured Total Depths	
		Deep = 81.45	
		Int = 56.25	
		Shallow = 33.60	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 40 PAGE OF 1 PAGES 2
LOCATION: DAYTON THERMAL PRODUCTS City of Dayton 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: 2" Sch40 PVC DIAMETER: SLOT NO. 10
DATE COMPLETED: 4/5/01	SETTING: 15-30, 55-57, 83-85
DRILLING COMPANY: MOODY'S/BOWSER MORNER Dave Driller, Nick & Don helpers	SAND PACK: SETTING: 87-81, 57.5-53, 30.5-13
DRILLING METHOD: ROTO SONIC	CASING
SAMPLING METHOD: 4" x 10' Continuous Core	SETTING: 30-0 55-0 83-0
OBSERVER: DVS	SEAL TYPE: medium bentonite chips
REFERENCE POINT: grade	SETTING: 89-87, 81-57.5, 53-30.5, 13-5
REFERENCE POINT ELEVATION: ~747 @ DP068 & 069 across street we are ~ 1 to 2' higher	DEVELOPMENT: pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~ 1.5 hrs/Nest
SURFACE COMPLETION: FLUSH GRADE	WATER LEVEL: ~748 - 731 = high WT = 17' to high WT, currently ~ 748-725 = 23'
REMARKS: 6 car parking lot in front the City of Dayton 520 Kiser St. Carpenter shop. Inst. Vault pictures only	YIELD:

Estimated

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION (Calibrated to 102 ppm w/ isobutylene)	OVM 580B PID READING (ppm) Feet	ppm
0	2"	Asphalt	3	2
2"	9.0	Silty sand & gravel; trace cobbles to 3.5" brown; dry;	6	2
9.0	19.0	as above, calculated high WT @ 17'	11	1
19.0	23.0	as above	14	2
23.0	24.0	Sand very coarse and fine gravel; orange brown (oxidized rusty appearance) sat. lab sample	*18	15
24.0	25.5	Silty S & g; trace cobbles to 4"; orange brown (oxidized rusty appearance) satur.	22	4
25.5	26.5	Till; trace vf-vc S & g disseminated throughout; gray sat	25	2
26.5	27.0	Sand; f-m; gray; sat	28	2
27.0	29.0	Gravel f-m; trace f-vc sand; trace cobbles to 3.5"; gray; sat	31	1
29.0	37.0	Sand, Gravel & cobbles to 5"; S & g vf-vc; gray sat.	34	1
37	39.0	Sand; m-vc; ~~trace fine~~ trace f-vc gravel; gray; sat	38	1
39.0	9:30 AM	Casing broke off in hole, went to get fishing tool to pull out casing	41	2
	10:05	Casing out & back drilling	45	1
39.0	44	Gravel; f-m; trace coarse-vc gravel; some sand f-vc; trace cobbles to 3.5"	48	2
44	49	Sand f-vc; little gravel vf-vc; gray; sat	52	1
49	51	as above	55	4
51	57	Silty sand & gravel vf-vc; trace cobbles to 3.5" gray sat	58	5
57	58.5	Sand c-vc; some f-m sand; trace fine gravel; gray sat	61	0
58.5	59.	S & G; vf-vc; gray; sat	64	0
59.0	59.5	as above	68	0

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 40 PAGE 2 OF 2 PAGES DATE: 4/5/01

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING feet/PPM
59.5	64.0	Sand vf-vc; trace f-c gravel; gray; sat	61 0
64.0	66.0	Sand med; little f x coarse; tr. fine gravel; gray sat	65 0
66.0	69.0	Sand vf-vc and f-m gravel; gray; sat	68 0
69	74.0	as above	71 0
74.0	79.0	Sand f-m; m-vc last one foot; gray sat.	75 0
79.0	83	Sand; m-vc; trace fine	78 0
83	85	Sand m-vc with fine-m gravel;	81 0
85	86.5	Sand f-m; trace coarse; gray sat	84 0
86.5	87.0	Silty stg; vf-vc; grey sat	88 3
87.0	89.0	Till; trace stg disseminated thruout; gray dry	
	89.0	EOB	
		Proposed screens	
		shallow = 25-30 = 2' above high WT 4' below low WT	
		Intermediate = 55-57 splits the difference	
		deep = 83-85' 2' above TILL incase the screen drops	
		~ Grade = 748	
		High Water = -731	
		Low Water = 722 26'	
		Measured Total Depths	
		Deep = 88.05	
		Int = 57.80	
		Shallow = 30.20	

GEOLOGIC LOG

Project: Chrysler Dayton Thermal Products
Location: Dayton, Ohio
Client: Chrysler Corporation
Driller: Moody's of Dayton
Elevation: 751.43 MSL
Water Level & Date: 26.2 ft BGS 11/17/94

Boring Number: MWA1
Date Started: 11/14/94
Date Completed: 11/14/94
Drilling Method: 4.25" HSA, CME 75
Page Number: 1 of 2
Logged By: Thompson

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
5	4-6	S1	1.1	14-16 20-21 (36)	Well Graded Gravel with Sand (GW); Light Brownish Gray (5YR6/1); Dry; Dense	BG, BG, 0.5 ppm Dye Test - Neg.
10	9-11	S2	1.2	23-29 18-18 (47)	Same as S1	BG, BG, 4.0 ppm Dye Test - Neg.
15	14-16	S3	1.4	24-25 23-25 (48)	Same as S2	BG, 10, 5 ppm Dye Test - Neg.
20	19-21	S4	1.3	25-30 23-20 (53)	Same as S3; Very Dense	BG, 3, 10 ppm Dye Test - Neg.
25	24-26	S5	1.6	20-25 26-33 (51)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Moist; Very Dense	BG, 3, 10 ppm Dye Test - Neg.
30	29-31	S6	1.8	38-25 25-30 (50)	Well Graded Gravel with Sand (GW); Brownish gray (5YR4/1); Wet; Very dense	BG, 6, 6 ppm Dye Test - Neg.
35	34-36	S7	1.8	23-24 35-35 (59)	Top 1 ft same as S6; Bottom 0.8 ft Well Graded Sand (SW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, 40, 15 ppm Dye Test - Neg.

CLEAN TECH

chryall.log

N = Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Air Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, and Split Spoon Sample Respectively.

GEOLOGIC LOG

Project	Chrysler Dayton Thermal Products	Boring Number	MWA1
Location	Dayton, Ohio	Date Started	11/14/94
Client	Chrysler Corporation	Date Completed	11/14/94
Driller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
Elevation	751.43 MSL	Page Number	2 of 2
Water Level & Date	26.2 ft BGS 11/17/94	Logged By	Thompson

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
40	39-41	S8	1.9	27-38 40-44 (78)	Top 0.5 ft Well Graded Sand (SW); Bottom 1.4 ft Well Graded Gravel (GW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, 10, 7 ppm Dye Test - Neg.
						Well Construction
						Total Depth 39 Screen 29-39 Sand 26.5-39 Bent. 23.8-26.5 Grout 0-23.8 Riser 0-29
						Screen is 10 Slot Screen & Riser 2"PVC

CLEAN TECH

chrysa12.log

N = Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Air Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, and Split Spoon Sample Respectively.

GEOLOGIC LOG

:oject Chrysler Dayton Thermal Products
ıcation Dayton, Ohio
.ient Chrysler Corporation
:iller Moody's of Dayton
.evation 749.45 MSL
ıter Level & Date 24.2 ft BGS 11/18/94

Boring Number MWA2
Date Started 10/28/94
Date Completed 10/28/94
Drilling Method 6.25" HSA, CME 75
Page Number 1 of 2
Logged By Thompson

ıepth BGS (ft)	Sample Int-erval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
5	4-6	S1	1.1	21-25 24-25 (49)	Poorly Graded Gravel with Silt (GP-GM); Light Brownish Gray (5YR 6/1); Dry; Dense	BG, BG, BG, Dye Test - Neg.
10	9-11	S2	1.0	25-26 22-21 (48)	Same as S1	BG, BG, 1.5 ppm Dye Test - Neg.
15	14-16	S3	1.5	11-19 26-26 (45)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR 4/1); Dry; Dense	BG, BG, 10 ppm Dye Test - Neg.
20	19-21	S4	1.3	17-24 24-22 (48)	Well Graded Sand with Silt and Gravel (SW-SM); Brownish Gray (5YR 4/1); Dry; Dense	BG, 20, 12 ppm Dye Test - Neg.
25	24-26	S5	1.6	14-19 21-28 (40)	Well Graded Sand with Gravel (SW) Brownish Gray (5YR4/1); Wet; Dense	BG, 10, 4 ppm Dye Test - Neg.
30	29-31	S6	1.8	19-22 19-23 (41)	Well Graded Gravel (GW); Brownish Gray (5YR4/1); Wet; Dense	1, 17, 5 ppm Dye Test - Neg.
35	34-36	S7	2.0	27-29 51-61 (80)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, BG, 4 ppm Dye Test - Neg.

EAN TECH

chrysa21.log

= Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
: Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
ı Split Spoon Sample Respectively.

GEOLOGIC LOG

:oject	Chrysler Dayton Thermal Products	Boring Number	MWA2
ıcation	Dayton, Ohio	Date Started	10/28/94
.ient	Chrysler Corporation	Date Completed	10/28/94
:iller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
.evation	749.45 MSL	Page Number	2 of 2
ıter Level & Date	24.2 ft BGS 11/18/94	Logged By	Thompson

)epth BGS (ft)	Sample Int-erval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
40	39-41	S8	2.0	22-25 29-41 (54)	Well Graded Gravel with Sand and Clay (GW-GC); Brownish Black (5YR 2/1); Wet; Very Dense	1, 4, 4 ppm Dye Test - Neg. Well Construction Total Depth 40 Screen 30-40 Sand 27-40 Bent. 23.5-27 Grout 0-23.5 Riser 0-30 Screen is 10 Slot Screen & Riser 2" PVC

:AN TECH

chrysa22.log

Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
Split Spoon Sample Respectively.

GEOLOGIC LOG

:oject	Chrysler Dayton Thermal Products	Boring Number	MWA3
ıcation	Dayton, Ohio	Date Started	11/11/94
.ient	Chrysler Corporation	Date Completed	11/11/94
·iller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
evation	752.19 MSL	Page Number	1 of 2
ter Level & Date	26.8 ft BGS 11/18/94	Logged By	Thompson

epth BGS (ft)	Sample Int-erval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
5	4-6	S1	1.6	12-12 15-15 (27)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Dry; Medium Dense	BG, BG, 0.5 ppm Dye Test - Neg.
10	9-11	S2	1.2	10-7 5-10 (12)	Same as S1	BG, BG, BG Dye Test - Neg.
15	14-16	S3	0.8	7-5 4-7 (9)	Same as S2; Loose	BG, BG, BG Dye Test - Neg.
20	19-21	S4	1.8	75-25 27-32 (52)	Clay with Gravel (CH); Moderate Yellowish Brown (10YR5/3); Dry; Very Dense	BG, BG, 2 ppm Dye Test - Neg.
25	24-26	S5	1.6	17-20 23-30 (43)	Well Graded Sand (SW); Pale Yellowish Brown (10YR6/2); Dry; Dense	BG, BG, 12 ppm Dye Test - Neg.
30	29-31	S6	1.8	27-22 33-40 (55)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, BG, 70 ppm Dye Test - Neg.
5	34-36	S7	1.9	35-30 28-35 (58)	Same as S6; Orange Staining	BG, BG, 70 ppm Dye Test - Neg.

AN TECH

chrysa31.log

Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, Split Spoon Sample Respectively.

GEOLOGIC LOG

oject	Chrysler Dayton Thermal Products	Boring Number	MWA3
cation	Dayton, Ohio	Date Started	11/11/94
ient	Chrysler Corporation	Date Completed	11/11/94
iller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
evation	752.19 MSL	Page Number	2 of 2
ter Level & Date	26.8 ft bgs 11/18/94	Logged By	Thompson

epth BGS (ft)	Sample Int-erval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
40	39-41	S8	1.8	35-45 60-60 (105)	Well Graded Gravel with Sand and Some Clay (GW); Brownish Gray (5YR 4/1); Wet; Very Dense	BG, BG, 5 ppm Dye Test - Neg.
						Well Construction Total Depth 39 Screen 29-39 Sand 27-29 Bent. 25-27 Grout 0-25 Riser 0- 29 Screen is 10 Slot Screen & Riser 2" PVC

AN TECH

chrysa32.log

Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, Split Spoon Sample Respectively.

GEOLOGIC LOG

roject	Chrysler Dayton Thermal Products	Boring Number	MWA4
ocation	Dayton, Ohio	Date Started	10/24/94
lient	Chrysler Corporation	Date Completed	10/24/94
riller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
levation	751.27 ft MSL	Page Number	1 of 2
ater Level & Date	25.8 ft BGS 11/19/94	Logged By	Thompson

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
_ 5	4-6	S1	0.8	8-13 10-12 (23)	Well Graded Sand with Gravel and Silt (SW-SM); Light Brownish Gray (5YR6/1); Dry; Medium Dense	_ BG, BG, BG Dye Test - Neg.
_ 10	9-11	S2	1.3	12-14 30-33 (44)	Same as S1; Dense; Larger Grains	_ BG, BG, 1.5 ppm Dye Test - Neg.
_ 15	14-16	S3	1.5	18-18 15-15 (33)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Dry; Dense	_ BG, BG, 0.5 ppm Dye Test - Neg.
_ 20	19-21	S4	1.7	45-90 60-90 (150)	Well Graded Gravel with Sand and Clay (GW-GC); Light Brownish Gray (5YR6/1); Dry; Very Dense	_ BG, BG, 50 ppm Dye Test - Neg.
_ 25	24-26	S5	1.9	14-16 21-25 (37)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Moist; Dense	_ BG, 8, 75 ppm Dye Test - Pos.
_ 30	29-31	S6	2.0	13-10 25-29 (35)	Poorly Graded Sand with Gravel (SP); Brownish Black (5YR2/1); Wet; Dense	_ BG, 13, 80 ppm Dye Test - Neg.
_ 35	34-36	S7	2.0	22-23 30-30 (53)	Same as S6; Very Dense	_ BG, 40, 80 ppm Dye Test - Neg.

LEAN TECH

chrya41.log

= Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
ir Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
nd Split Spoon Sample Respectively.

GEOLOGIC LOG

Project	Chrysler Dayton Thermal Products	Boring Number	MWA4
Location	Dayton, Ohio	Date Started	10/24/94
Client	Chrysler Corporation	Date Completed	10/24/94
Driller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
Elevation	751.27 ft MSL	Page Number	2 of 2
Water Level & Date	25.8 ft BGS 11/19/94	Logged By	Thompson

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
40	39-41	S8	2.0	35-40 45-75 (85)	Poorly Graded Sand with Silt (SW-SM) Brownish Black (5YR2/1); Wet; Very Dense	BG, 20, 100 ppm Dye Test - Neg.
45	44-46	S9	2.0	50-52 70 (122)	Same as S8	2, 40, 60 ppm Dye Test - Neg.
						Well Construction Total Depth 45 Screen 35-45 Sand 32.5-45 Bent. 28.7-32.5 Grout 0-28.7 Riser 0-35 Screen is 10 Slot Screen & Riser 2" PVC

CLEAN TECH

chrya42.log

N = Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Air Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, and Split Spoon Sample Respectively.

GEOLOGIC LOG

Project	Chrysler Dayton Thermal Products	Boring Number	MWA5
Location	Dayton, Ohio	Date Started	11/15/94
Client	Chrysler Corporation	Date Completed	11/15/94
Driller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
Elevation	751.25 ft MSL	Page Number	1 of 2
Water Level & Date	26 ft BGS 11/18/94	Logged By	Thompson

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
5	4-6	S1	1.3	10-11 14-21 (25)	Well Graded Gravel with Silt and Clay (GW-GC); Light Brownish Gray (5YR6/1); Dry; Medium Dense	BG, BG, 1 ppm Dye Test - Neg.
10	9-11	S2	1.2	11-12 25-30 (37)	Well Graded Gravel with Silt (GW-GM); Light Brownish Gray (5YR 6/1); Dry; Dense	BG, BG, 3 ppm Dye Test - Neg.
15	14-16	S3	1.2	20-19 15-20 (34)	Poorly Graded Sand with Gravel (SP); Brownish Gray (5YR4/1); Dense; Dry	BG, BG, 3 ppm Dye Test - Neg.
20	19-21	S4	1.0	20-55 44-40 (99)	Well Graded Gravel with Clay (GW-GC) Grayish Brown (5YR3/2); Moist; Very Dense	BG, BG, 4 ppm Dye Test - Neg.
25	24-26	S5	1.5	34-60 40-40 (100)	Well Graded Gravel with Sand and Clay (GW-GC) Grayish Brown (5YR3/2) Wet; Dense	BG, BG, 4 ppm Dye Test - Neg.
30	29-31	S6	1.7	18-22 24-25 (46)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Dense; Wet	BG, BG, 6 ppm Dye Test - Neg.
35	34-36	S7	2.0	21-23 23-25 (46)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Dense; Wet	BG, BG, 5 ppm Dye Test - Neg.

CLEAN TECH

chrya511.log

N = Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Air Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, and Split Spoon Sample Respectively.

GEOLOGIC LOG

;ct	Chrysler Dayton Thermal Products	Boring Number	MWA5
:ion	Dayton, Ohio	Date Started	11/15/94
ıt	Chrysler Corporation	Date Completed	11/15/94
.er	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
ıtion	751.25 ft MSL	Page Number	2 of 2
: Level & Date	26 ft BGS 11/18/94	Logged By	Thompson

:h ; :)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
)	39-41	S8	2.0	25-19 40-7 (59)	Top foot same as S7; Bottom foot Poorly Sorted Sand (SP); Dark Yellowish Brown (10YR4/2); Dense; Wet	BG, BG, 6 ppm Dye Test - Neg.
						Well Construction Total Depth 39 Screen 29-39 Sand 27-39 Bent. 24.5-27 Grout 0-24.5 Riser 0-29 Screen is 10 Slot Screen & Riser 2" PVC

AN TECH

chrya52.log

Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, Split Spoon Sample Respectively.

GEOLOGIC LOG

Project	Chrysler Dayton Thermal Products	Boring Number	MWA6
Location	Dayton, Ohio	Date Started	10/25/94
Client	Chrysler Corporation	Date Completed	10/25/94
Driller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
Elevation	751.75 ft MSL	Page Number	1 of 2
Water Level & Date	26.5 ft BGS 11/17/94	Logged By	Thompson

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
5	4-6	S1	1.2	8-9 11-14 (20)	Gravelly Clay with Sand (CH); Dark reddish brown (10YR2/2); Moist; Dense	BG, BG, BG, Dye Test - Neg.
10	9-11	S2	1.3	10-15 17-16 (32)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Dry; Dense	BG, BG, 3 ppm Dye Test - Neg.
15	14-16	S3	1.8	22-25 25-56 (50)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Dry; Dense	BG, BG, 1 ppm Dye Test - Neg.
20	19-21	S4	1.0	7-13 17-27 (30)	Same as S3; Moist; Dense	BG, BG, BG Dye Test - Neg.
25	24-26	S5	1.8	9-9 11-12 (20)	Well Graded Sand (SW); Brownish Gray (5YR4/1); Moist; Medium Dense	BG, BG, 3 ppm
30	29-31	S6	2.0	17-25 30-40 (55)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, BG, 4 ppm Dye Test - Neg.
35	34-36	S7	2.0	22-18 18-30 (36)	Well Graded Gravel with Sand (GW); Brownish Black (5YR2/1); Wet; Dense	BG, BG, 4 ppm Dye Test - Neg.

CLEAN TECH

chrya61.log

N = Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Air Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, and Split Spoon Sample Respectively.

GEOLOGIC LOG

:oject	Chrysler Dayton Thermal Products	Boring Number	MWA6
ɔcation	Dayton, Ohio	Date Started	10/25/94
;lient	Chrysler Corporation	Date Completed	10/25/94
:iller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
;levation	751.75 ft MSL	Page Number	2 of 2
ıter Level & Date	26.5 ft BGS 11/17/94	Logged By	Thompson

)epth BGS (ft)	Sample Int-erval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
40	39-41	S8	2.0	15-15 20-22 (35)	Same as S7; Wet	BG, BG, 5 ppm Dye Test - Neg.
						Well Construction Total Depth 40 Screen 30-40 Sand 27.5-40 Bent. 24-27.5 Grout 0-24 Riser 0-30 Screen is 10 Slot Screen & Riser 2" PVC

EAN TECH

chrya62.log

: Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
· Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
· Split Spoon Sample Respectively.

GEOLOGIC LOG

roject	Chrysler Dayton Thermal Products	Boring Number	MWB1
ocation	Dayton, Ohio	Date Started	10/27/94
lient	Chrysler Corporation	Date Completed	10/28/94
riller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
levation	744.93 ft MSL	Page Number	1 of 3
ater Level & Date	19.8 ft BGS 11/19/94	Logged By	Thompson

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
5	4-6	S1	1.1	2-2 4-5 (6)	Clay with gravel (CH); Dark Gray (N3); Moist; Firm	BG, BG, BG Dye Test - Neg.
10	9-11	S2	1.4	6-6 10-13 (16)	Well graded gravel and sand (GW); Light Brownish Gray (5YR6/1); Dry; Dense	BG, BG, 0.2 ppm Dye Test - Neg.
15	14-16	S3	1.9	20-30 18-18 (48)	Well Graded Gravel with Sand and Clay (GW-GC); Moderate Reddish Brown (10YR4/6); Dry; Dense	BG, BG, 0.5 ppm Dye Test - Neg.
20	19-21	S4	1.5	18-16 12-17 (28)	Well Graded Gravel (GW); Grayish Brown (5YR3/2); Medium Dense; Wet	BG, BG, 0.2 ppm Dye Test - Neg.
25	24-26	S5	2.0	30-30 30-40 (60)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Very Dense; Wet	BG, BG, BG Dye Test - Neg.
30	29-31	S6	1.9	20-18 18-25 (36)	Well Graded Gravel (GW); Grayish Brown (5YR3/2); Medium Dense; Wet	BG, BG, BG Dye Test - Neg.
35	34-36	S7	2.0	30-25 28-35 (53)	Top foot same as S6; Bottom foot Well Graded Gravel with Clay(GW-GC); Moderate Yellowish Brown (10YR4/2); Very Dense; Wet	BG, BG, BG Dye Test - Neg.

.EAN TECH

chrybll.log

= Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
r Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
d Split Spoon Sample Respectively.

GEOLOGIC LOG

ject	Chrysler Dayton Thermal Products	Boring Number	MWB1
ation	Dayton, Ohio	Date Started	10/27/94
ent	Chrysler Corporation	Date Completed	10/28/94
ller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
vation	744.93 ft MSL	Page Number	2 of 3
er Level & Date	19.8 ft BGS 11/19/94	Logged By	Thompson

pth GS ft)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
10	39-41	S8	2.0	22-23 20-23 (43)	Well Graded Gravel (GW); Moderate Brown (5YR4/4); Medium Dense; Wet	BG, BG, BG Dye Test - Neg.
5	44-46	S9	1.4	17-48 28-18 (76)	Same as S8 with a 1 Inch Layer of Poorly Graded Sand at the Sample Bottom (SP); Brownish Black (5YR 2/1); Very Dense	BG, BG, BG Dye Test - Neg.
0	49-51	S10	2.0	37-31 42-78 (73)	Poorly Graded Sand (SP); Medium Dark Gray (N4); Very Dense; Wet	BG, BG, BG Dye Test - Neg.
5	54-56	S11	2.0	27-19 30-4 (49)	Well Graded Gravel with Sand (GW); Dark Gray (N3); Wet; Dense	BG, BG, BG Dye Test - Neg.
0	59-61	S12	2.0	36-28 34-38 (62)	Same as S11; Very Dense	BG, BG, BG Dye Test - Neg.
5	64-66	S13	2.0	35-46 40-40 (86)	Top foot same as S12; Bottom foot Well Graded Gravel with Dense Clay (GW-GC); Dark Gray (N3); Wet; Very Dense	BG, BG, Bg Dye Test - Neg.
0	69-71	S14	2.0	31-42 45-46 (87)	Same as S13	BG, BG, BG Dye Test - Pos. Oil from Clay Suspected Source

N TECH

chrybl2.log

Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, Split Spoon Sample Respectively.

GEOLOGIC LOG

·ject	Chrysler Dayton Thermal Products	Boring Number	MWB1
:ation	Dayton, Ohio	Date Started	10/27/94
.ent	Chrysler Corporation	Date Completed	10/28/94
.ller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
vation	744.93 ft MSL	Page Number	3 of 3
.er Level & Date	19.8 ft BGS 11/19/94	Logged By	Thompson

pth GS ft)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
75	74-76	S15	2.0	44-140 (188)	Clay (CH); Greenish Gray (5GY6/1); Hard	BG, BG, BG Dye Test - Neg. Well Construction Total Depth 74 Screen 64-74 Sand 61-74 Bent. 58-61 Grout 0-58 Riser 0-64 Screen is 10 Slot Screen & Riser 2" PVC

AN TECH

chryb13.log

Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, Split Spoon Sample Respectively.

GEOLOGIC LOG

›ject	Chrysler Dayton Thermal Products	Boring Number	MWB2
:ation	Dayton, Ohio	Date Started	11/16/94
.ent	Chrysler Corporation	Date Completed	11/17/94
.ller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
›vation	751.62 ft MSL	Page Number	1 of 3
:er Level & Date	26.8 ft BGS 11/19/94	Logged By	Thompson

›pth BGS (ft)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
5	4-6	S1	1.2	10-17 18-17 (35)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Dry; Medium Dense	BG, BG, 1 ppm Dye Test - Neg.
10	9-11	S2	1.3	35-33 30-30 (63)	Same as S1; Some Silt; Very Dense	BG, BG, 2 ppm Dye Test - Neg.
15	14-16	S3	1.5	11-18 19-18 (37)	Same as S2; Larger Grains; Moist	BG, BG, 2 ppm Dye Test - Neg.
20	19-21	S4	0.6	55-50/1"	Same as S3; Moist	BG, BG, 3 ppm Dye Test - Neg.
25	24-26	S5	1.8	35-35 38-43 (73)	Top 0.5 ft same as S4; Bottom 1.3 ft Poorly Graded Sand (SP); Brownish Gray (5YR4/1); Dry; Very Dense	BG, 1, 7 ppm Dye Test - Neg.
30	29-31	S6	1.9	27-33 36-35 (69)	Well Graded Gravel (GW); Grayish Brown (5YR3/2); Wet; Very Dense; Orange Staining	BG, BG, 1 ppm Dye Test - Neg.
35	34-36	S7	1.9	31-20 19-25 (39)	Well Graded Sand with Gravel (SW); Grayish Brown (5YR3/2); Wet; Dense	BG, BG, 0.5 ppm Dye Test - Neg.

LEAN TECH

chryb21.log

= Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
ir Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
nd Split Spoon Sample Respectively.

GEOLOGIC LOG

roject	Chrysler Dayton Thermal Products	Boring Number	MWB2
ocation	Dayton, Ohio	Date Started	11/16/94
lient	Chrysler Corporation	Date Completed	11/17/94
riller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
levation	751.62 ft MSL	Page Number	2 of 3
ater Level & Date	26.8 ft BGS 11/19/94	Logged By	Thompson

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
40	39-41	S8	2.0	20-21 18-25 (39)	Top 1.5 ft same as S7; Bottom 0.5 ft Well Graded Gravel with Sand and Clay (GW-GC); Pale Yellowish Brown (10YR6/2); Wet; Dense	BG, 2 ppm, BG Dye Test - Neg.
45	44-46	S9	2.0	25-25 30-33 (55)	Same as bottom 0.5 foot of S8	BG, BG, BG Dye Test - Neg.
50	49-51	S10	2.0	25-27 30-30 (57)	Same as S9	BG, BG, BG Dye Test - Neg.
55	54-56	S11	2.0	25-28 25-30 (53)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, BG, BG Dye Test - Neg.
60	59-61	S12	2.0	30-32 40-75 (72)	Poorly Graded Sand (SP); Brownish Black (5YR2/1); Wet; Very Dense	BG, BG, BG Dye Test - Neg.
65	64-66	S13	2.0	35-45 32-40 (77)	Well Graded Gravel with Sand and Some Clay (SW); Brownish Black (5YR 2/1); Wet; Very Dense	BG, BG, BG Dye Test - Pos.
70	69-71	S14	2.0	35-34 40-44 (74)	Same as S13	BG, BG, BG Dye Test - Pos.

LEAN TECH

chryb22.log

= Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
ir Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
nd Split Spoon Sample Respectively.

GEOLOGIC LOG

ject	Chrysler Dayton Thermal Products	Boring Number	MWB2
ation	Dayton, Ohio	Date Started	11/16/94
ent	Chrysler Corporation	Date Completed	11/17/94
ller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
vation	751.62 ft MSL	Page Number	3 of 3
er Level & Date	26.8 ft BGS 11/19/94	Logged By	Thompson

pth GS ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
75	74-76	S15	2.0	47-38 50-66 (88)	Same as S14	BG, BG, BG Dye Test - Pos.
30	79-81	S16	2.0	40-42 53-100 (95)	Same as S15	BG, BG, BG Dye Test - Pos.
35	84-86	S17	2.0	55-66 68 (134)	Poorly Graded Sand (SP); Dark Gray (N3); Wet; Very Dense	BG, BG, BG Dye Test - Pos.
90	89-91	S18	2.0	25-37 74-238 (111)	Clay with Gravel (CH); Olive Gray (5Y4/1); Very Hard	BG, BG, BG Dye Test - Pos.
						Well Construction Total Depth 89 Screen 79-89 Sand 76.4-89 Bent. 70-76.4 Grout 0-70 Riser 0-79 Screen is 10 Slot Screen & Riser 2" PVC

AN TECH

chryb23.log

Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, Split Spoon Sample Respectively.

GEOLOGIC LOG

Project: Chrysler Dayton Thermal Products
Location: Dayton, Ohio
Client: Chrysler Corporation
Driller: Moody's of Dayton
Elevation: 752.13 ft MSL
Water Level & Date: 26.8 ft BGS 11/19/94

Boring Number: MWB3
Date Started: 11/3/94
Date Completed: 11/4/94
Drilling Method: 4.25" HSA, CME 75
Page Number: 1 of 2
Logged By: Thompson

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
5	4-6	S1	0.9	27-18 18-22 (36)	Well Graded Gravel with Sand and Silt (GW-GM); Light Brownish Gray (5YR6/1); Dry; Dense	BG, BG, 0.2 ppm Dye Test - Neg.
10	9-11	S2	1.2	25-20 14-13 (34)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Dry; Dense	BG, BG, 0.5 ppm Dye Test - Neg.
15	14-16	S3	1.6	15-17 28-18 (45)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Moist; Dense	BG, BG, 0.5 ppm Dye Test - Neg.
20	19-21	S4	1.8	12-30 37-35 (67)	Top 0.5 ft same as S3; Bottom 1.3 ft Clay with gravel (CH); Dark Greenish Gray (5GY4/1); Moist; Hard; Orange Staining	BG, BG, 2 ppm Dye Test - Neg.
25	24-26	S5	2.0	27-30 27-22 (57)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Moist; Very Dense; Orange Staining	BG, BG, 5 ppm Dye Test - Neg.
30	29-31	S6	1.7	17-21 28-27 (49)	Same as S5; Wet; Dense	BG, BG, 8 ppm Dye Test - Neg.
35	34-36	S7	2.0	41-47 37-36 (84)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, BG, 15 ppm Dye Test - Neg.

CLEAN TECH

chryb31.log

N = Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Air Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, and Split Spoon Sample Respectively.

GEOLOGIC LOG

ject	Chrysler Dayton Thermal Products	Boring Number	MWB3
ation	Dayton, Ohio	Date Started	11/3/94
ent	Chrysler Corporation	Date Completed	11/4/94
ller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
vation	752.13 ft MSL	Page Number	2 of 2
er Level & Date	26.8 ft BGS 11/19/94	Logged By	Thompson

pth GS ft)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
40	39-41	S8	1.8	20-30 27-35 (57)	Same as S7; More Gravel	BG, BG, 5 ppm Dye Test - Pos.
45	44-46	S9	1.8	40-40 50-60 (90)	Same as S8	BG, BG, 20 ppm Dye Test - Neg.
50	49-51	S10	1.2	32-30 34-35 (64)	Same as S9	BG, 0.4, 5 ppm Dye Test - Neg.
55	54-56	S11	1.2	22-20 30-34 (50)	Top 0.5 ft Sandy Clay (CH); Moderate Yellowish Brown (10YR5/4); Bottom 0.7 ft Clay (CH); Light Olive Gray (5Y6/1); Wet; Hard	BG, BG, 2 ppm Dye Test - Pos.
60	59-61	S12	1.0	15-30 30-45 (60)	Clay (CH); Olive Gray (5Y4/1); Moist; Very Hard	BG, 10 ppm, BG Dye Test - Neg.

Well Construction

Total Depth 60
Screen 46-56
Sand 43-60
Bent. 38-43
Grout 0-38
Riser 0-46
Screen is 10 Slot
Screen & Riser
2"PVC

Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, Split Spoon Sample Respectively.

GEOLOGIC LOG

›ject	Chrysler Dayton Thermal Products	Boring Number	MWB4
:ation	Dayton, Ohio	Date Started	10/31/94
ient	Chrysler Corporation	Date Completed	11/2/94
iller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
evation	751.64 ft MSL	Page Number	1 of 3
:er Level & Date	26.9 ft BGS 11/19/94	Logged By	Thompson

epth BGS (ft)	Sample Int-erval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
5	4-6	S1	1.0	8-10 15-18 (25)	Well Graded Gravel with Silt and Clay (GW-GM); Light Brownish Gray (5YR6/1); Dry; Medium Dense	BG, BG, BG Dye Test - Neg.
10	9-11	S2	0.9	10-13 26-30 (39)	Same as S1	BG, BG, BG Dye Test - Neg.
15	14-16	S3	0.8	20-20 18-18 (38)	Same as S2	BG, BG, 0.5 ppm Dye Test - Neg.
20	19-21	S4	2.0	37-25 25-30 (50)	Well Graded Sand with Silt and Gravel (SW-SM); Brownish Gray (5YR4/1); Dry; Dense	BG, BG, 1 ppm Dye Test - Neg.
25	24-26	S5	0.5	--	Same as S4; Very Dense	BG, BG, 1 ppm Dye Test - Neg.
30	29-31	S6	2.0	20-28 31-40 (59)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, BG, BG Dye Test - Neg.
35	34-36	S7	2.0	34-52 48-53 (100)	Well Graded Gravel with Clay (GW-GC) Pale Brown (5YR5/2); Wet; Very Dense	BG, BG, BG Dye Test - Neg.

EAN TECH

chryb41.log

: Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
· Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
l Split Spoon Sample Respectively.

GEOLOGIC LOG

ject	Chrysler Dayton Thermal Products	Boring Number	MWB4
ation	Dayton, Ohio	Date Started	10/31/94
ent	Chrysler Corporation	Date Completed	11/2/94
ller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
vation	751.64 ft MSL	Page Number	2 of 3
er Level & Date	26.9 ft BGS 11/19/94	Logged By	Thompson

pth CS ft)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
0	39-41	S8	2.0	26-31 43-44 (74)	Same as S7; Very Dense	BG, BG, BG Dye Test - Neg.
5	44-46	S9	2.0	43-42 42-56 (84)	Well Graded Gravel with Sand and Clay (GW-GC); Pale Brown (5YR5/2); Wet; Very Dense	BG, BG, BG Dye Test - Neg.
	49-51	S10	2.0	34-35 44-48 (79)	Well Graded Sand with Clay (SW-SC); Pale Brown (5YR5/2); Wet; Very Dense	BG, BG, BG Dye Test - Neg.
	54-56	S11	2.0	50-43 44-50 (87)	Well Graded Gravel with Clay (GW-GC) Pale Brown (5YR5/2); Wet; Very Dense	BG, BG, BG Dye Test - Neg.
	59-61	S12	2.0	57-60 65-70 (125)	Same as S11	BG, BG, BG Dye Test - Neg.
	64-66	S13	2.0	44-49 48-56 (97)	Same as S12	BG, BG, BG Dye Test - Neg.
	69-71	S14	2.0	32-55 60-64 (115)	Same as S13	BG, BG, BG Dye Test - Neg.

TECH

chryb42.log

nber Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
nitoring Data Shown as PID Readings in Breathing Zone, Borehole,
lit Spoon Sample Respectively.

GEOLOGIC LOG

oject	Chrysler Dayton Thermal Products	Boring Number	MWB4
cation	Dayton, Ohio	Date Started	10/31/94
ient	Chrysler Corporation	Date Completed	11/2/94
iller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
evation	751.64 ft MSL	Page Number	3 of 3
ter Level & Date	26.9 ft BGS 11/19/94	Logged By	Thompson

epth BGS (ft)	Sample Int-erval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
75	74-76	S15	2.0	90-82 (172)	Same as S14	BG, BG, BG Dye Test - Neg.
					*Augers began walking at approximately 70-75 ft BGS and could not be advanced any further. The decision was made to screen the well at 25-35 ft BGS.	
						Well Construction Sand 54-74 Bent. 49-54 Sand 38-49 Bent. 36-38 Sand 35-36 Screen 25-35 Sand 22.8-35 Bent. 20.4-22.8 Grout 0-20.4 Riser 0-25 Screen is 10 Slot Screen & Riser 2" PVC

AN TECH

chryb43.log

Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, Split Spoon Sample Respectively.

GEOLOGIC LOG

·ject	Chrysler Dayton Thermal Products	Boring Number	MWB5
:ation	Dayton, Ohio	Date Started	11/7/94
.ent	Chrysler Corporation	Date Completed	11/8/94
.ller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
·vation	750.73 ft MSL	Page Number	1 of 3
:er Level & Date	26.8 ft BGS 11/15/94	Logged By	Thompson

·pth BGS (ft)	Sample Int-erval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
5	4-6	S1	1.5	8-12 13-12 (25)	Sandy Clay (CL); Dark Reddish Brown (10YR3/4); Dry; Very Stiff	BG, BG, BG Dye Test - Neg.
10	9-11	S2	1.1	10-12 12-16 (24)	Well Graded Gravel with Silt (GW-GM) Light Brownish Gray (5YR6/1); Dry; Medium Dense	BG, BG, 0.2 ppm Dye Test - Neg.
15	14-16	S3	0.7	18-57 (75)	Same as S2; Larger Gravel	BG, BG, BG Dye Test - Neg.
20	19-21	S4	1.1	43-50 50/3" (100)	Top 0.5 ft same as S3; Bottom 0.5 ft Well Graded Sand (SW); Dark Reddish Brown (10YR3/4); Dry; Very Dense	BG, 0.2ppm, BG Dye Test - Neg.
25	24-26	S5	1.7	33-22 24-30 (46)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Wet; Dense	BG, BG, 0.5 ppm Dye Test - Neg.
30	29-31	S6	1.8	22-22 22-26 (44)	Well Graded Sand (SW); Brownish Gray (5YR4/1); Wet; Dense	BG, BG, 0.2 ppm Dye Test - Neg.
35	34-36	S7	2.0	20-27 25-25 (52)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, BG, 0.2 ppm Dye Test - Neg.

= Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
ir Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
nd Split Spoon Sample Respectively.

GEOLOGIC LOG

›ject	Chrysler Dayton Thermal Products	Boring Number	MWB5
:ation	Dayton, Ohio	Date Started	11/7/94
.ent	Chrysler Corporation	Date Completed	11/8/94
:ller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
›vation	750.73 ft MSL	Page Number	2 of 3
:er Level & Date	26.8 ft BGS 11/15/94	Logged By	Thompson

›pth BGS (ft)	Sample Int-erval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
40	39-41	S8	1.2	35-53 75 (128)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, BG, BG Dye Test - Pos.
45	44-46	S9	2.0	33-35 50-50 (85)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, BG, BG Dye Test - Neg.
50	49-51	S10	2.0	31-30 28-36 (58)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, BG, BG Dye Test - Pos.
55	54-56	S11	1.5	35-35 54-65 (89)	Same as S10; Larger Gravel	BG, BG, BG Dye Test - Pos.
60	59-61	S12	1.6	60-60 50-55 (110)	Same as S11	BG, BG, BG Dye Test - Pos.
65	64-66	S13	1.5	50-40 50-60 (90)	Same as S12; Some Clay	BG, BG, BG Dye Test - Pos.
70	69-71	S14	1.3	55-53 68-73 (121)	Same as S13	BG, BG, BG Dye Test - Pos.

LEAN TECH

chryb52.log

= Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
ir Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
nd Split Spoon Sample Respectively.

GEOLOGIC LOG

›ject	Chrysler Dayton Thermal Products	Boring Number	MWB5
:ation	Dayton, Ohio	Date Started	11/7/94
.ent	Chrysler Corporation	Date Completed	11/8/94
.ller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
›vation	750.73 ft MSL	Page Number	3 of 3
:er Level & Date	26.8 ft BGS 11/15/94	Logged By	Thompson

›pth GS (ft)	Sample Int-erval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
75	74-76	S15	1.5	40-58 53-60 (111)	Same as S14	BG, BG, BG Dye Test - Pos.
80	79-81	S16	1.6	40-50 50-50 (100)	Same as S15	BG, BG, BG Dye Test - Pos.
85	84-86	S17	1.4	50-65 50-50 (115)	Same as S16	BG, BG, BG Dye Test - Pos.
90	89-91	S18	2.0	22-25 35-40 (60)	Top 1.5 ft Well Graded Sand with Clay (SW-SC);Dark Greenish Gray (5GY 4/1); Bottom 0.5 ft Clay (CH); Dark Greenish Gray (5GY4/1); Wet; Very Dense	BG, BG, BG Dye Test - Pos.
					Note: Positive Dye Tests Likely Result of Oil in Clay Units	Well Construction Total Depth 90 Screen 80-90 Sand 75.5-90 Bent. 70.5-75.5 Grout 0-70.5 Riser 0-80 Screen is 10 Slot Screen & Riser 2" PVC

EAN TECH

chryb53.log

: Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
Split Spoon Sample Respectively.

GEOLOGIC LOG

ject	Chrysler Dayton Thermal Products	Boring Number	MWB6
ation	Dayton, Ohio	Date Started	11/9/94
ent	Chrysler Corporation	Date Completed	11/10/94
ller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
ation	751.37 ft MSL	Page Number	1 of 2
er Level & Date	25.9 ft BGS 11/18/94	Logged By	Thompson

pth (S ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
	4-6	S1	1.2	15-16 20-25 (36)	Well Graded Gravel with Silt and Sand (GW-GM); Pale Yellowish Brown (10YR6/2); Medium Dense	BG, BG, 0.5 ppm Dye Test - Neg.
0	9-11	S2	1.5	25-25 16-15 (41)	Well Graded Gravel with Sand (GW); Pale Yellowish Brown (10YR6/2); Dry; Medium Dense	BG, BG, 2 ppm Dye Test - Neg.
5	14-16	S3	1.4	10-11 11-12 (22)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Moist; Medium Dense	BG, BG, 1 ppm Dye Test - Neg.
0	19-21	S4	1.8	21-28 26-22 (54)	Well Graded Gravel with Sand and Silt (GW-GM); Brownish Gray (5YR 4/1); Dry; Very Dense	BG, BG, 5 ppm Dye Test - Neg.
5	24-26	S5	1.8	15-20 19-21 (39)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Dry; Medium Dense	BG, 2, 14 ppm Dye Test - Neg.
)	29-31	S6	1.6	38-34 25-25 (59)	Well Graded Gravel with Sand and Some Clay (GW); Dark Yellowish Brown (10YR4/2); Wet; Very Dense	BG, 2, 8 ppm Dye Test - Neg.
)	34-36	S7	1.7	20-20 18-25 (38)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Wet; Medium Dense; Orange Staining	BG, 3, 5 ppm No Dye Test

.N TECH

chryb61.log

Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
Split Spoon Sample Respectively.

GEOLOGIC LOG

Project	Chrysler Dayton Thermal Products	Boring Number	MWB6
Location	Dayton, Ohio	Date Started	11/9/94
Client	Chrysler Corporation	Date Completed	11/10/94
Driller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
Elevation	751.37 ft MSL	Page Number	2 of 2
Water Level & Date	25.9 ft BGS 11/18/94	Logged By	Thompson

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
40	39-41	S8	1.4	26-25 40-50 (65)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, 1, 5 ppm Dye Test - Pos.
45	44-46	S9	1.2	20-33 48-56 (81)	Clay with Gravel (CH); Olive Gray (5Y4/1); Moist; Very Dense	BG, 0.5, 2 ppm Dye Test - Pos.
50	49-51	S10	1.0	38-47 100 (147)	Well Graded Sand and Gravel with Some Clay (SW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, 2 ppm, BG Dye Test - Neg.
55	54-56	S11	.8	31-23 27-58 (50)	Same as S10	BG, 1 ppm, BG Dye Test - Neg.

Well Construction

Total Depth	54
Bent.	47-54
Sand	46-47
Screen	36-46
Sand	34-46
Bent.	32-34
Grout	0-32

Screen is 10 Slot Screen & Riser 2" PVC

CLEAN TECH

chryb62.log

N = Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
Air Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, and Split Spoon Sample Respectively.

GEOLOGIC LOG

ect	Chrysler Dayton Thermal Products	Boring Number	MWC1
tion	Dayton, Ohio	Date Started	10/18/94
nt	Chrysler Corporation	Date Completed	10/25/94
ler	Moody's of Dayton	Drilling Method	Cable Tool 3E22-W
ation	745.00 ft MSL	Page Number	1 of 2
r Level & Date	24.5 ft BGS 11/19/24	Logged By	Newsom

th (S t)	Sample Int-erval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
.0		NA	NA	NA	Well Graded Gravel and Medium to Coarse Grain Sand (GW-SW); Trace fine sand, silt, and clay. No Odor or Sheen.	_ BG, BG, BG
:0		NA	NA	NA	Same as above	_ BG, BG, BG
:0		NA	NA	NA	Same as above	_ BG, BG, BG
;0		NA	NA	NA	Same as above	_ BG, BG, BG
;0		NA	NA	NA	Same as above	_ BG, BG, BG
;0		NA	NA	NA	Same as above	_ BG, BG, BG
'0		NA	NA	NA	Same as above	_ BG, BG, BG
6					Soft to Firm Gray Silt and Clay with Medium to Fine Grain Sand, Trace Gravel (CL); No Odor or Sheen.	Soft Clay 76 ft Firm Clay 79 ft

AN TECH

chrycl1.log

Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, Bailed Sample Respectively.

GEOLOGIC LOG

ɔject	Chrysler Dayton Thermal Products	Boring Number	MWC1
ɛation	Dayton, Ohio	Date Started	10/18/94
ient	Chrysler Corporation	Date Completed	10/25/94
iller	Moody's of Dayton	Drilling Method	Cable Tool BE22-W
ɜvation	745 ft MSL	Page Number	2 of 2
ɛer Level & Date	24.5 ft BGS 11/19/94	Logged By	Newsom

ɜpth BGS (ft)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
80	81-83	S1	1.0	NA	Silty Clay with Medium to Fine Grain Sand, Trace Gravel (CL); Medium to Light Gray (N5-N7)	- BG, BG, BG
90	83-96	NA	NA	NA	Same as S1, but with a Dark Oil Sheen in Bailed Water and Cuttings	- BG, BG, 5 ppm
	96-98	S2	1.1	NA	Fine to Coarse Grain Sand with Silt, Trace Gravel (SW); Dark Gray (N7)	- BG, BG, 0.6 ppm
100	104-106	S3	1.0	NA	Same as S2	- Dye Test - Neg.
110	110-112	S4	2.0	NA	Same as S3	- Dye Test - Neg.

Well Construction

Total Depth 112
Screen 102-112
Sand 100-112
Bent. 96-100
Grout 0-96
8" casing 0-81
Riser 0-102

Screen is 10 Slot
Screen & Riser
2" PVC

Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, Bailed Sample Respectively.

GEOLOGIC LOG

›ject	Chrysler Dayton Thermal Products	Boring Number	MWC2
:ation	Dayton, Ohio	Date Started	10/18/94
.ent	Chrysler Corporation	Date Completed	10/25/94
.ller	Moody's of Dayton	Drilling Method	Cable Tool BE22-W
›vation	751.60 ft MSL	Page Number	1 of 3
:er Level & Date	30.2 ft BGS 11/19/24	Logged By	Newsom

›pth BGS (ft)	Sample Int-erval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
10		NA	NA	NA	Well Graded Gravel and Medium to Coarse Grain Sand (GW-SW); Trace Fine Sand, Silt, and Clay. No Odor or Sheen.	BG, BG, BG
20		NA	NA	NA	Same as above	BG, BG, BG
30		NA	NA	NA	Same as above	BG, BG, 3 ppm
40		NA	NA	NA	Same as above	BG, BG, BG
50		NA	NA	NA	Same as above	BG, BG, BG
60		NA	NA	NA	Same as above	BG, BG, BG
70		NA	NA	NA	Same as above	BG, BG, BG

.r Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, ıd Bailed Sample Respectively.

GEOLOGIC LOG

ɔject	Chrysler Dayton Thermal Products	Boring Number	MWC2
ɛation	Dayton, Ohio	Date Started	10/18/94
ient	Chrysler Corporation	Date Completed	10/25/94
iller	Moody's of Dayton	Drilling Method	Cable Tool BE22-W
evation	751.60 ft MSL	Page Number	2 of 3
ter Level & Date	24.5 ft BGS 11/19/94	Logged By	Newsom

epth BGS (ft)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
80		NA	NA	NA	Same as above	
	85-87	S1	1.0	NA	Silt and Clay with Trace Fine to Coarse Grain Sand (CL); Medium Gray (N5)	- BG, BG, 9 ppm
90						
	87-102	NA	NA	NA	Same as S1 with a Dark Oil Sheen in Bailed Water and Cuttings	- BG, BG, BG
100						
	107-109	S2	1.5	NA	Fine to Coarse Grain Sand, Silt, and Gravel, with Trace Clay (SW); Gray (N5)	- BG, BG, BG Dye Test - Neg.
110	109-114	NA	NA	NA	Same as S2; No Trace Clay	- BG, BG, BG
	114-116	S3	2.0	NA	Fine to Coarse Grain Sand and Silt with Trace Gravel and Clay (SW)	- BG, BG, BG Dye Test - Neg.
120	116-120	NA	NA	NA	Fine to Coarse Grain Sand, Silt, and Gravel (SW); Oil Sheen Noted in the Water and Cuttings	- BG, BG, 0.6 ppm
	120-122	S4	2.0	NA	Same as S3	- BG, BG, BG Dye Test - Neg.

:LEAN TECH

chryc22.log

ir Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, nd Bailed Sample Respectively.

GEOLOGIC LOG

›ject	Chrysler Dayton Thermal Products	Boring Number	MWC3
:ation	Dayton, Ohio	Date Started	11/9/94
.ent	Chrysler Corporation	Date Completed	11/17/94
:ller	Moody's of Dayton	Drilling Method	Cable Tool BE22-W
›vation	752.15 ft MSL	Page Number	1 of 2
:er Level & Date	26.8 ft BGS 11/19/24	Logged By	Newsom

›pth BGS (ft)	Sample Int-erval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
10		NA	NA	NA	Well Graded Gravel and Fine to Coarse Grain Sand with Silt (GW-SW); No Odor or Sheen.	BG, BG, BG
20	19	NA	NA	NA	Silty Clay with Sand and Gravel (CL); Medium Dark Gray (N4); Dark Brown Oil Sheen in Bailed Water & Cuttings	BG, BG, BG
30	26	NA	NA	NA	Well Graded Gravel with Fine to Coarse Grain Sand with Silt (GW); No Odor or Sheen.	BG, BG, BG
40		NA	NA	NA	Same as above	BG, BG, 0.4 ppm
50						
	57-59	S1	2.0	NA	Silt and Clay with Trace Fine Grain Sand (CL); Medium Gray (N5); No Odor or Sheen.	BG, BG, BG
60	59-69	NA	NA	NA	Same as S1	BG, BG, BG
70	70-72	S2	1.5	NA	Fine to Coarse Grain Sand and Gravel with Silt and Trace Clay (SW); Medium Gray (N5); No Odor or Sheen.	BG, BG, BG

LEAN TECH

chryc31.log

ir Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, nd Bailed Sample Respectively.

GEOLOGIC LOG

›ject	Chrysler Dayton Thermal Products	Boring Number	MWC3
:ation	Dayton, Ohio	Date Started	11/9/94
:ent	Chrysler Corporation	Date Completed	11/17/94
:ller	Moody's of Dayton	Drilling Method	Cable Tool BE22-W
›vation	752.15 ft MSL	Page Number	2 of 2
:er Level & Date	26.8 ft BGS 11/19/94	Logged By	Newsom

›pth BGS (ft)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
75	72-76	NA	NA	NA	Same as S2	BG, BG, BG - Dye Test - Neg.
	76-78	S3	2.0	NA	Same as S2	BG, BG, BG - Dye Test - Neg.
80	78-82	NA	NA	NA	Well Graded Gravel and Medium to Coarse Grain Sand, Silt, and Trace Clay (GW); Medium Gray (N5); No Odor or Sheen.	BG, BG, BG Dye Test - Neg.
	82-84	S4	2.0	NA	Fine to Coarse Grain Sand and Gravel with Silt and Trace Clay (SW); Medium Gray (N5); No Odor or Sheen.	BG, BG, BG Dye Test - Neg.

Well Construction

Total Depth 84
Screen 74-84
Sand 72-84
Bent. 69-72
Grout 0-69
12" casing 0-57
8" casing 0-58.5
Riser 0-74

Screen is 10 Slot
Screen & Riser
2" PVC

EAN TECH

chryc32.log

: Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
: Bailed Sample Respectively.

EPA Region 5 Records Ctr.
349870

TECH COPY

MEMORANDUM

To: Joe Whitlock, DaimlerChrysler Corporation

From: Ken Vogel, Leggette, Brashears & Graham, Inc. KOV

Subject: Dayton Thermal Products
Free-Phase Product Recovery and Collection

Date: July 23, 1999

On June 28, 1999 you met with Kristin Yahnke from our St. Paul, MN office and discussed the possibility of temporarily collecting recovered free-phase product from beneath Building 40B into a waste oil sump also located in Building 40B. Currently, product thickness averages 0.4 feet in thickness in four Bldg. 40B wells. As a result, we are in the process of evaluating the feasibility and design of a potential product recovery system.

In September 1998, samples were submitted for laboratory analysis of free-phase product in SVE-11D, oil/water in the Trade Waste Sump located in the southern drum storage area in Building 40B, and oil/water in the Waste Oil Sump located just west of the new presses in Building 40B (figure 1). Chromatographic analyses indicate that all three of these samples are consistent with a complex mixture of lubricating oil fractions with volatile and semi-volatile components typical of diesel #2 and heavier weight, residual fuel oil fractions.

It is our understanding that the contents of the waste sumps are periodically collected for recycling by Waste Management. Since all three samples are similar in composition, we are interested in determining if DTPP and Waste Management will accept additional product recovered from the water table, and temporarily placed into existing infrastructure, for recycling also.

Attached are the analytical data along with a summary table for your evaluation regarding the option to collect the recovered free-phase product into the Waste Oil Sump. The samples have been identified in the laboratory report as "SVE-11 Grab Product Sample" (SVE-11D), "West Sump Grab Water Sample" (Waste Oil Sump), and "South Sump Grab Water Sample" (Trade Waste Sump). A verbal interpretation of the contents of each of the samples has been provided by the laboratory and is included in the laboratory report.

Placing collected free-phase oil in the Waste Oil Sump will eliminate the need to purchase, install, and permit an above ground storage tank which will be required for containing the recovered product if disposal to the sump is not an option. Please review the enclosed information and advise us as to DaimlerChrysler's position on this issue. Feel free to call me at (651) 490-1405 ext. 202 with comments or questions.

cc: Gary Stanczuk, DaimlerChrysler

S:\TECH\3CHRY\DAYTON\ENGINEER\MEMOS\071499JO.WPD

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

FREE-PHASE PRODUCT ANALYSIS
SVE-11D, WEST SUMP, AND SOUTH SUMP

UNITS ARE IN MICROGRAMS PER LITER (ug/L)

WELL	DATE	Total Hydrocarbons	PCB-1260	2-Methyl-naphthalene	Butylbenzyl-phthalate	bis(2-ethylhexyl)-phthalate	Phenol	2-methyl-phenol	3 & 4-methyl-phenol	2, 4-methyl-phenol	N-nitrosodi-phenylamine	Diesel #2 Fuel
OEPA VAP MCLs		---	0.5	---	---	6.0	9,400	---	---	---	---	---
SVE-11D	15-Sep-98	**2,300,000**	1080 J	23,000 J	97,000 J	21,000 J	< 100,000	---	---	---	---	---
WEST SUMP	15-Sep-98	< 2,000,000	< 1,000	< 5,000	< 5,000	25 J	54 J	22 J	**42,000**	33 J	38 J	**710,000**
SOUTH SUMP	15-Sep-98	< 2,000,000	< 1,000	< 1,000	< 1,000	< 1,000	---	---	---	---	< 1,000	**5,500,000**

NUMBERS IN BOLD WERE DETECTED ABOVE THE LABORATORY METHOD DETECTION LIMIT

J: ESTIMATED VALUE

SHADED NUMBERS EXCEED OEPA VAP MCLs

OEPA VAP MCLs: OHIO ENVIRONMENTAL PROTECTION AGENCY VOLUNTARY ACTION PROGRAM MAXIMUM CONTAMINANT LEVELS FOR GENERIC UNRESTRICTED POTABLE USE STANDARDS, 1998 1st ADDITION

WEST SUMP: WASTE OIL SUMP

SOUTH SUMP: TRADE WASTE SUMP

SVE-11D: WELL CONTAINING FREE-PHASE PRODUCT

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. G5 3001161
Collected: 9/15/98 at 18:15 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products
SVE11 SDG#: LBG01-01

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W. Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
0174	PCBs in Oil			See Page 2
0893	Semivolatile Library Search			See Page 11
	The results from the semivolatile library search are listed on the attached FORM 1F - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form. An "X" indicates an isomer of the listed compound.			
4615	App. IX Semivolatiles-Oil			See Page 3
4616	App. IX Semivolatiles con't			See Page 5
4617	App. IX Semivolatiles con't			See Page 6
4618	App. IX Semivolatiles con't			See Page 7
0445	Solvent Identification			See Page 8
0466	Solvent Identification (cont.)			See Page 10
2535	Quantitative GC Fingerprint			See Page 13
9188	Total Hydrocarbons as n-Hexane	2,300.	2,000.	ppm
	The reported value for total hydrocarbons as n-hexane represents total volatile organic material detected by the solvent screen conditions for the range of C5 (n-pentane) through C10 (n-decane) normal hydrocarbons.			

1 COPY TO Leggette,Brashears & Graham MN ATTN: Mr. Ken Vogel
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300
19:30:22 D 0002 3 135779 632339
885 0.00 00085100 ASR000

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. G5 3001161
Collected: 9/15/98 at 18:15 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products
SVE11 SDG#: LBG01-01

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
PCBs in Oil				
4815	PCB-1016	N.D.	2,500.	ug/kg
4816	PCB-1221	N.D.	2,500.	ug/kg
4817	PCB-1232	N.D.	2,500.	ug/kg
4818	PCB-1242	N.D.	2,500.	ug/kg
4819	PCB-1248	N.D.	2,500.	ug/kg
4820	PCB-1254	N.D.	2,500.	ug/kg
4821	PCB-1260	1,080.	J 2,500.	ug/kg

Aroclor 1260 was detected at 5700 ug/kg in the method blank associated with this sample. The LCS/LCSD recoveries are above the QC limits. The sample was reextracted along with a second method blank that did not contain contamination, and LCS/LCSD that was within the acceptance limits. Since the hold time had expired prior to the second extraction, the results from the original analysis are reported. The result for 1260 from the second trial is 923 ug/kg, which confirms the original result and indicates that no contamination of the sample occurred.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. G5 3001161
Collected: 9/15/98 at 18:15 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products
SVE11 SDG#: LBG01-01

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

App. IX Semivolatiles-Oil

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
4668	pyridine	N.D.	100,000.	ug/kg
3752	N-nitrosodimethylamine	N.D.	100,000.	ug/kg
4666	2-picoline	N.D.	100,000.	ug/kg
4657	N-nitrosomethylethylamine	N.D.	100,000.	ug/kg
4645	methylmethanesulfonate	N.D.	100,000.	ug/kg
4655	N-nitrosodiethylamine	N.D.	100,000.	ug/kg
4639	ethylmethanesulfonate	N.D.	100,000.	ug/kg
1185	phenol	N.D.	100,000.	ug/kg
4622	aniline	N.D.	100,000.	ug/kg
3753	bis(2-chloroethyl)ether	N.D.	100,000.	ug/kg
1186	2-chlorophenol	N.D.	100,000.	ug/kg
3754	1,3-dichlorobenzene	N.D.	100,000.	ug/kg
1187	1,4-dichlorobenzene	N.D.	100,000.	ug/kg
4623	benzyl alcohol	N.D.	250,000.	ug/kg
3755	1,2-dichlorobenzene	N.D.	100,000.	ug/kg
4690	2-methylphenol	N.D.	100,000.	ug/kg
3756	bis(2-chloroisopropyl)ether	N.D.	100,000.	ug/kg
4692	3- and 4-methylphenol	N.D.	100,000.	ug/kg
4660	N-nitrosopyrrolidine	N.D.	100,000.	ug/kg
4619	acetophenone	N.D.	100,000.	ug/kg
4658	N-nitrosomorpholine	N.D.	100,000.	ug/kg
1188	N-nitrosodi-n-propylamine	N.D.	100,000.	ug/kg
4674	o-toluidine	N.D.	100,000.	ug/kg
3757	hexachloroethane	N.D.	100,000.	ug/kg
3758	nitrobenzene	N.D.	100,000.	ug/kg
4659	N-nitrosopiperidine	N.D.	100,000.	ug/kg
3759	isophorone	N.D.	100,000.	ug/kg
3746	2-nitrophenol	N.D.	100,000.	ug/kg

Aramite is not reported due to unavailability of a suitable standard.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. G5 3001161
Collected: 9/15/98 at 18:15 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products
SVE11 SDG#: LBG01-01

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS

App. IX Semivolatiles-Oil

The QC limits for the following compounds are advisory only until sufficient data points can be obtained to calculate statistical limits:
1,3,5-Trinitrobenzene
1,4-Naphthalene
1,4-Phenylenediamine
2-Acetylaminofluorene
Hexachlorophene
4-Nitroquinoline-1-oxide
5-Nitro-o-toluidine

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. G5 3001161
Collected: 9/15/98 at 18:15 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products
SVE11 SDG#: LBG01-01

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

App. IX Semivolatiles con't

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS		LIMIT OF QUANTITATION	UNITS
3747	2,4-dimethylphenol	N.D.		100,000.	ug/kg
3760	bis(2-chloroethoxy)methane	N.D.		100,000.	ug/kg
4676	0,0,0-triethylphosphorothioate	N.D.		100,000.	ug/kg
3748	2,4-dichlorophenol	N.D.		100,000.	ug/kg
1189	1,2,4-trichlorobenzene	N.D.		100,000.	ug/kg
3761	naphthalene	N.D.		100,000.	ug/kg
4631	2,6-dichlorophenol	N.D.		100,000.	ug/kg
4693	4-chloroaniline	N.D.		100,000.	ug/kg
4640	hexachloropropene	N.D.		100,000.	ug/kg
3762	hexachlorobutadiene	N.D.		100,000.	ug/kg
4665	1,4-phenylenediamine	N.D.		2,000,000.	ug/kg
4654	N-nitrosodi-n-butylamine	N.D.		100,000.	ug/kg
1190	4-chloro-3-methylphenol	N.D.		100,000.	ug/kg
4669	safrole	N.D.		100,000.	ug/kg
4694	2-methylnaphthalene	23,000.	J	100,000.	ug/kg
4670	1,2,4,5-tetrachlorobenzene	N.D.		100,000.	ug/kg
3763	hexachlorocyclopentadiene	N.D.		200,000.	ug/kg
3749	2,4,6-trichlorophenol	N.D.		100,000.	ug/kg
4695	2,4,5-trichlorophenol	N.D.		100,000.	ug/kg
4642	isosafrole	N.D.		100,000.	ug/kg
3764	2-chloronaphthalene	N.D.		100,000.	ug/kg
4696	2-nitroaniline	N.D.		100,000.	ug/kg
4647	1,4-naphthoquinone	N.D.		200,000.	ug/kg
3766	dimethylphthalate	N.D.		100,000.	ug/kg
4637	1,3-dinitrobenzene	N.D.		100,000.	ug/kg
3767	2,6-dinitrotoluene	N.D.		100,000.	ug/kg
3750	2,4-dinitrophenol	N.D.		250,000.	ug/kg

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. G5 3001161
Collected: 9/15/98 at 18:15 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products
SVE11 SDG#: LBG01-01

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

App. IX Semivolatiles con't

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
3765	acenaphthylene	N.D.	100,000.	ug/kg
4697	3-nitroaniline	N.D.	100,000.	ug/kg
1191	acenaphthene	N.D.	100,000.	ug/kg
1192	4-nitrophenol	N.D.	250,000.	ug/kg
4698	dibenzofuran	N.D.	100,000.	ug/kg
4662	pentachlorobenzene	N.D.	100,000.	ug/kg
1193	2,4-dinitrotoluene	N.D.	100,000.	ug/kg
4648	1-naphthylamine	N.D.	100,000.	ug/kg
4649	2-naphthylamine	N.D.	250,000.	ug/kg
4671	2,3,4,6-tetrachlorophenol	N.D.	100,000.	ug/kg
3770	diethylphthalate	N.D.	100,000.	ug/kg
3769	4-chlorophenylphenylether	N.D.	100,000.	ug/kg
3768	fluorene	N.D.	100,000.	ug/kg
4661	5-nitro-o-toluidine	N.D.	250,000.	ug/kg
4700	4-nitroaniline	N.D.	100,000.	ug/kg
3751	4,6-dinitro-2-methylphenol	N.D.	250,000.	ug/kg
3772	N-nitrosodiphenylamine	N.D.	100,000.	ug/kg
4672	tetraethyldithiopyrophosphate	N.D.	100,000.	ug/kg
4677	1,3,5-trinitrobenzene	N.D.	200,000.	ug/kg
4664	phenacetin	N.D.	100,000.	ug/kg
3773	4-bromophenylphenylether	N.D.	100,000.	ug/kg
4629	diallate (trans/cis)	N.D.	100,000.	ug/kg
4632	dimethoate	N.D.	100,000.	ug/kg
3774	hexachlorobenzene	N.D.	100,000.	ug/kg

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. G5 3001161
Collected: 9/15/98 at 18:15 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products
SVE11 SDG#: LBG01-01

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W. Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS		LIMIT OF QUANTITATION	UNITS
App. IX Semivolatiles con't					
4621	4-aminobiphenyl	N.D.		250,000.	ug/kg
1194	pentachlorophenol	N.D.		250,000.	ug/kg
4667	pronamide	N.D.		250,000.	ug/kg
4663	pentachloronitrobenzene	N.D.		100,000.	ug/kg
3775	phenanthrene	N.D.		100,000.	ug/kg
3776	anthracene	N.D.		100,000.	ug/kg
3777	di-n-butylphthalate	N.D.		100,000.	ug/kg
4653	4-nitroquinoline-1-oxide	N.D.		250,000.	ug/kg
4643	methapyrilene	N.D.		100,000.	ug/kg
4641	isodrin	N.D.		200,000.	ug/kg
3778	fluoranthene	N.D.		100,000.	ug/kg
1195	pyrene	N.D.		100,000.	ug/kg
4633	p-(dimethylamino)azobenzene	N.D.		100,000.	ug/kg
4626	chlorobenzilate	N.D.		100,000.	ug/kg
4635	3,3'-dimethylbenzidine	N.D.		250,000.	ug/kg
3780	butylbenzylphthalate	97,000.	J	100,000.	ug/kg
4620	2-acetylaminofluorene	N.D.		100,000.	ug/kg
3783	3,3'-dichlorobenzidine	N.D.		200,000.	ug/kg
3781	benzo(a)anthracene	N.D.		100,000.	ug/kg
3784	bis(2-ethylhexyl)phthalate	21,000.	J	100,000.	ug/kg
3782	chrysene	N.D.		100,000.	ug/kg
3785	di-n-octylphthalate	N.D.		100,000.	ug/kg
4634	7,12-dimethylbenz(a)anthracene	N.D.		100,000.	ug/kg
3786	benzo(b)fluoranthene	N.D.		100,000.	ug/kg
3787	benzo(k)fluoranthene	N.D.		100,000.	ug/kg
3788	benzo(a)pyrene	N.D.		100,000.	ug/kg
4644	3-methylcholanthrene	N.D.		100,000.	ug/kg
3789	indeno(1,2,3-cd)pyrene	N.D.		100,000.	ug/kg
3790	dibenz(a,h)anthracene	N.D.		100,000.	ug/kg
3791	benzo(ghi)perylene	N.D.		100,000.	ug/kg
4673	thionazin	N.D.		200,000.	ug/kg

Due to sample matrix, the GC/MS semivolatile surrogate recoveries were outside of QC limits.

The usual quantitation limits could not be attained due to the matrix of the sample or interferences observed in the GC/MS semivolatile analysis.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. G5 3001161
Collected: 9/15/98 at 18:15 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products
SVE11 SDG#: LBG01-01

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
Solvent Identification				
0854	n-hexane	N.D.	0.050	% by wt.
0855	n-heptane	N.D.	0.050	% by wt.
0856	n-octane	N.D.	0.050	% by wt.
0857	isooctane	N.D.	0.050	% by wt.
0858	benzene	N.D.	0.050	% by wt.
0859	toluene	N.D.	0.050	% by wt.
0860	ethyl benzene	N.D.	0.050	% by wt.
0861	xylenes	N.D.	0.050	% by wt.
0862	styrene	N.D.	0.050	% by wt.
1120	chlorobenzene	N.D.	0.050	% by wt.
0863	methanol	N.D.	0.050	% by wt.
1118	n-propanol	N.D.	0.050	% by wt.
0864	ethanol	N.D.	0.050	% by wt.
0865	isopropanol	N.D.	0.050	% by wt.
0866	n-butanol	N.D.	0.050	% by wt.
0867	isobutanol	N.D.	0.050	% by wt.
0868	acetone	N.D.	0.050	% by wt.
0869	methyl ethyl ketone	N.D.	0.050	% by wt.
0870	methyl isobutyl ketone	N.D.	0.050	% by wt.
1119	cyclohexanone	N.D.	0.050	% by wt.
0871	methyl cellosolve	N.D.	0.050	% by wt.
0872	ethyl cellosolve	N.D.	0.050	% by wt.
0873	butyl cellosolve	N.D.	0.050	% by wt.
0874	cellosolve acetate	N.D.	0.050	% by wt.
0875	ethyl acetate	N.D.	0.050	% by wt.
0876	propyl acetate	N.D.	0.050	% by wt.
0877	isopropyl acetate	N.D.	0.050	% by wt.
0878	n-butyl acetate	N.D.	0.050	% by wt.
1116	ethyl ether	N.D.	0.050	% by wt.
0880	carbon tetrachloride	N.D.	0.050	% by wt.
0881	chloroform	N.D.	0.050	% by wt.
0882	methylene chloride	N.D.	0.050	% by wt.
0883	1,1-dichloroethane	N.D.	0.050	% by wt.
0884	1,2-dichloroethane	N.D.	0.050	% by wt.
0885	1,1,1-trichloroethane	N.D.	0.050	% by wt.
0886	1,1,2-trichloroethane	N.D.	0.050	% by wt.
0887	trichloroethylene	N.D.	0.050	% by wt.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. G5 3001161
Collected: 9/15/98 at 18:15 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products
SVE11 SDG#: LBG01-01

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
Solvent Identification				
0888	tetrachloroethylene	N.D.	0.050	% by wt.
0889	Freon 113	N.D.	0.050	% by wt.
1117	pyridine	N.D.	0.050	% by wt.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. G5 3001161
Collected: 9/15/98 at 18:15 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products
SVE11 SDG#: LBG01-01

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W. Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
Solvent Identification (cont.)				
0853	n-pentane	N.D.	0.050	% by wt.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

Lancaster Laboratories
A division of Thermo Analytical Inc.

 1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SVE11

Lab Name: LANCASTER LABS Contract: _____.
Lab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) SOIL Lab Sample ID: 3001161
Sample wt/vol: 0 (g/mL) ML Lab File ID: >LJ269
Level: (low/med) LOW Date Received: 09/17/98
% Moisture: not dec. _____. dec. _____. Date Extracted: 10/09/98
Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/12/98
GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.0

Number TICs found: 50

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown alkane	10.86	1500000.	J
2.	Unknown alkane	11.35	890000.	J
3.	Unknown alkane	11.65	910000.	J
4.	Unknown alkane	12.07	2400000.	J
5.	Unknown alkane	12.27	1100000.	J
6.	Unknown	12.38	610000.	J
7.	Unknown alkane	13.01	2300000.	J
8.	Unknown	13.54	620000.	J
9.	Unknown cycloalkane	13.87	800000.	J
10.	Unknown alkane	14.29	630000.	J
11.	Unknown alkane	14.42	600000.	J
12.	Unknown alkane	14.99	1200000.	J
13.	Unknown alkane	15.22	590000.	J
14.	Unknown alkane	16.30	980000.	J
15.	Unknown alkane	16.82	1400000.	J
16.	Unknown	17.88	2500000.	J
17.	Unknown	17.96	4600000.	J
18.	Unknown	18.31	2600000.	J
19.	Unknown	18.63	139000000.	J
20.	Unknown	19.28	610000.	J
21.	Unknown alkane	19.53	1700000.	J
22.	Unknown	19.82	880000.	J
23.	Unknown	19.95	2300000.	J
24.	Unknown	20.06	710000.	J
25.	Unknown	20.55	720000.	J
26.	Unknown	20.74	780000.	J
27.	Unknown alkane	21.14	910000.	J
28.	Unknown	21.23	1000000.	J
29.	Unknown	21.44	1800000.	J
30.	Unknown	21.59	1200000.	J

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

 1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SVE11

Lab Name: LANCASTER LABS Contract: _____.
Lab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) SOIL Lab Sample ID: 3001161
Sample wt/vol: 0 (g/mL) ML Lab File ID: >LJ269
Level: (low/med) LOW Date Received: 09/17/98
% Moisture: not dec. _____. dec. _____. Date Extracted: 10/09/98
Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/12/98
GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.0

CONCENTRATION UNITS:
Number TICs found: 50 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
31.	Unknown alkane	21.69	2200000.	J
32.	Unknown	21.88	690000.	J
33.	Unknown	22.00	1300000.	J
34.	Unknown alkane	22.36	2800000.	J
35.	Unknown	22.86	1000000.	J
36.	Unknown alkane	23.14	6400000.	J
37.	Unknown alkane	23.71	1100000.	J
38.	Unknown alkane	23.81	1100000.	J
39.	Unknown	24.10	600000.	J
40.	Unknown	24.18	640000.	J
41.	Unknown alkane	24.50	2200000.	J
42.	Unknown alkane	24.59	2500000.	J
43.	Unknown alkane	25.05	660000.	J
44.	Unknown alkane	25.78	1500000.	J
45.	Unknown	26.26	770000.	J
46.	Unknown alkane	26.93	780000.	J
47.	Unknown alkane	27.34	1000000.	J
48.	Unknown	31.22	820000.	J
49.	Unknown	32.70	630000.	J
50.	Unknown	37.34	660000.	J

FORM I SV-TIC 1/87 Rev.

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products

ANALYSIS: 2535

The GC Fingerprint for this sample indicates a complex mixture of petroleum based and nonpetroleum organic materials. The overall sample fingerprint elutes throughout the range C10 (n-decane) through C40 (n-tetracontane) normal hydrocarbons and consists primarily of two distinct unresolved regions. The early eluting (more volatile) region elutes in the C10 - C20 (n-eicosane) range. This region is primarily unresolved; however, the overall pattern is a fairly good match for our #2 fuel oil reference pattern. Additionally, a large single component peak, which is not present in the fuel reference pattern, elutes just prior to C14 (n-tetradecane). This component accounts for approximately 10%, by weight, of the total organic content of the sample. The later eluting (less volatile) region elutes in the C20 - C40 range and is also unresolved. Each unresolved region (including the component peak in the C10 - C20 range) accounts for approximately 50%, by weight, of the total organic content of the sample. The unresolved nature of the two regions is typical of lubricating oil fractions analyzed by this method. However, the presence of fuel components indicates a complex mixture of lubricating oil fractions with volatile and semi-volatile components that are typical of diesel/#2 and heavier weight, residual fuel oil fractions.

For the purpose of quantitation, we base total area response of the sample pattern(s) on our #2 fuel oil reference standard response. When we calculate total sample area eluting in the C8 (n-octane) through C40 normal hydrocarbon range as petroleum distillate/product (#2 fuel oil), it is present at 76% by weight.

The GC Fingerprint for this sample was used as a reference fingerprint for LL 3001162 and 3001163.

The quantitation is presented on an as received basis. Consider it an approximation due to the differences between the sample pattern(s) and the reference patterns.

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

&&&

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. G5 3001161
Collected: 09/15/98 at 18:15 by DO

Submitted: 09/17/98

SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products
SVE11 SDG#: LBG01-01

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
0174	PCBs in Oil	SW-846 8082	1		09/29/98 1343	Rick Shober
0815	Oil Sample PCB's Cleanup Ext.	SW-846 3580A	1		09/26/98 0715	Deborah M. Zimmerman
0381	BNA Soil Extraction	SW-846 3550B	1		10/09/98 1900	Wanda F. Oswald
4615	App. IX Semivolatiles-Oil	SW-846 8270C	1		10/12/98 1815	David J. Evans
4616	App. IX Semivolatiles con't	SW-846 8270C	1		10/12/98 1815	David J. Evans
4617	App. IX Semivolatiles con't	SW-846 8270C	1		10/12/98 1815	David J. Evans
4618	App. IX Semivolatiles con't	SW-846 8270C	1		10/12/98 1815	David J. Evans
0445	Solvent Identification	SW-846 8015B modified	1		09/24/98 1320	Tracy A. McNickle
0466	Solvent Identification (cont.)	SW-846 8015B modified	1		09/24/98 1320	Tracy A. McNickle
2535	Quantitative GC Fingerprint	SW-846 8015B modified	1		09/21/98 2213	Robert G. Brown
9188	Total Hydrocarbons as n-Hexane	SW-846 8015B			09/24/98 1355	Tracy A. McNickle

MEMBER AGIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001161
SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
0174 PCBs in Oil		Batch: 982680010A									
4815 PCB-1016											
2,500.	ug/kg	N.D.					143	136	5	36	136
4816 PCB-1221											
2,500.	ug/kg	N.D.									
4817 PCB-1232											
2,500.	ug/kg	N.D.									
4818 PCB-1242											
2,500.	ug/kg	N.D.									
4819 PCB-1248											
2,500.	ug/kg	N.D.									
4820 PCB-1254											
2,500.	ug/kg	N.D.									
4821 PCB-1260											
2,500.	ug/kg	5,700. ug/kg					133	127	5	51	124
4615 App. IX Semivolatiles-Oil		Batch: 98282SDB026									
4668 pyridine											
100,000.	ug/kg	N.D.					21	21	1	34	92
3752 N-nitrosodimethylamine											
100,000.	ug/kg	N.D.					21	22	1	47	109
4666 2-picoline											
100,000.	ug/kg	N.D.					21	21	2	29	129
4657 N-nitrosomethylethylamine											
100,000.	ug/kg	N.D.					26	27	5	78	128
4645 methylmethanesulfonate											
100,000.	ug/kg	N.D.					42	41	1	66	122
4655 N-nitrosodiethylamine											
100,000.	ug/kg	N.D.					21	22	5	37	135
4639 ethylmethanesulfonate											
100,000.	ug/kg	N.D.					42	42	0	65	117
1185 phenol											
100,000.	ug/kg	N.D.					21	21	1	49	105
4622 aniline											
100,000.	ug/kg	N.D.					20	20	1	30	97
3753 bis(2-chloroethyl)ether											
100,000.	ug/kg	N.D.					24	24	0	53	109
1186 2-chlorophenol											
100,000.	ug/kg	N.D.					21	21	1	55	107
3754 1,3-dichlorobenzene											
100,000.	ug/kg	N.D.					21	21	1	53	103
1187 1,4-dichlorobenzene											
100,000.	ug/kg	N.D.					21	22	3	52	103
4623 benzyl alcohol											
250,000.	ug/kg	N.D.					22	22	2	62	115
3755 1,2-dichlorobenzene											
100,000.	ug/kg	N.D.					21	22	3	56	107

MEMBER ACIL

LLI Sample No. 3001161
SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
4690 2-methylphenol											
100.000.	ug/kg	N.D.					22	22	1	57	101
3756 bis(2-chloroisopropyl)ether											
100.000.	ug/kg	N.D.					24	24	0	38	117
4692 3- and 4-methylphenol											
100.000.	ug/kg	N.D.					22	22	1	48	116
4660 N-nitrosopyrrolidine											
100.000.	ug/kg	N.D.					20	20	2	77	113
4619 acetophenone											
100.000.	ug/kg	N.D.					44	44	1	59	134
4658 N-nitrosomorpholine											
100.000.	ug/kg	N.D.					22	22	2	78	109
1188 N-nitrosodi-n-propylamine											
100.000.	ug/kg	N.D.					22	22	1	50	124
4674 o-toluidine											
100.000.	ug/kg	N.D.					20	20	2	12	89
3757 hexachloroethane											
100.000.	ug/kg	N.D.					21	22	1	52	108
3758 nitrobenzene											
100.000.	ug/kg	N.D.					41	41	0	56	110
4659 N-nitrosopiperidine											
100.000.	ug/kg	N.D.					20	20	0	78	105
3759 isophorone											
100.000.	ug/kg	N.D.					39	39	2	57	114
3746 2-nitrophenol											
100.000.	ug/kg	N.D.					20	20	2	59	107
4616 App. IX Semivolatiles con't		Batch: 98282SDB026									
3747 2,4-dimethylphenol											
100.000.	ug/kg	N.D.					21	21	1	39	108
3760 bis(2-chloroethoxy)methane											
100.000.	ug/kg	N.D.					21	21	2	56	103
4676 0,0,0-triethylphosphorothioate											
100.000.	ug/kg	N.D.					19	19	0	67	103
3748 2,4-dichlorophenol											
100.000.	ug/kg	N.D.					20	20	1	59	100
1189 1,2,4-trichlorobenzene											
100.000.	ug/kg	N.D.					20	20	2	57	104
3761 naphthalene											
100.000.	ug/kg	N.D.					21	21	3	58	99
4631 2,6-dichlorophenol											
100.000.	ug/kg	N.D.					20	20	0	62	109
4693 4-chloroaniline											
100.000.	ug/kg	N.D.					21	21	3	1	102
4640 hexachloropropene											
100.000.	ug/kg	N.D.					20	21	2	70	130
3762 hexachlorobutadiene											
100.000.	ug/kg	N.D.					21	21	4	56	115

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001161
SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
4665 1,4-phenylenediamine											
2,000,000.	ug/kg	N.D.					23	23	0	70	130
4654 N-nitrosodi-n-butylamine											
100,000.	ug/kg	N.D.					21	20	1	75	103
1190 4-chloro-3-methylphenol											
100,000.	ug/kg	N.D.					20	21	1	56	108
4669 safrole											
100,000.	ug/kg	N.D.					38	39	2	30	109
4694 2-methylnaphthalene											
100,000.	ug/kg	N.D.					20	21	2	60	102
4670 1,2,4,5-tetrachlorobenzene											
100,000.	ug/kg	N.D.					21	22	3	61	113
3763 hexachlorocyclopentadiene											
200,000.	ug/kg	N.D.					13	9	30	27	113
3749 2,4,6-trichlorophenol											
100,000.	ug/kg	N.D.					20	20	1	62	106
4695 2,4,5-trichlorophenol											
100,000.	ug/kg	N.D.					20	20	1	63	107
4642 isosafrole											
100,000.	ug/kg	N.D.					28	28	0	14	72
3764 2-chloronaphthalene											
100,000.	ug/kg	N.D.					21	21	2	60	106
4696 2-nitroaniline											
100,000.	ug/kg	N.D.					22	21	1	54	111
4647 1,4-naphthoquinone											
200,000.	ug/kg	N.D.					19	20	1	70	130
3766 dimethylphthalate											
100,000.	ug/kg	N.D.					24	24	1	61	104
4637 1,3-dinitrobenzene											
100,000.	ug/kg	N.D.					37	38	1	61	109
3767 2,6-dinitrotoluene											
100,000.	ug/kg	N.D.					38	37	1	62	111
3750 2,4-dinitrophenol											
250,000.	ug/kg	N.D.					20	20	0	29	117
4617 App. IX Semivolatiles con't		Batch: 98282SDB026									
3765 acenaphthylene											
100,000.	ug/kg	N.D.					21	21	1	62	101
4697 3-nitroaniline											
100,000.	ug/kg	N.D.					18	18	0	9	110
1191 acenaphthene											
100,000.	ug/kg	N.D.					21	21	0	61	100
1192 4-nitrophenol											
250,000.	ug/kg	N.D.					24	24	1	44	110
4698 dibenzofuran											
100,000.	ug/kg	N.D.					21	21	1	62	102
4662 pentachlorobenzene											
100,000.	ug/kg	N.D.					21	21	0	69	100

MEMBER ACIL

LLI Sample No. 3001161
SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
1193 2,4-dinitrotoluene											
100,000.	ug/kg	N.D.					39	39	0	58	113
4648 1-naphthylamine											
100,000.	ug/kg	N.D.					15	15	1	1	99
4649 2-naphthylamine											
250,000.	ug/kg	N.D.					10	10	0	1	100
4671 2,3,4,6-tetrachlorophenol											
100,000.	ug/kg	N.D.					18	18	3	62	103
3770 diethylphthalate											
100,000.	ug/kg	N.D.					24	24	2	59	104
3769 4-chlorophenylphenylether											
100,000.	ug/kg	N.D.					24	24	1	52	110
3768 fluorene											
100,000.	ug/kg	N.D.					21	21	2	59	109
4661 5-nitro-o-toluidine											
250,000.	ug/kg	N.D.					13	13	3	70	130
4700 4-nitroaniline											
100,000.	ug/kg	N.D.					15	16	3	37	120
3751 4,6-dinitro-2-methylphenol											
250,000.	ug/kg	N.D.					18	18	2	42	107
3772 N-nitrosodiphenylamine											
100,000.	ug/kg	N.D.					20	20	1	60	106
4672 tetraethyldithiopyrophosphate											
100,000.	ug/kg	N.D.					19	19	3	62	111
4677 1,3,5-trinitrobenzene											
200,000.	ug/kg	N.D.					44	45	2	70	130
4664 phenacetin											
100,000.	ug/kg	N.D.					21	21	2	69	105
3773 4-bromophenylphenylether											
100,000.	ug/kg	N.D.					24	24	1	61	110
4629 diallate (trans/cis)											
100,000.	ug/kg	N.D.					22	22	1	69	126
4632 dimethoate											
100,000.	ug/kg	N.D.					17	17	0	23	79
3774 hexachlorobenzene											
100,000.	ug/kg	N.D.					23	22	4	52	123
4618 App. IX Semivolatiles con't		Batch: 98282SDB026									
4621 4-aminobiphenyl											
250,000.	ug/kg	N.D.					6	5	6	1	46
1194 pentachlorophenol											
250,000.	ug/kg	N.D.					22	22	1	42	108
4667 pronamide											
250,000.	ug/kg	N.D.					11	11	0	1	132
4663 pentachloronitrobenzene											
100,000.	ug/kg	N.D.					32	41	24	68	115
3775 phenanthrene											
100,000.	ug/kg	N.D.					21	21	0	62	107

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001161
SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3776 anthracene											
100,000.	ug/kg	N.D.					21	21	1	62	105
3777 di-n-butylphthalate											
100,000.	ug/kg	N.D.					24	24	1	59	114
4653 4-nitroquinoline-1-oxide											
250,000.	ug/kg	N.D.					21	25	17	70	130
4643 methapyrilene											
100,000.	ug/kg	N.D.					20	19	3	35	138
4641 isodrin											
200,000.	ug/kg	N.D.					19	19	1	66	117
3778 fluoranthene											
100,000.	ug/kg	N.D.					20	20	0	58	110
1195 pyrene											
100,000.	ug/kg	N.D.					21	21	1	52	115
4633 p-(dimethylamino)azobenzene											
100,000.	ug/kg	N.D.					23	24	3	1	186
4626 chlorobenzilate											
100,000.	ug/kg	N.D.					23	24	5	9	223
4635 3,3'-dimethylbenzidine											
250,000.	ug/kg	N.D.					8	9	2	1	137
3780 butylbenzylphthalate											
100,000.	ug/kg	N.D.					26	27	3	58	119
4620 2-acetylaminofluorene											
100,000.	ug/kg	N.D.					21	20	1	70	130
3783 3,3'-dichlorobenzidine											
200,000.	ug/kg	N.D.					17	17	1	15	94
3781 benzo(a)anthracene											
100,000.	ug/kg	N.D.					21	21	2	63	106
3784 bis(2-ethylhexyl)phthalate											
100,000.	ug/kg	N.D.					25	26	2	8	158
3782 chrysene											
100,000.	ug/kg	N.D.					22	22	1	60	107
3785 di-n-octylphthalate											
100,000.	ug/kg	N.D.					23	24	3	54	127
4634 7,12-dimethylbenz(a)anthracene											
100,000.	ug/kg	N.D.					36	36	1	99	213
3786 benzo(b)fluoranthene											
100,000.	ug/kg	N.D.					20	21	3	59	105
3787 benzo(k)fluoranthene											
100,000.	ug/kg	N.D.					20	21	2	63	108
3788 benzo(a)pyrene											
100,000.	ug/kg	N.D.					21	21	0	61	107
4644 3-methylcholanthrene											
100,000.	ug/kg	N.D.					38	39	3	58	169
3789 indeno(1,2,3-cd)pyrene											
100,000.	ug/kg	N.D.					23	23	0	55	111
3790 dibenz(a,h)anthracene											
100,000.	ug/kg	N.D.					23	24	5	60	117
3791 benzo(ghi)perylene											
100,000.	ug/kg	N.D.					23	23	1	52	113

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001161
SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
4673 thionazin											
200,000.	ug/kg	N.D.					20	20	0	63	110

0445 Solvent Identification — Batch: 982670002A

0854	n-hexane	
	0.050	% by wt.
0855	n-heptane	
	0.050	% by wt.
0856	n-octane	
	0.050	% by wt.
0857	isooctane	
	0.050	% by wt.
0858	benzene	
	0.050	% by wt.
0859	toluene	
	0.050	% by wt.
0860	ethyl benzene	
	0.050	% by wt.
0861	xylenes	
	0.050	% by wt.
0862	styrene	
	0.050	% by wt.
1120	chlorobenzene	
	0.050	% by wt.
0863	methanol	
	0.050	% by wt.
1118	n-propanol	
	0.050	% by wt.
0864	ethanol	
	0.050	% by wt.
0865	isopropanol	
	0.050	% by wt.
0866	n-butanol	
	0.050	% by wt.
0867	isobutanol	
	0.050	% by wt.
0868	acetone	
	0.050	% by wt.
0869	methyl ethyl ketone	
	0.050	% by wt.
0870	methyl isobutyl ketone	
	0.050	% by wt.
1119	cyclohexanone	
	0.050	% by wt.
0871	methyl cellosolve	
	0.050	% by wt.
0872	ethyl cellosolve	
	0.050	% by wt.

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001161
SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

	SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
0873 butyl cellosolve	0.050	% by wt.										
0874 cellosolve acetate	0.050	% by wt.										
0875 ethyl acetate	0.050	% by wt.										
0876 propyl acetate	0.050	% by wt.										
0877 isopropyl acetate	0.050	% by wt.										
0878 n-butyl acetate	0.050	% by wt.										
1116 ethyl ether	0.050	% by wt.										
0880 carbon tetrachloride	0.050	% by wt.										
0881 chloroform	0.050	% by wt.										
0882 methylene chloride	0.050	% by wt.										
0883 1,1-dichloroethane	0.050	% by wt.										
0884 1,2-dichloroethane	0.050	% by wt.										
0885 1,1,1-trichloroethane	0.050	% by wt.										
0886 1,1,2-trichloroethane	0.050	% by wt.										
0887 trichloroethylene	0.050	% by wt.										
0888 tetrachloroethylene	0.050	% by wt.										
0889 Freon 113	0.050	% by wt.										
1117 pyridine	0.050	% by wt.										

0466 Solvent Identification (cont.) Batch: 982670002A

0853 n-pentane	0.050	% by wt.										

2535 Quantitative GC Fingerprint attached Batch: 982620000A J264

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001161
SVE-11 Grab Product Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS LOW	HIGH
0174 PCBs in Oil	TCX	97	32	139
	DCB	80	42	133
2535 Quantitative GC Fingerprint	Chlorobenz	96	71	135
	o-terpheny	91	75	125
4615 App. IX Semivolatiles-Oil	Phenol-d6	101	39	108
	2-Flphenol	108	35	108
	2,4,6-TBP	131	23	125
4616 App. IX Semivolatiles con't	Nitrobz-d5	112	31	126
	2-Fbiphnyl	111	45	113
	Tphenyld14	117	37	130

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001162
Collected: 9/15/98 at 18:00 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products
WESTS SDG#: LBG01-02

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS	
0173	PCBs in Water				See Page 2
0893	Semivolatile Library Search				See Page 13
	The results from the semivolatile library search are listed on the attached FORM 1F - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form. An "X" indicates an isomer of the listed compound.				
1309	App. IX Semivolatiles-Water				See Page 3
1310	App. IX Semi-volatiles con't				See Page 5
1311	App. IX Semi-volatiles con't				See Page 6
1312	App. IX Semi-volatiles con't				See Page 7
0445	Solvent Identification				See Page 9
0466	Solvent Identification (cont.)				See Page 11
4828	TPH by GC-FID in Water				See Page 15
9188	Total Hydrocarbons as n-Hexane	N.D.	2,000.	ppm	
	The reported value for total hydrocarbons as n-hexane represents total volatile organic material detected by the solvent screen conditions for the range of C5 (n-pentane) through C10 (n-decane) normal hydrocarbons.				

1 COPY TO Leggette,Brashears & Graham MN ATTN: Mr. Ken Vogel
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300
19:33:21 D 0002 3 135779 632339
885 0.00 00085400 ASR000

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001162
Collected: 9/15/98 at 18:00 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products
WESTS SDG#: LBG01-02

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
PCBs in Water				
0639	PCB-1016	N.D.	1,000.	ug/l
0640	PCB-1221	N.D.	1,000.	ug/l
0641	PCB-1232	N.D.	1,000.	ug/l
0642	PCB-1242	N.D.	1,000.	ug/l
0643	PCB-1248	N.D.	1,000.	ug/l
0644	PCB-1254	N.D.	1,000.	ug/l
0645	PCB-1260	N.D.	1,000.	ug/l

Due to interfering peaks on the chromatogram, the values reported represent the lowest quantitation limits obtainable.
Despite numerous cleanup methods, we were unable to reach our usual quantitation limits.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001162
Collected: 9/15/98 at 18:00 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products
WESTS SDG#: LBG01-02

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

App. IX Semivolatiles-Water

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS		LIMIT OF QUANTITATION	UNITS
3920	pyridine	N.D.		5,000.	ug/l
3913	N-nitrosodimethylamine	N.D.		5,000.	ug/l
1301	2-picoline	N.D.		5,000.	ug/l
1292	N-nitrosomethylethylamine	N.D.		5,000.	ug/l
1285	methylmethanesulfonate	N.D.		5,000.	ug/l
1291	N-nitrosodiethylamine	N.D.		5,000.	ug/l
1279	ethylmethanesulfonate	N.D.		5,000.	ug/l
3918	phenol	54.	J	100.	ug/l
0925	aniline	N.D.		5,000.	ug/l
3867	bis(2-chloroethyl)ether	N.D.		5,000.	ug/l
3874	2-chlorophenol	N.D.		5,000.	ug/l
3883	1,3-dichlorobenzene	N.D.		5,000.	ug/l
3884	1,4-dichlorobenzene	N.D.		5,000.	ug/l
3865	benzylalcohol	N.D.		10,000.	ug/l
3882	1,2-dichlorobenzene	N.D.		5,000.	ug/l
3877	2-methylphenol	22.	J	100.	ug/l
1271	bis(2-chloroisopropyl)ether	N.D.		5,000.	ug/l
3878	3- and 4-methylphenol	42,000.		5,000.	ug/l
1295	N-nitrosopyrrolidine	N.D.		5,000.	ug/l
1267	acetophenone	N.D.		5,000.	ug/l
1293	N-nitrosomorpholine	N.D.		5,000.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.		5,000.	ug/l
1306	o-toluidine	N.D.		5,000.	ug/l
3902	hexachloroethane	N.D.		5,000.	ug/l
3910	nitrobenzene	N.D.		5,000.	ug/l
1294	N-nitrosopiperidine	N.D.		5,000.	ug/l
3904	isophorone	N.D.		5,000.	ug/l
3911	2-nitrophenol	N.D.		5,000.	ug/l

Aramite is not reported due to unavailability of a suitable standard.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

LLI Sample No. WW 3001162
Collected: 9/15/98 at 18:00 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products
WESTS SDG#: LBG01-02

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS

App. IX Semivolatiles-Water

The QC limits for the following compounds are advisory only until sufficient data points can be obtained to calculate statistical limits:
1,3,5-Trinitrobenzene
1,4-Naphthalene
1,4-Phenylenediamine
2-Acetylaminofluorene
Hexachlorophene
4-Nitroquinoline-1-oxide
5-Nitro-o-toluidine

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

LLI Sample No. WW 3001162
Collected: 9/15/98 at 18:00 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products
WESTS SDG#: LBG01-02

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS		LIMIT OF QUANTITATION	UNITS
App. IX Semi-volatiles con't					
3890	2,4-dimethylphenol	33.	J	100.	ug/l
3866	bis(2-chloroethoxy)methane	N.D.		5,000.	ug/l
1307	0,0,0-triethylphosphorothioate	N.D.		5,000.	ug/l
3886	2,4-dichlorophenol	N.D.		5,000.	ug/l
3921	1,2,4-trichlorobenzene	N.D.		5,000.	ug/l
3906	naphthalene	N.D.		5,000.	ug/l
1273	2,6-dichlorophenol	N.D.		5,000.	ug/l
3871	4-chloroaniline	N.D.		5,000.	ug/l
1281	hexachloropropene	N.D.		5,000.	ug/l
3900	hexachlorobutadiene	N.D.		5,000.	ug/l
1300	1,4-phenylenediamine	N.D.		100,000.	ug/l
1290	N-nitrosodi-n-butylamine	N.D.		5,000.	ug/l
3872	4-chloro-3-methylphenol	N.D.		5,000.	ug/l
1303	safrole	N.D.		5,000.	ug/l
3905	2-methylnaphthalene	N.D.		5,000.	ug/l
1304	1,2,4,5-tetrachlorobenzene	N.D.		5,000.	ug/l
3901	hexachlorocyclopentadiene	N.D.		13,000.	ug/l
3923	2,4,6-trichlorophenol	N.D.		5,000.	ug/l
3922	2,4,5-trichlorophenol	N.D.		5,000.	ug/l
1283	isosafrole	N.D.		5,000.	ug/l
3873	2-chloronaphthalene	N.D.		5,000.	ug/l
3907	2-nitroaniline	N.D.		5,000.	ug/l
1286	1,4-naphthoquinone	N.D.		50,000.	ug/l
3891	dimethylphthalate	N.D.		5,000.	ug/l
1278	1,3-dinitrobenzene	N.D.		5,000.	ug/l
3895	2,6-dinitrotoluene	N.D.		5,000.	ug/l

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001162
Collected: 9/15/98 at 18:00 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products
WESTS SDG#: LBG01-02

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

App. IX Semi-volatiles con't

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS		LIMIT OF QUANTITATION	UNITS
3858	acenaphthylene	N.D.		5,000.	ug/l
3908	3-nitroaniline	N.D.		5,000.	ug/l
3857	acenaphthene	N.D.		5,000.	ug/l
3893	2,4-dinitrophenol	N.D.		25,000.	ug/l
3912	4-nitrophenol	N.D.		25,000.	ug/l
3879	dibenzofuran	N.D.		5,000.	ug/l
1297	pentachlorobenzene	N.D.		5,000.	ug/l
3894	2,4-dinitrotoluene	N.D.		5,000.	ug/l
1287	1-naphthylamine	N.D.		5,000.	ug/l
1288	2-naphthylamine	N.D.		5,000.	ug/l
0438	2,3,4,6-Tetrachlorophenol	N.D.		5,000.	ug/l
3887	diethylphthalate	N.D.		5,000.	ug/l
3875	4-chlorophenylphenylether	N.D.		5,000.	ug/l
3898	fluorene	N.D.		5,000.	ug/l
1296	5-nitro-o-toluidine	N.D.		5,000.	ug/l
3909	4-nitroaniline	N.D.		5,000.	ug/l
3892	4,6-dinitro-2-methylphenol	N.D.		13,000.	ug/l
3914	N-nitrosodiphenylamine	38.	J	100.	ug/l
1305	tetraethyldithiopyrophosphate	N.D.		5,000.	ug/l
1308	1,3,5-trinitrobenzene	N.D.		10,000.	ug/l
1299	phenacetin	N.D.		5,000.	ug/l
3869	4-bromophenylphenylether	N.D.		5,000.	ug/l
1313	diallate (trans/cis)	N.D.		5,000.	ug/l
1274	dimethoate	N.D.		10,000.	ug/l
3899	hexachlorobenzene	N.D.		5,000.	ug/l

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER

LLI Sample No. WW 3001162
Collected: 9/15/98 at 18:00 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products
WESTS SDG#: LBG01-02

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

App. IX Semi-volatiles con't

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS		LIMIT OF QUANTITATION	UNITS
1269	4-aminobiphenyl	N.D.		5,000.	ug/l
3916	pentachlorophenol	N.D.		13,000.	ug/l
1302	pronamide	N.D.		5,000.	ug/l
1298	pentachloronitrobenzene	N.D.		5,000.	ug/l
3917	phenanthrene	N.D.		5,000.	ug/l
3859	anthracene	N.D.		5,000.	ug/l
3880	di-n-butylphthalate	N.D.		5,000.	ug/l
1289	4-nitroquinoline-1-oxide	N.D.		50,000.	ug/l
3368	methapyrilene	N.D.		5,000.	ug/l
1282	isodrin	N.D.		13,000.	ug/l
3897	fluoranthene	N.D.		5,000.	ug/l
3919	pyrene	N.D.		5,000.	ug/l
1275	p-(dimethylamino)azobenzene	N.D.		5,000.	ug/l
1272	chlorobenzilate	N.D.		10,000.	ug/l
1277	3,3'-dimethylbenzidine	N.D.		13,000.	ug/l
3870	butylbenzylphthalate	N.D.		5,000.	ug/l
1268	2-acetylaminofluorene	N.D.		5,000.	ug/l
3885	3,3'-dichlorobenzidine	N.D.		5,000.	ug/l
3860	benzo(a)anthracene	N.D.		5,000.	ug/l
3868	bis(2-ethylhexyl)phthalate	25.	J	100.	ug/l
3876	chrysene	N.D.		5,000.	ug/l
3896	di-n-octylphthalate	N.D.		5,000.	ug/l
1276	7,12-dimethylbenz(a)anthracene	N.D.		5,000.	ug/l
3861	benzo(b)fluoranthene	N.D.		5,000.	ug/l
3862	benzo(k)fluoranthene	N.D.		5,000.	ug/l
3864	benzo(a)pyrene	N.D.		5,000.	ug/l
1284	3-methylcholanthrene	N.D.		5,000.	ug/l
3903	indeno(1,2,3-cd)pyrene	N.D.		5,000.	ug/l
3881	dibenz(a,h)anthracene	N.D.		5,000.	ug/l
3863	benzo(ghi)perylene	N.D.		5,000.	ug/l
3370	thionazin	N.D.		5,000.	ug/l

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001162
Collected: 9/15/98 at 18:00 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products
WESTS SDG#: LBG01-02

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS

App. IX Semi-volatiles con't

Due to insufficient sample, the quantitation limits for the GC/MS semivolatile compounds were raised.

The usual quantitation limits could not be attained due to the matrix of the sample or interferences observed in the GC/MS semivolatile analysis.

Batch QC was not extracted with this sample.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

LLI Sample No. WW 3001162
Collected: 9/15/98 at 18:00 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products
WESTS SDG#: LBG01-02

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
Solvent Identification				
0854	n-hexane	N.D.	0.050	% by wt.
0855	n-heptane	N.D.	0.050	% by wt.
0856	n-octane	N.D.	0.050	% by wt.
0857	isooctane	N.D.	0.050	% by wt.
0858	benzene	N.D.	0.050	% by wt.
0859	toluene	N.D.	0.050	% by wt.
0860	ethyl benzene	N.D.	0.050	% by wt.
0861	xylenes	N.D.	0.050	% by wt.
0862	styrene	N.D.	0.050	% by wt.
1120	chlorobenzene	N.D.	0.050	% by wt.
0863	methanol	N.D.	0.050	% by wt.
1118	n-propanol	N.D.	0.050	% by wt.
0864	ethanol	N.D.	0.050	% by wt.
0865	isopropanol	N.D.	0.050	% by wt.
0866	n-butanol	N.D.	0.050	% by wt.
0867	isobutanol	N.D.	0.050	% by wt.
0868	acetone	N.D.	0.050	% by wt.
0869	methyl ethyl ketone	N.D.	0.050	% by wt.
0870	methyl isobutyl ketone	N.D.	0.050	% by wt.
1119	cyclohexanone	N.D.	0.050	% by wt.
0871	methyl cellosolve	N.D.	0.050	% by wt.
0872	ethyl cellosolve	N.D.	0.050	% by wt.
0873	butyl cellosolve	N.D.	0.050	% by wt.
0874	cellosolve acetate	N.D.	0.050	% by wt.
0875	ethyl acetate	N.D.	0.050	% by wt.
0876	propyl acetate	N.D.	0.050	% by wt.
0877	isopropyl acetate	N.D.	0.050	% by wt.
0878	n-butyl acetate	N.D.	0.050	% by wt.
1116	ethyl ether	N.D.	0.050	% by wt.
0880	carbon tetrachloride	N.D.	0.050	% by wt.
0881	chloroform	N.D.	0.050	% by wt.
0882	methylene chloride	N.D.	0.050	% by wt.
0883	1,1-dichloroethane	N.D.	0.050	% by wt.
0884	1,2-dichloroethane	N.D.	0.050	% by wt.
0885	1,1,1-trichloroethane	N.D.	0.050	% by wt.
0886	1,1,2-trichloroethane	N.D.	0.050	% by wt.
0887	trichloroethylene	N.D.	0.050	% by wt.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001162
Collected: 9/15/98 at 18:00 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products
WESTS SDG#: LBG01-02

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
Solvent Identification				
0888	tetrachloroethylene	N.D.	0.050	% by wt.
0889	Freon 113	N.D.	0.050	% by wt.
1117	pyridine	N.D.	0.050	% by wt.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001162
Collected: 9/15/98 at 18:00 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products
WESTS SDG#: LBG01-02

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
Solvent Identification (cont.)				
0853	n-pentane	N.D.	0.050	% by wt.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001162
Collected: 9/15/98 at 18:00 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products
WESTS SDG#: LBG01-02

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
TPH by GC-FID in Water				
4829	Gasoline	N.D.	40.	mg/l
4830	Kerosene	N.D.	40.	mg/l
4831	Diesel/#2 Fuel	710.	40.	mg/l

The quantitation limits were raised because sample dilution was necessary to bring target compounds into the calibration range of the system.
See attached fingerprint comment.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

 1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

WESTS

Lab Name: LANCASTER LABS Contract: _____.
Lab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) WATER Lab Sample ID: 3001162
Sample wt/vol: 500 (g/mL) ML Lab File ID: >LJ270
Level: (low/med) LOW Date Received: 09/17/98
% Moisture: not dec. _____. dec. _____. Date Extracted: 10/09/98
Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/12/98
GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 5.0

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

Number TICs found: 48

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.54	4000.	J
2.	Unknown carboxylic acid	5.45	340.	J
3.	Unknown	7.39	1200.	J
4.	Unknown carboxylic acid	10.48	260.	J
5.	Unknown alkane	11.61	550.	J
6.	Unknown	13.26	210.	J
7.	Unknown carboxylic acid	14.35	310.	J
8.	Unknown alkane	15.60	300.	J
9.	Unknown	15.96	5700.	J
10.	Unknown	16.28	270.	J
11.	Unknown	17.28	260.	J
12.	Unknown	17.62	780.	J
13.	Unknown cycloalkane	17.87	1000.	J
14.	Unknown cycloalkane	17.95	1000.	J
15.	Unknown	18.31	1800.	J
16.	Unknown cycloalkane	18.56	46000.	J
17.	Unknown	19.29	4500.	J
18.	Unknown alkane	19.51	330.	J
19.	Unknown	19.69	3600.	J
20.	Unknown	19.95	280.	J
21.	Unknown	21.15	250.	J
22.	Unknown	21.56	240.	J
23.	Unknown alkane	22.35	280.	J
24.	Unknown alkane	23.15	460.	J
25.	Unknown	23.36	230.	J
26.	Unknown	23.47	200.	J
27.	Unknown alkane	24.57	260.	J
28.	Unknown	26.99	420.	J

FORM I SV-TIC 1/87 Rev.

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

 1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

WESTS

Lab Name: LANCASTER LABS Contract: _____.
Lab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) WATER Lab Sample ID: 3001162
Sample wt/vol: 500 (g/mL) ML Lab File ID: >LJ270
Level: (low/med) LOW Date Received: 09/17/98
% Moisture: not dec. _____. dec. _____. Date Extracted: 10/09/98
Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/12/98
GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 5.0

Number TICs found: 48

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
29.	Unknown	27.35	240.	J
30.	Unknown alkane	27.68	260.	J
31.	Unknown alkane	27.96	360.	J
32.	Unknown alkane	29.15	260.	J
33.	Unknown alkane	30.00	260.	J
34.	Unknown	30.50	220.	J
35.	Unknown	31.21	530.	J
36.	Unknown	31.93	240.	J
37.	Unknown	32.16	410.	J
38.	Unknown	32.72	470.	J
39.	Unknown	32.94	390.	J
40.	Unknown	33.22	670.	J
41.	Unknown	34.61	290.	J
42.	Unknown	34.98	270.	J
43.	Unknown	35.71	210.	J
44.	Unknown	36.67	250.	J
45.	Unknown	37.39	530.	J
46.	Unknown	38.69	250.	J
47.	Unknown	39.31	220.	J
48.	Unknown	40.47	220.	J

FORM I SV-TIC 1/87 Rev.

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products

ANALYSIS: 4828

The GC Fingerprint for this sample indicates a complex mixture of petroleum based and nonpetroleum organic materials. The overall sample fingerprint elutes throughout the range C10 (n-decane) through C40 (n-tetracontane) normal hydrocarbons and consists primarily of two distinct unresolved regions. The early eluting (more volatile) region elutes in the C10 - C20 (n-eicosane) range. This region is primarily unresolved; however, the overall pattern is a fairly good match for our #2 fuel oil reference pattern. Additionally, two large single component peaks, which are not present in the fuel reference pattern, elute just prior to C12 (n-dodecane) and C14 (n-tetradecane), respectively. This region, including the two component peaks, accounts for approximately 30%, by weight of the total organic content of the sample. The later eluting (less volatile) region elutes in the C20 - C40 range and is also unresolved. This region accounts for approximately 70%, by weight, of the total organic content of the sample. The unresolved nature of the two regions is typical of lubricating oil fractions analyzed by this method. However, the presence of fuel components indicates a complex mixture of lubricating oil fractions with volatile and semi-volatile components that are typical of diesel/#2 and heavier weight, residual fuel oil fractions.

For the purpose of quantitation, we base total area response of the sample pattern(s) on our #2 fuel oil reference standard response. When we calculate total sample area eluting in the C8 (n-octane) through C40 normal hydrocarbon range as petroleum distillate/product (#2 fuel oil), it is present at 710 mg/l in the sample.

The GC Fingerprint for this sample was compared to the fingerprint for LL 3001161, a client submitted reference material. The overall sample fingerprint is a good match for LL 3001161. The relative ratios of the distinct regions are significantly different from the reference fingerprint. The single peak eluting just before C14 is a retention time match for the single component in LL 3001161.

Consider the quantitation an approximation due to the differences between the sample pattern(s) and the reference patterns.

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

&&&

LABORATORY CHRONICLE

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001162
Collected: 09/15/98 at 18:00 by DO

Submitted: 09/17/98

West Sump Grab Water Sample

Chrysler - Dayton Thermal Products
WESTS SDG#: LBG01-02

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
0173	PCBs in Water	SW-846 8082	1		09/24/98 2229	Michael Kielb
0817	Water Sample Pest. Extraction	SW-846 3510C	1		09/22/98 1515	Lee L. Munro
0813	BNA Water Extraction	SW-846 3510C	1		09/18/98 0830	Maria A. Davenport
1309	App. IX Semivolatiles-Water	SW-846 8270C	1		10/12/98 2247	Mark A. Ratcliff
1310	App. IX Semi-volatiles con't	SW-846 8270C	1		10/12/98 2247	Mark A. Ratcliff
1311	App. IX Semi-volatiles con't	SW-846 8270C	1		10/12/98 2247	Mark A. Ratcliff
1312	App. IX Semi-volatiles con't	SW-846 8270C	1		10/12/98 2247	Mark A. Ratcliff
0445	Solvent Identification	SW-846 8015B modified	1		09/24/98 1355	Tracy A. McNickle
0466	Solvent Identification (cont.)	SW-846 8015B modified	1		09/24/98 1355	Tracy A. McNickle
2376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1		09/18/98 0930	Maria A. Davenport
4828	TPH by GC-FID in Water	SW-846 8015B, modified	1		09/22/98 0935	Robert G. Brown
9188	Total Hydrocarbons as n-Hexane	SW-846 8015B			09/24/98 1431	Tracy A. McNickle

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001162
West Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
0173 PCBs in Water		Batch: 982650008A									
0639 PCB-1016											
1,000.	ug/l	N.D.		89	88	1	85	87		43	126
0640 PCB-1221											
1,000.	ug/l	N.D.									
0641 PCB-1232											
1,000.	ug/l	N.D.									
0642 PCB-1242											
1,000.	ug/l	N.D.									
0643 PCB-1248											
1,000.	ug/l	N.D.									
0644 PCB-1254											
1,000.	ug/l	N.D.									
0645 PCB-1260											
1,000.	ug/l	N.D.		95	94	1	90	92		51	126
1309 App. IX Semivolatiles-Water		Batch: 98282WAG026									
3920 pyridine											
5,000.	ug/l	N.D.									
3913 N-nitrosodimethylamine											
5,000.	ug/l	N.D.									
1301 2-picoline											
5,000.	ug/l	N.D.									
1292 N-nitrosomethylethylamine											
5,000.	ug/l	N.D.									
1285 methylmethanesulfonate											
5,000.	ug/l	N.D.									
1291 N-nitrosodiethylamine											
5,000.	ug/l	N.D.									
1279 ethylmethanesulfonate											
5,000.	ug/l	N.D.									
3918 phenol											
100.	ug/l	N.D.									
0925 aniline											
5,000.	ug/l	N.D.									
3867 bis(2-chloroethyl)ether											
5,000.	ug/l	N.D.									
3874 2-chlorophenol											
5,000.	ug/l	N.D.									
3883 1,3-dichlorobenzene											
5,000.	ug/l	N.D.									
3884 1,4-dichlorobenzene											
5,000.	ug/l	N.D.									
3865 benzylalcohol											
10,000.	ug/l	N.D.									
3882 1,2-dichlorobenzene											
5,000.	ug/l	N.D.									

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001162
West Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS		BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3877	2-methylphenol											
100.	ug/l		N.D.									
1271	bis(2-chloroisopropyl)ether											
5,000.	ug/l		N.D.									
3878	3- and 4-methylphenol											
5,000.	ug/l		N.D.									
1295	N-nitrosopyrrolidine											
5,000.	ug/l		N.D.									
1267	acetophenone											
5,000.	ug/l		N.D.									
1293	N-nitrosomorpholine											
5,000.	ug/l		N.D.									
3915	N-nitrosodi-n-propylamine											
5,000.	ug/l		N.D.									
1306	o-toluidine											
5,000.	ug/l		N.D.									
3902	hexachloroethane											
5,000.	ug/l		N.D.									
3910	nitrobenzene											
5,000.	ug/l		N.D.									
1294	N-nitrosopiperidine											
5,000.	ug/l		N.D.									
3904	isophorone											
5,000.	ug/l		N.D.									
3911	2-nitrophenol											
5,000.	ug/l		N.D.									
1310 App. IX Semi-volatiles con't		Batch: 98282WAG026										
3890	2,4-dimethylphenol											
100.	ug/l		N.D.									
3866	bis(2-chloroethoxy)methane											
5,000.	ug/l		N.D.									
1307	0,0,0-triethylphosphorothioate											
5,000.	ug/l		N.D.									
3886	2,4-dichlorophenol											
5,000.	ug/l		N.D.									
3921	1,2,4-trichlorobenzene											
5,000.	ug/l		N.D.									
3906	naphthalene											
5,000.	ug/l		N.D.									
1273	2,6-dichlorophenol											
5,000.	ug/l		N.D.									
3871	4-chloroaniline											
5,000.	ug/l		N.D.									
1281	hexachloropropene											
5,000.	ug/l		N.D.									
3900	hexachlorobutadiene											
5,000.	ug/l		N.D.									

LLI Sample No. 3001162
West Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
1300 1,4-phenylenediamine											
100,000.	ug/l	N.D.									
1290 N-nitrosodi-n-butylamine											
5,000.	ug/l	N.D.									
3872 4-chloro-3-methylphenol											
5,000.	ug/l	N.D.									
1303 safrole											
5,000.	ug/l	N.D.									
3905 2-methylnaphthalene											
5,000.	ug/l	N.D.									
1304 1,2,4,5-tetrachlorobenzene											
5,000.	ug/l	N.D.									
3901 hexachlorocyclopentadiene											
13,000.	ug/l	N.D.									
3923 2,4,6-trichlorophenol											
5,000.	ug/l	N.D.									
3922 2,4,5-trichlorophenol											
5,000.	ug/l	N.D.									
1283 isosafrole											
5,000.	ug/l	N.D.									
3873 2-chloronaphthalene											
5,000.	ug/l	N.D.									
3907 2-nitroaniline											
5,000.	ug/l	N.D.									
1286 1,4-naphthoquinone											
50,000.	ug/l	N.D.									
3891 dimethylphthalate											
5,000.	ug/l	N.D.									
1278 1,3-dinitrobenzene											
5,000.	ug/l	N.D.									
3895 2,6-dinitrotoluene											
5,000.	ug/l	N.D.									
1311 App. IX Semi-volatiles con't		Batch: 98282WAG026									
3858 acenaphthylene											
5,000.	ug/l	N.D.									
3908 3-nitroaniline											
5,000.	ug/l	N.D.									
3857 acenaphthene											
5,000.	ug/l	N.D.									
3893 2,4-dinitrophenol											
25,000.	ug/l	N.D.									
3912 4-nitrophenol											
25,000.	ug/l	N.D.									
3879 dibenzofuran											
5,000.	ug/l	N.D.									
1297 pentachlorobenzene											
5,000.	ug/l	N.D.									

LLI Sample No. 3001162
West Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3894 2,4-dinitrotoluene											
5,000.	ug/l	N.D.									
1287 1-naphthylamine											
5,000.	ug/l	N.D.									
1288 2-naphthylamine											
5,000.	ug/l	N.D.									
0438 2,3,4,6-Tetrachlorophenol											
5,000.	ug/l	N.D.									
3887 diethylphthalate											
5,000.	ug/l	N.D.									
3875 4-chlorophenylphenylether											
5,000.	ug/l	N.D.									
3898 fluorene											
5,000.	ug/l	N.D.									
1296 5-nitro-o-toluidine											
5,000.	ug/l	N.D.									
3909 4-nitroaniline											
5,000.	ug/l	N.D.									
3892 4,6-dinitro-2-methylphenol											
13,000.	ug/l	N.D.									
3914 N-nitrosodiphenylamine											
100.	ug/l	N.D.									
1305 tetraethyldithiopyrophosphate											
5,000.	ug/l	N.D.									
1308 1,3,5-trinitrobenzene											
10,000.	ug/l	N.D.									
1299 phenacetin											
5,000.	ug/l	N.D.									
3869 4-bromophenylphenylether											
5,000.	ug/l	N.D.									
1313 diallate (trans/cis)											
5,000.	ug/l	N.D.									
1274 dimethoate											
10,000.	ug/l	N.D.									
3899 hexachlorobenzene											
5,000.	ug/l	N.D.									

1312 App. IX Semi-volatiles con't Batch: 98282WAG026

1269 4-aminobiphenyl											
5,000.	ug/l	N.D.									
3916 pentachlorophenol											
13,000.	ug/l	N.D.									
1302 pronamide											
5,000.	ug/l	N.D.									
1298 pentachloronitrobenzene											
5,000.	ug/l	N.D.									
3917 phenanthrene											
5,000.	ug/l	N.D.									

LLI Sample No. 3001162
West Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3859 anthracene											
5,000.	ug/l	N.D.									
3880 di-n-butylphthalate											
5,000.	ug/l	N.D.									
1289 4-nitroquinoline-1-oxide											
50,000.	ug/l	N.D.									
3368 methapyrilene											
5,000.	ug/l	N.D.									
1282 isodrin											
13,000.	ug/l	N.D.									
3897 fluoranthene											
5,000.	ug/l	N.D.									
3919 pyrene											
5,000.	ug/l	N.D.									
1275 p-(dimethylamino)azobenzene											
5,000.	ug/l	N.D.									
1272 chlorobenzilate											
10,000.	ug/l	N.D.									
1277 3,3'-dimethylbenzidine											
13,000.	ug/l	N.D.									
3870 butylbenzylphthalate											
5,000.	ug/l	N.D.									
1268 2-acetylaminofluorene											
5,000.	ug/l	N.D.									
3885 3,3'-dichlorobenzidine											
5,000.	ug/l	N.D.									
3860 benzo(a)anthracene											
5,000.	ug/l	N.D.									
3868 bis(2-ethylhexyl)phthalate											
100.	ug/l	N.D.									
3876 chrysene											
5,000.	ug/l	N.D.									
3896 di-n-octylphthalate											
5,000.	ug/l	N.D.									
1276 7,12-dimethylbenz(a)anthracene											
5,000.	ug/l	N.D.									
3861 benzo(b)fluoranthene											
5,000.	ug/l	N.D.									
3862 benzo(k)fluoranthene											
5,000.	ug/l	N.D.									
3864 benzo(a)pyrene											
5,000.	ug/l	N.D.									
1284 3-methylcholanthrene											
5,000.	ug/l	N.D.									
3903 indeno(1,2,3-cd)pyrene											
5,000.	ug/l	N.D.									
3881 dibenz(a,h)anthracene											
5,000.	ug/l	N.D.									
3863 benzo(ghi)perylene											
5,000.	ug/l	N.D.									

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001162
West Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3370 thionazin											
5,000.	ug/l	N.D.									
0445 Solvent Identification		Batch: 982670002A									
0854 n-hexane											
0.050	% by wt.										
0855 n-heptane											
0.050	% by wt.										
0856 n-octane											
0.050	% by wt.										
0857 isooctane											
0.050	% by wt.										
0858 benzene											
0.050	% by wt.										
0859 toluene											
0.050	% by wt.										
0860 ethyl benzene											
0.050	% by wt.										
0861 xylenes											
0.050	% by wt.										
0862 styrene											
0.050	% by wt.										
1120 chlorobenzene											
0.050	% by wt.										
0863 methanol											
0.050	% by wt.										
1118 n-propanol											
0.050	% by wt.										
0864 ethanol											
0.050	% by wt.										
0865 isopropanol											
0.050	% by wt.										
0866 n-butanol											
0.050	% by wt.										
0867 isobutanol											
0.050	% by wt.										
0868 acetone											
0.050	% by wt.										
0869 methyl ethyl ketone											
0.050	% by wt.										
0870 methyl isobutyl ketone											
0.050	% by wt.										
1119 cyclohexanone											
0.050	% by wt.										
0871 methyl cellosolve											
0.050	% by wt.										
0872 ethyl cellosolve											
0.050	% by wt.										

LLI Sample No. 3001162
West Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

	SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
0873 butyl cellosolve	0.050	% by wt.										
0874 cellosolve acetate	0.050	% by wt.										
0875 ethyl acetate	0.050	% by wt.										
0876 propyl acetate	0.050	% by wt.										
0877 isopropyl acetate	0.050	% by wt.										
0878 n-butyl acetate	0.050	% by wt.										
1116 ethyl ether	0.050	% by wt.										
0880 carbon tetrachloride	0.050	% by wt.										
0881 chloroform	0.050	% by wt.										
0882 methylene chloride	0.050	% by wt.										
0883 1,1-dichloroethane	0.050	% by wt.										
0884 1,2-dichloroethane	0.050	% by wt.										
0885 1,1,1-trichloroethane	0.050	% by wt.										
0886 1,1,2-trichloroethane	0.050	% by wt.										
0887 trichloroethylene	0.050	% by wt.										
0888 tetrachloroethylene	0.050	% by wt.										
0889 Freon 113	0.050	% by wt.										
1117 pyridine	0.050	% by wt.										
0466 Solvent Identification (cont.)			**Batch: 982670002A**									
0853 n-pentane	0.050	% by wt.										
4828 TPH by GC-FID in Water			**Batch: 982580008B J264**									
4829 Gasoline	40.	mg/l	N.D.									
4830 Kerosene	40.	mg/l	N.D.									
4831 Diesel/#2 Fuel	40.	mg/l	N.D.		95	95	1	91	95	4	75	125

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001162
West Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS LOW	HIGH
0173 PCBs in Water	TCX	346	39	117
	DCB	192	22	142
1309 App. IX Semivolatiles-Water	Phenol-d6	0	7	74
	2-Flphenol	0	25	88
1310 App. IX Semi-volatiles con't	Nitrobz-d5	2	47	114
	2-Fbiphnyl	0	51	106
	Tphenyld14	1	37	119
4828 TPH by GC-FID in Water	Chlorobenz	(5)	50	120
	o-Terpheny	(5)	75	135

(5) Accurate surrogate recoveries could not be determined due to interferences or dilution necessary for this sample.

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001163
Collected: 9/15/98 at 18:25 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products
SOUTS SDG#: LBG01-03*

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
0173	PCBs in Water			See Page 2
0893	Semivolatile Library Search			See Page 13
	The results from the semivolatile library search are listed on the attached FORM 1F - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form. An "X" indicates an isomer of the listed compound.			
1309	App. IX Semivolatiles-Water			See Page 3
1310	App. IX Semi-volatiles con't			See Page 5
1311	App. IX Semi-volatiles con't			See Page 6
1312	App. IX Semi-volatiles con't			See Page 7
0445	Solvent Identification			See Page 9
0466	Solvent Identification (cont.)			See Page 11
4828	TPH by GC-FID in Water			See Page 15
9188	Total Hydrocarbons as n-Hexane	N.D.	2,000.	ppm
	The reported value for total hydrocarbons as n-hexane represents total volatile organic material detected by the solvent screen conditions for the range of C5 (n-pentane) through C10 (n-decane) normal hydrocarbons.			

1 COPY TO Leggette,Brashears & Graham MN ATTN: Mr. Ken Vogel
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300
19:36:43 D 0002 3 135779 632339
885 0.00 00085400 ASR000

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL

LLI Sample No. WW 3001163
Collected: 9/15/98 at 18:25 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products
SOUTS SDG#: LBG01-03*

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
PCBs in Water				
0639	PCB-1016	N.D.	1,000.	ug/l
0640	PCB-1221	N.D.	1,000.	ug/l
0641	PCB-1232	N.D.	1,000.	ug/l
0642	PCB-1242	N.D.	1,000.	ug/l
0643	PCB-1248	N.D.	1,000.	ug/l
0644	PCB-1254	N.D.	1,000.	ug/l
0645	PCB-1260	N.D.	1,000.	ug/l

Due to interfering peaks on the chromatogram, the values reported represent the lowest quantitation limits obtainable.
Despite numerous cleanup methods, we were unable to reach our usual quantitation limits.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001163
Collected: 9/15/98 at 18:25 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products
SOUTS SDG#: LBG01-03*

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

App. IX Semivolatiles-Water

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
3920	pyridine	N.D.	1,000.	ug/l
3913	N-nitrosodimethylamine	N.D.	1,000.	ug/l
1301	2-picoline	N.D.	1,000.	ug/l
1292	N-nitrosomethylethylamine	N.D.	1,000.	ug/l
1285	methylmethanesulfonate	N.D.	1,000.	ug/l
1291	N-nitrosodiethylamine	N.D.	1,000.	ug/l
1279	ethylmethanesulfonate	N.D.	1,000.	ug/l
3918	phenol	N.D.	1,000.	ug/l
0925	aniline	N.D.	1,000.	ug/l
3867	bis(2-chloroethyl)ether	N.D.	1,000.	ug/l
3874	2-chlorophenol	N.D.	1,000.	ug/l
3883	1,3-dichlorobenzene	N.D.	1,000.	ug/l
3884	1,4-dichlorobenzene	N.D.	1,000.	ug/l
3865	benzylalcohol	N.D.	2,000.	ug/l
3882	1,2-dichlorobenzene	N.D.	1,000.	ug/l
3877	2-methylphenol	N.D.	1,000.	ug/l
1271	bis(2-chloroisopropyl)ether	N.D.	1,000.	ug/l
3878	3- and 4-methylphenol	N.D.	1,000.	ug/l
1295	N-nitrosopyrrolidine	N.D.	1,000.	ug/l
1267	acetophenone	N.D.	1,000.	ug/l
1293	N-nitrosomorpholine	N.D.	1,000.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.	1,000.	ug/l
1306	o-toluidine	N.D.	1,000.	ug/l
3902	hexachloroethane	N.D.	1,000.	ug/l
3910	nitrobenzene	N.D.	1,000.	ug/l
1294	N-nitrosopiperidine	N.D.	1,000.	ug/l
3904	isophorone	N.D.	1,000.	ug/l
3911	2-nitrophenol	N.D.	1,000.	ug/l

Aramite is not reported due to unavailability of a suitable standard.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER

LLI Sample No. WW 3001163
Collected: 9/15/98 at 18:25 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products
SOUTS SDG#: LBG01-03*

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS

App. IX Semivolatiles-Water

The QC limits for the following compounds are advisory only until sufficient data points can be obtained to calculate statistical limits:
1,3,5-Trinitrobenzene
1,4-Naphthalene
1,4-Phenylenediamine
2-Acetylaminofluorene
Hexachlorophene
4-Nitroquinoline-1-oxide
5-Nitro-o-toluidine

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001163
Collected: 9/15/98 at 18:25 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products
SOUTS SDG#: LBG01-03*

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
App. IX Semi-volatiles con't				
3890	2,4-dimethylphenol	N.D.	1,000.	ug/l
3866	bis(2-chloroethoxy)methane	N.D.	1,000.	ug/l
1307	0,0,0-triethylphosphorothioate	N.D.	1,000.	ug/l
3886	2,4-dichlorophenol	N.D.	1,000.	ug/l
3921	1,2,4-trichlorobenzene	N.D.	1,000.	ug/l
3906	naphthalene	N.D.	1,000.	ug/l
1273	2,6-dichlorophenol	N.D.	1,000.	ug/l
3871	4-chloroaniline	N.D.	1,000.	ug/l
1281	hexachloropropene	N.D.	1,000.	ug/l
3900	hexachlorobutadiene	N.D.	1,000.	ug/l
1300	1,4-phenylenediamine	N.D.	20,000.	ug/l
1290	N-nitrosodi-n-butylamine	N.D.	1,000.	ug/l
3872	4-chloro-3-methylphenol	N.D.	1,000.	ug/l
1303	safrole	N.D.	1,000.	ug/l
3905	2-methylnaphthalene	N.D.	1,000.	ug/l
1304	1,2,4,5-tetrachlorobenzene	N.D.	1,000.	ug/l
3901	hexachlorocyclopentadiene	N.D.	2,500.	ug/l
3923	2,4,6-trichlorophenol	N.D.	1,000.	ug/l
3922	2,4,5-trichlorophenol	N.D.	1,000.	ug/l
1283	isosafrole	N.D.	1,000.	ug/l
3873	2-chloronaphthalene	N.D.	1,000.	ug/l
3907	2-nitroaniline	N.D.	1,000.	ug/l
1286	1,4-naphthoquinone	N.D.	10,000.	ug/l
3891	dimethylphthalate	N.D.	1,000.	ug/l
1278	1,3-dinitrobenzene	N.D.	1,000.	ug/l
3895	2,6-dinitrotoluene	N.D.	1,000.	ug/l

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

LLI Sample No. WW 3001163
Collected: 9/15/98 at 18:25 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products
SOUTS SDG#: LBG01-03*

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
App. IX Semi-volatiles con't				
3858	acenaphthylene	N.D.	1,000.	ug/l
3908	3-nitroaniline	N.D.	1,000.	ug/l
3857	acenaphthene	N.D.	1,000.	ug/l
3893	2,4-dinitrophenol	N.D.	5,000.	ug/l
3912	4-nitrophenol	N.D.	5,000.	ug/l
3879	dibenzofuran	N.D.	1,000.	ug/l
1297	pentachlorobenzene	N.D.	1,000.	ug/l
3894	2,4-dinitrotoluene	N.D.	1,000.	ug/l
1287	1-naphthylamine	N.D.	1,000.	ug/l
1288	2-naphthylamine	N.D.	1,000.	ug/l
0438	2,3,4,6-Tetrachlorophenol	N.D.	1,000.	ug/l
3887	diethylphthalate	N.D.	1,000.	ug/l
3875	4-chlorophenylphenylether	N.D.	1,000.	ug/l
3898	fluorene	N.D.	1,000.	ug/l
1296	5-nitro-o-toluidine	N.D.	1,000.	ug/l
3909	4-nitroaniline	N.D.	1,000.	ug/l
3892	4,6-dinitro-2-methylphenol	N.D.	2,500.	ug/l
3914	N-nitrosodiphenylamine	N.D.	1,000.	ug/l
1305	tetraethyldithiopyrophosphate	N.D.	1,000.	ug/l
1308	1,3,5-trinitrobenzene	N.D.	2,000.	ug/l
1299	phenacetin	N.D.	1,000.	ug/l
3869	4-bromophenylphenylether	N.D.	1,000.	ug/l
1313	diallate (trans/cis)	N.D.	1,000.	ug/l
1274	dimethoate	N.D.	2,000.	ug/l
3899	hexachlorobenzene	N.D.	1,000.	ug/l

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

LLI Sample No. WW 3001163
Collected: 9/15/98 at 18:25 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products
SOUTS SDG#: LBG01-03*

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
App. IX Semi-volatiles con't				
1269	4-aminobiphenyl	N.D.	1,000.	ug/l
3916	pentachlorophenol	N.D.	2,500.	ug/l
1302	pronamide	N.D.	1,000.	ug/l
1298	pentachloronitrobenzene	N.D.	1,000.	ug/l
3917	phenanthrene	N.D.	1,000.	ug/l
3859	anthracene	N.D.	1,000.	ug/l
3880	di-n-butylphthalate	N.D.	1,000.	ug/l
1289	4-nitroquinoline-1-oxide	N.D.	10,000.	ug/l
3368	methapyrilene	N.D.	1,000.	ug/l
1282	isodrin	N.D.	2,500.	ug/l
3897	fluoranthene	N.D.	1,000.	ug/l
3919	pyrene	N.D.	1,000.	ug/l
1275	p-(dimethylamino)azobenzene	N.D.	1,000.	ug/l
1272	chlorobenzilate	N.D.	2,000.	ug/l
1277	3,3'-dimethylbenzidine	N.D.	2,500.	ug/l
3870	butylbenzylphthalate	N.D.	1,000.	ug/l
1268	2-acetylaminofluorene	N.D.	1,000.	ug/l
3885	3,3'-dichlorobenzidine	N.D.	1,000.	ug/l
3860	benzo(a)anthracene	N.D.	1,000.	ug/l
3868	bis(2-ethylhexyl)phthalate	N.D.	1,000.	ug/l
3876	chrysene	N.D.	1,000.	ug/l
3896	di-n-octylphthalate	N.D.	1,000.	ug/l
1276	7,12-dimethylbenz(a)anthracene	N.D.	1,000.	ug/l
3861	benzo(b)fluoranthene	N.D.	1,000.	ug/l
3862	benzo(k)fluoranthene	N.D.	1,000.	ug/l
3864	benzo(a)pyrene	N.D.	1,000.	ug/l
1284	3-methylcholanthrene	N.D.	1,000.	ug/l
3903	indeno(1,2,3-cd)pyrene	N.D.	1,000.	ug/l
3881	dibenz(a,h)anthracene	N.D.	1,000.	ug/l
3863	benzo(ghi)perylene	N.D.	1,000.	ug/l
3370	thionazin	N.D.	1,000.	ug/l

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER

LLI Sample No. WW 3001163
Collected: 9/15/98 at 18:25 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products
SOUTS SDG#: LBG01-03*

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W. Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS

App. IX Semi-volatiles con't

The quantitation limits for the GC/MS semivolatile compounds were raised due to the high concentration of non-target compounds.

Due to insufficient sample, the quantitation limits for the GC/MS semivolatile compounds were raised.

The usual quantitation limits could not be attained due to the matrix of the sample or interferences observed in the GC/MS semivolatile analysis.

Batch QC was not extracted with this sample.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001163
Collected: 9/15/98 at 18:25 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products
SOUTS SDG#: LBG01-03*

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
Solvent Identification				
0854	n-hexane	N.D.	0.050	% by wt.
0855	n-heptane	N.D.	0.050	% by wt.
0856	n-octane	N.D.	0.050	% by wt.
0857	isooctane	N.D.	0.050	% by wt.
0858	benzene	N.D.	0.050	% by wt.
0859	toluene	N.D.	0.050	% by wt.
0860	ethyl benzene	N.D.	0.050	% by wt.
0861	xylenes	N.D.	0.050	% by wt.
0862	styrene	N.D.	0.050	% by wt.
1120	chlorobenzene	N.D.	0.050	% by wt.
0863	methanol	N.D.	0.050	% by wt.
1118	n-propanol	N.D.	0.050	% by wt.
0864	ethanol	N.D.	0.050	% by wt.
0865	isopropanol	N.D.	0.050	% by wt.
0866	n-butanol	N.D.	0.050	% by wt.
0867	isobutanol	N.D.	0.050	% by wt.
0868	acetone	N.D.	0.050	% by wt.
0869	methyl ethyl ketone	N.D.	0.050	% by wt.
0870	methyl isobutyl ketone	N.D.	0.050	% by wt.
1119	cyclohexanone	N.D.	0.050	% by wt.
0871	methyl cellosolve	N.D.	0.050	% by wt.
0872	ethyl cellosolve	N.D.	0.050	% by wt.
0873	butyl cellosolve	N.D.	0.050	% by wt.
0874	cellosolve acetate	N.D.	0.050	% by wt.
0875	ethyl acetate	N.D.	0.050	% by wt.
0876	propyl acetate	N.D.	0.050	% by wt.
0877	isopropyl acetate	N.D.	0.050	% by wt.
0878	n-butyl acetate	N.D.	0.050	% by wt.
1116	ethyl ether	N.D.	0.050	% by wt.
0880	carbon tetrachloride	N.D.	0.050	% by wt.
0881	chloroform	N.D.	0.050	% by wt.
0882	methylene chloride	N.D.	0.050	% by wt.
0883	1,1-dichloroethane	N.D.	0.050	% by wt.
0884	1,2-dichloroethane	N.D.	0.050	% by wt.
0885	1,1,1-trichloroethane	N.D.	0.050	% by wt.
0886	1,1,2-trichloroethane	N.D.	0.050	% by wt.
0887	trichloroethylene	N.D.	0.050	% by wt.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001163
Collected: 9/15/98 at 18:25 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products
SOUTS SDG#: LBG01-03*

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
Solvent Identification				
0888	tetrachloroethylene	N.D.	0.050	% by wt.
0889	Freon 113	N.D.	0.050	% by wt.
1117	pyridine	N.D.	0.050	% by wt.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001163
Collected: 9/15/98 at 18:25 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products
SOUTS SDG#: LBG01-03*

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W. Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
Solvent Identification (cont.)				
0853	n-pentane	N.D.	0.050	% by wt.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL

LLI Sample No. WW 3001163
Collected: 9/15/98 at 18:25 by DO

Submitted: 9/17/98 Reported: 10/21/98
Discard: 12/21/98

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products
SOUTS SDG#: LBG01-03*

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W, Ste. 700
St. Paul, MN 55112

P.O. 3CHRY4/DAYTON
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS
TPH by GC-FID in Water				
4829	Gasoline	N.D.	2,000.	mg/l
4830	Kerosene	N.D.	2,000.	mg/l
4831	Diesel/#2 Fuel	5,500.	2,000.	mg/l

The quantitation limits were raised because sample dilution was necessary to bring target compounds into the calibration range of the system.
See attached fingerprint comment.

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

 1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SOUTS

Lab Name: LANCASTER LABS Contract: _____.
Lab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) WATER Lab Sample ID: 3001163
Sample wt/vol: 500 (g/mL) ML Lab File ID: >LJ267
Level: (low/med) LOW Date Received: 09/17/98
% Moisture: not dec. _____. dec. _____. Date Extracted: 10/09/98
Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/12/98
GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 250.0

CONCENTRATION UNITS:
Number TICs found: 50 (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	14.83	5300.	J
2.		Unknown alkane	16.31	4200.	J
3.		Unknown	16.56	3300.	J
4.		Unknown	16.83	13000.	J
5.		Unknown alkane	17.02	3600.	J
6.		Unknown	17.28	9800.	J
7.		Unknown	17.54	9600.	J
8.		Unknown	17.65	9900.	J
9.		Unknown	17.90	99000.	J
10.		Unknown	17.98	300000.	J
11.		Unknown	18.14	3000.	J
12.	19780348	Tridecane, 3-methylene-	18.33	91000.	J
13.		Unknown	18.73	6900000.	J
14.		Unknown	18.88	27000.	J
15.		Unknown	19.04	17000.	J
16.		Unknown	19.32	12000.	J
17.		Unknown alkane	19.54	83000.	J
18.		Unknown	19.85	20000.	J
19.		Unknown	19.98	68000.	J
20.		Unknown	20.09	22000.	J
21.		Unknown	20.37	30000.	J
22.		Unknown	20.61	9300.	J
23.		Unknown	20.76	25000.	J
24.		Unknown	20.87	12000.	J
25.		Unknown	20.98	26000.	J
26.		Unknown alkane	21.17	31000.	J
27.		Unknown	21.37	11000.	J
28.		Unknown	21.47	72000.	J
29.		Unknown	21.61	70000.	J
30.		Unknown	21.89	18000.	J

FORM I SV-TIC 1/87 Rev.

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

Lancaster Laboratories
A division of Thermo Analytical Inc.

 1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SOUTS

Lab Name: LANCASTER LABS Contract: _____.
Lab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) WATER Lab Sample ID: 3001163
Sample wt/vol: 500 (g/mL) ML Lab File ID: >LJ267
Level: (low/med) LOW Date Received: 09/17/98
% Moisture: not dec. _____. dec. _____. Date Extracted: 10/09/98
Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/12/98
GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 250.0
CONCENTRATION UNITS:
Number TICs found: 50 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
31.	Unknown alkane	22.39	49000.	J
32.	Unknown	22.52	28000.	J
33.	Unknown	22.70	21000.	J
34.	Unknown	22.81	13000.	J
35.	Unknown alkane	23.21	66000.	J
36.	Unknown	23.53	14000.	J
37.	Unknown	24.11	8800.	J
38.	Unknown	24.20	21000.	J
39.	Unknown alkane	24.49	16000.	J
40.	Unknown alkane	24.58	24000.	J
41.	Unknown	25.48	8500.	J
42.	Unknown alkane	25.64	5400.	J
43.	Unknown alkane	25.77	3200.	J
44.	Unknown	26.24	6200.	J
45.	Unknown	27.29	3800.	J
46.	Unknown	30.34	4000.	J
47.	Unknown	31.19	3500.	J
48.	Unknown	31.31	3300.	J
49.	Unknown	32.66	4000.	J
50.	Unknown	33.98	3900.	J

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER ACIL

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products

ANALYSIS: 4828

The GC Fingerprint for this sample indicates a complex mixture of petroleum based and nonpetroleum organic materials. The overall sample fingerprint elutes throughout the range C10 (n-decane) through C40 (n-tetracontane) normal hydrocarbons and consists primarily of two distinct unresolved regions. The early eluting (more volatile) region elutes in the C10 - C20 (n-eicosane) range. This region is primarily unresolved; however, the overall pattern is a fairly good match for our #2 fuel oil reference pattern. Additionally, a large single component peak, which is not present in the fuel reference pattern, elutes just prior to C14 (n-tetradecane). This region, including the component peak, accounts for approximately 90%, by weight, of the total organic content of the sample. The later eluting (less volatile) region elutes in the C20 - C40 range and is also unresolved. This region accounts for approximately 10%, by weight, of the total organic content of the sample. The unresolved nature of the two regions is typical of lubricating oil fractions analyzed by this method. However, the presence of fuel components indicates a complex mixture of lubricating oil fractions with volatile and semi-volatile components that are typical of diesel/#2 and heavier weight, residual fuel oil fractions.

For the purpose of quantitation, we base total area response of the sample pattern(s) on our #2 fuel oil reference standard response. When we calculate total sample area eluting in the C8 (n-octane) through C40 normal hydrocarbon range as petroleum distillate/product (#2 fuel oil), it is present at 5,500 mg/l in the sample.

The GC Fingerprint for this sample was compared to the fingerprint for LL 3001161, a client submitted reference material. The overall sample fingerprint is a good match for LL 3001161. The relative ratios of the distinct regions are significantly different from the reference fingerprint. The single peak eluting just before C14 is a retention time match for the single component in LL 3001161.

Consider the quantitation an approximation due to the differences between the sample pattern(s) and the reference patterns.

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3001163
Collected: 09/15/98 at 18:25 by DO

Submitted: 09/17/98

Account No: 10108
Leggette,Brashears & Graham MN

1210 County Rd. E W. Ste. 700
St. Paul, MN 55112

South Sump Grab Water Sample

Chrysler - Dayton Thermal Products
SOUTS SDG#: LBG01-03*

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
0173	PCBs in Water	SW-846 8082	1		09/24/98 2249	Michael Kielb
0817	Water Sample Pest. Extraction	SW-846 3510C	1		09/22/98 1515	Lee L. Munro
0813	BNA Water Extraction	SW-846 3510C	1		09/18/98 0830	Maria A. Davenport
1309	App. IX Semivolatiles-Water	SW-846 8270C	1		10/12/98 1532	Mark A. Ratcliff
1310	App. IX Semi-volatiles con't	SW-846 8270C	1		10/12/98 1532	Mark A. Ratcliff
1311	App. IX Semi-volatiles con't	SW-846 8270C	1		10/12/98 1532	Mark A. Ratcliff
1312	App. IX Semi-volatiles con't	SW-846 8270C	1		10/12/98 1532	Mark A. Ratcliff
0445	Solvent Identification	SW-846 8015B modified	1		09/24/98 1431	Tracy A. McNickle
0466	Solvent Identification (cont.)	SW-846 8015B modified	1		09/24/98 1431	Tracy A. McNickle
2376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1		09/18/98 0930	Maria A. Davenport
4828	TPH by GC-FID in Water	SW-846 8015B, modified	1		09/22/98 1211	Robert G. Brown
9188	Total Hydrocarbons as n-Hexane	SW-846 8015B			09/24/98 1507	Tracy A. McNickle

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001163
South Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
0173 PCBs in Water		Batch: 982650008A									
0639 PCB-1016											
1.000.	ug/l	N.D.		89	88	1	85	87		43	126
0640 PCB-1221											
1.000.	ug/l	N.D.									
0641 PCB-1232											
1.000.	ug/l	N.D.									
0642 PCB-1242											
1.000.	ug/l	N.D.									
0643 PCB-1248											
1.000.	ug/l	N.D.									
0644 PCB-1254											
1.000.	ug/l	N.D.									
0645 PCB-1260											
1.000.	ug/l	N.D.		95	94	1	90	92		51	126
1309 App. IX Semivolatiles-Water		Batch: 98282WAG026									
3920 pyridine											
1.000.	ug/l	N.D.									
3913 N-nitrosodimethylamine											
1.000.	ug/l	N.D.									
1301 2-picoline											
1.000.	ug/l	N.D.									
1292 N-nitrosomethylethylamine											
1.000.	ug/l	N.D.									
1285 methylmethanesulfonate											
1.000.	ug/l	N.D.									
1291 N-nitrosodiethylamine											
1.000.	ug/l	N.D.									
1279 ethylmethanesulfonate											
1.000.	ug/l	N.D.									
3918 phenol											
1.000.	ug/l	N.D.									
0925 aniline											
1.000.	ug/l	N.D.									
3867 bis(2-chloroethyl)ether											
1.000.	ug/l	N.D.									
3874 2-chlorophenol											
1.000.	ug/l	N.D.									
3883 1,3-dichlorobenzene											
1.000.	ug/l	N.D.									
3884 1,4-dichlorobenzene											
1.000.	ug/l	N.D.									
3865 benzylalcohol											
2.000.	ug/l	N.D.									
3882 1,2-dichlorobenzene											
1.000.	ug/l	N.D.									

LLI Sample No. 3001163
South Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3877 2-methylphenol											
1,000.	ug/l	N.D.									
1271 bis(2-chloroisopropyl)ether											
1,000.	ug/l	N.D.									
3878 3- and 4-methylphenol											
1,000.	ug/l	N.D.									
1295 N-nitrosopyrrolidine											
1,000.	ug/l	N.D.									
1267 acetophenone											
1,000.	ug/l	N.D.									
1293 N-nitrosomorpholine											
1,000.	ug/l	N.D.									
3915 N-nitrosodi-n-propylamine											
1,000.	ug/l	N.D.									
1306 o-toluidine											
1,000.	ug/l	N.D.									
3902 hexachloroethane											
1,000.	ug/l	N.D.									
3910 nitrobenzene											
1,000.	ug/l	N.D.									
1294 N-nitrosopiperidine											
1,000.	ug/l	N.D.									
3904 isophorone											
1,000.	ug/l	N.D.									
3911 2-nitrophenol											
1,000.	ug/l	N.D.									
1310 App. IX Semi-volatiles con't		Batch: 98282WAG026									
3890 2,4-dimethylphenol											
1,000.	ug/l	N.D.									
3866 bis(2-chloroethoxy)methane											
1,000.	ug/l	N.D.									
1307 0,0,0-triethylphosphorothioate											
1,000.	ug/l	N.D.									
3886 2,4-dichlorophenol											
1,000.	ug/l	N.D.									
3921 1,2,4-trichlorobenzene											
1,000.	ug/l	N.D.									
3906 naphthalene											
1,000.	ug/l	N.D.									
1273 2,6-dichlorophenol											
1,000.	ug/l	N.D.									
3871 4-chloroaniline											
1,000.	ug/l	N.D.									
1281 hexachloropropene											
1,000.	ug/l	N.D.									
3900 hexachlorobutadiene											
1,000.	ug/l	N.D.									

LLI Sample No. 3001163
South Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
1300 1,4-phenylenediamine											
20,000.	ug/l	N.D.									
1290 N-nitrosodi-n-butylamine											
1,000.	ug/l	N.D.									
3872 4-chloro-3-methylphenol											
1,000.	ug/l	N.D.									
1303 safrole											
1,000.	ug/l	N.D.									
3905 2-methylnaphthalene											
1,000.	ug/l	N.D.									
1304 1,2,4,5-tetrachlorobenzene											
1,000.	ug/l	N.D.									
3901 hexachlorocyclopentadiene											
2,500.	ug/l	N.D.									
3923 2,4,6-trichlorophenol											
1,000.	ug/l	N.D.									
3922 2,4,5-trichlorophenol											
1,000.	ug/l	N.D.									
1283 isosafrole											
1,000.	ug/l	N.D.									
3873 2-chloronaphthalene											
1,000.	ug/l	N.D.									
3907 2-nitroaniline											
1,000.	ug/l	N.D.									
1286 1,4-naphthoquinone											
10,000.	ug/l	N.D.									
3891 dimethylphthalate											
1,000.	ug/l	N.D.									
1278 1,3-dinitrobenzene											
1,000.	ug/l	N.D.									
3895 2,6-dinitrotoluene											
1,000.	ug/l	N.D.									

1311 App. IX Semi-volatiles con't Batch: 98282WAG026

3858 acenaphthylene											
1,000.	ug/l	N.D.									
3908 3-nitroaniline											
1,000.	ug/l	N.D.									
3857 acenaphthene											
1,000.	ug/l	N.D.									
3893 2,4-dinitrophenol											
5,000.	ug/l	N.D.									
3912 4-nitrophenol											
5,000.	ug/l	N.D.									
3879 dibenzofuran											
1,000.	ug/l	N.D.									
1297 pentachlorobenzene											
1,000.	ug/l	N.D.									

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001163
South Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS		BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3894 2,4-dinitrotoluene												
1.000.	ug/l		N.D.									
1287 1-naphthylamine												
1.000.	ug/l		N.D.									
1288 2-naphthylamine												
1.000.	ug/l		N.D.									
0438 2,3,4,6-Tetrachlorophenol												
1.000.	ug/l		N.D.									
3887 diethylphthalate												
1.000.	ug/l		N.D.									
3875 4-chlorophenylphenylether												
1.000.	ug/l		N.D.									
3898 fluorene												
1.000.	ug/l		N.D.									
1296 5-nitro-o-toluidine												
1.000.	ug/l		N.D.									
3909 4-nitroaniline												
1.000.	ug/l		N.D.									
3892 4,6-dinitro-2-methylphenol												
2.500.	ug/l		N.D.									
3914 N-nitrosodiphenylamine												
1.000.	ug/l		N.D.									
1305 tetraethyldithiopyrophosphate												
1.000.	ug/l		N.D.									
1308 1,3,5-trinitrobenzene												
2.000.	ug/l		N.D.									
1299 phenacetin												
1.000.	ug/l		N.D.									
3869 4-bromophenylphenylether												
1.000.	ug/l		N.D.									
1313 diallate (trans/cis)												
1.000.	ug/l		N.D.									
1274 dimethoate												
2.000.	ug/l		N.D.									
3899 hexachlorobenzene												
1.000.	ug/l		N.D.									
1312 App. IX Semi-volatiles con't		Batch: 98282WAG026										
1269 4-aminobiphenyl												
1.000.	ug/l		N.D.									
3916 pentachlorophenol												
2.500.	ug/l		N.D.									
1302 pronamide												
1.000.	ug/l		N.D.									
1298 pentachloronitrobenzene												
1.000.	ug/l		N.D.									
3917 phenanthrene												
1.000.	ug/l		N.D.									

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001163
South Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3859 anthracene											
1.000.	ug/l	N.D.									
3880 di-n-butylphthalate											
1.000.	ug/l	N.D.									
1289 4-nitroquinoline-1-oxide											
10.000.	ug/l	N.D.									
3368 methapyrilene											
1.000.	ug/l	N.D.									
1282 isodrin											
2.500.	ug/l	N.D.									
3897 fluoranthene											
1.000.	ug/l	N.D.									
3919 pyrene											
1.000.	ug/l	N.D.									
1275 p-(dimethylamino)azobenzene											
1.000.	ug/l	N.D.									
1272 chlorobenzilate											
2.000.	ug/l	N.D.									
1277 3,3'-dimethylbenzidine											
2.500.	ug/l	N.D.									
3870 butylbenzylphthalate											
1.000.	ug/l	N.D.									
1268 2-acetylaminofluorene											
1.000.	ug/l	N.D.									
3885 3,3'-dichlorobenzidine											
1.000.	ug/l	N.D.									
3860 benzo(a)anthracene											
1.000.	ug/l	N.D.									
3868 bis(2-ethylhexyl)phthalate											
1.000.	ug/l	N.D.									
3876 chrysene											
1.000.	ug/l	N.D.									
3896 di-n-octylphthalate											
1.000.	ug/l	N.D.									
1276 7,12-dimethylbenz(a)anthracene											
1.000.	ug/l	N.D.									
3861 benzo(b)fluoranthene											
1.000.	ug/l	N.D.									
3862 benzo(k)fluoranthene											
1.000.	ug/l	N.D.									
3864 benzo(a)pyrene											
1.000.	ug/l	N.D.									
1284 3-methylcholanthrene											
1.000.	ug/l	N.D.									
3903 indeno(1,2,3-cd)pyrene											
1.000.	ug/l	N.D.									
3881 dibenz(a,h)anthracene											
1.000.	ug/l	N.D.									
3863 benzo(ghi)perylene											
1.000.	ug/l	N.D.									

MEMBER ACIL

LLI Sample No. 3001163
South Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3370 thionazin											
1.000.	ug/l	N.D.									
0445 Solvent Identification		Batch: 982670002A									
0854 n-hexane											
0.050	% by wt.										
0855 n-heptane											
0.050	% by wt.										
0856 n-octane											
0.050	% by wt.										
0857 isooctane											
0.050	% by wt.										
0858 benzene											
0.050	% by wt.										
0859 toluene											
0.050	% by wt.										
0860 ethyl benzene											
0.050	% by wt.										
0861 xylenes											
0.050	% by wt.										
0862 styrene											
0.050	% by wt.										
1120 chlorobenzene											
0.050	% by wt.										
0863 methanol											
0.050	% by wt.										
1118 n-propanol											
0.050	% by wt.										
0864 ethanol											
0.050	% by wt.										
0865 isopropanol											
0.050	% by wt.										
0866 n-butanol											
0.050	% by wt.										
0867 isobutanol											
0.050	% by wt.										
0868 acetone											
0.050	% by wt.										
0869 methyl ethyl ketone											
0.050	% by wt.										
0870 methyl isobutyl ketone											
0.050	% by wt.										
1119 cyclohexanone											
0.050	% by wt.										
0871 methyl cellosolve											
0.050	% by wt.										
0872 ethyl cellosolve											
0.050	% by wt.										

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001163
South Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SAMPLE LOQ	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
0873 butyl cellosolve											
0.050	% by wt.										
0874 cellosolve acetate											
0.050	% by wt.										
0875 ethyl acetate											
0.050	% by wt.										
0876 propyl acetate											
0.050	% by wt.										
0877 isopropyl acetate											
0.050	% by wt.										
0878 n-butyl acetate											
0.050	% by wt.										
1116 ethyl ether											
0.050	% by wt.										
0880 carbon tetrachloride											
0.050	% by wt.										
0881 chloroform											
0.050	% by wt.										
0882 methylene chloride											
0.050	% by wt.										
0883 1,1-dichloroethane											
0.050	% by wt.										
0884 1,2-dichloroethane											
0.050	% by wt.										
0885 1,1,1-trichloroethane											
0.050	% by wt.										
0886 1,1,2-trichloroethane											
0.050	% by wt.										
0887 trichloroethylene											
0.050	% by wt.										
0888 tetrachloroethylene											
0.050	% by wt.										
0889 Freon 113											
0.050	% by wt.										
1117 pyridine											
0.050	% by wt.										
0466 Solvent Identification (cont.)		Batch: 982670002A									
0853 n-pentane											
0.050	% by wt.										
4828 TPH by GC-FID in Water		Batch: 982580008B J264									
4829 Gasoline											
2,000.	mg/l	N.D.									
4830 Kerosene											
2,000.	mg/l	N.D.									
4831 Diesel/#2 Fuel											
2,000.	mg/l	N.D.		95	95	1	91	95	4	75	125

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 3001163
South Sump Grab Water Sample

Chrysler - Dayton Thermal Products

Group No. 632339
Leggette,Brashears & Graham MN

SURROGATE SUMMARY

	TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS LOW	HIGH
0173 PCBs in Water		TCX	353	39	117
		DCB	219	22	142
1309 App. IX Semivolatiles-Water		Phenol-d6	(5)	7	74
		2-Flphenol	(5)	25	88
		2,4,6-TBP	(5)	34	125
1310 App. IX Semi-volatiles con't		Nitrobz-d5	(5)	47	114
		2-Fbiphnyl	(5)	51	106
		Tphenyld14	(5)	37	119
4828 TPH by GC-FID in Water		Chlorobenz	(5)	50	120
		o-Terpheny	(5)	75	135

(5) Accurate surrogate recoveries could not be determined due to interferences or dilution necessary for this sample.

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories
A division of Thermo Analytical Inc.

Air bill # 808219674954

For Lancaster Laboratories use only
Acct. # 10103 Sample # 300116 1-6.3

Please print. Instructions on reverse side correspond with circled numbers.

(1)
Client: Dayton Thermal Products Acct. #: 6326
Project Name/#: 3CHRY4 / DAYTON PWSID #:
Project Manager: Ken Vogel P.O.#
Sampler: Anne B. Olson / [illegible] Quote #:
Name of state where samples were collected: OHIO

For lab use only
FSC:
SCR #: 11160038

(2) (3) (4) (5)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water (Potable ☐ NPDES ☐)	Other	Total # of Containers	4829 TPH Ice	173 PCB	445 Sol Scr	174 PCB	2535 GCFP				Remarks	Temperature of samples upon receipt (if requested)
SVE-11	9/15/98	18:15	X				X	2			X	X	X				Product	
West Sump	9/15/98	18:00	X			X		5	X	X	X						Trace Product	
South Sump	9/15/98	18:25	X			X		6	X	X	X						Trace Product	
																	Leggette, Brashears & Graham	
																	1210 W. Co Rd. E	
																	St. Paul, MN. 55112	

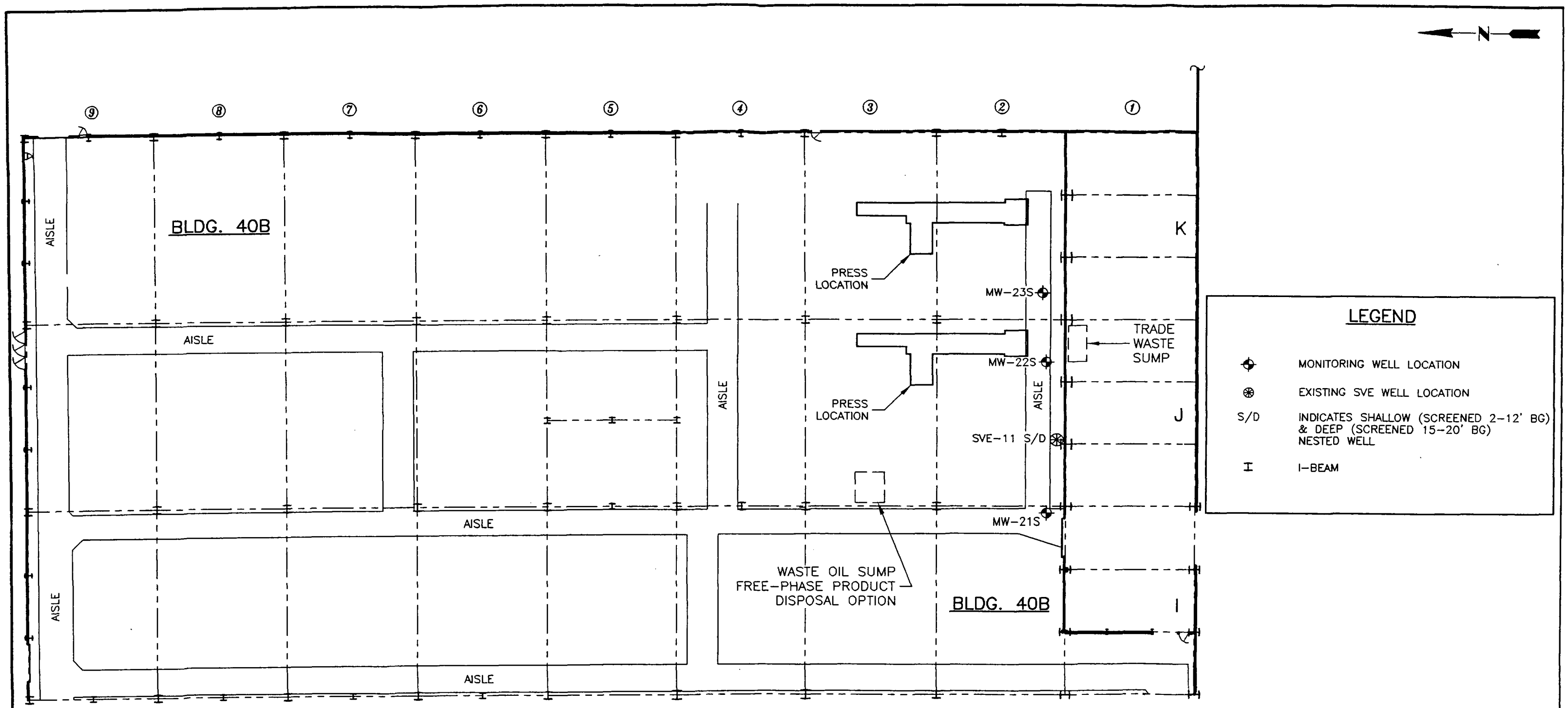
(7) **Turnaround Time Requested** (TAT) (please circle): (Normal) Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone (Fax)
Phone #: 651-490-1405 Fax #: 651-490-1006

(8) **Data Package Options** (please circle if requested)
QC Summary Type VI (Raw Data)
Type I (Tier I) GLP
Type II (Tier II) Other
Type III (NJ Red. Del.)
Type IV (CLP)

SDG Complete? Yes No

Site-specific QC required? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal Chain of Custody required? Yes No

Relinquished by:	Date	Time	Received by:	Date	Time
MHufford	9-25-98	1355			
Anne B. Olson	9/16/98	10:00			
			Received by: [signature]	9/16/98	0900



0 30
SCALE IN FEET

DATE	REVISED

Prepared By:
LEGGETTE, BRASHEARS & GRAHAM, INC.
Professional Ground-Water and Environmental Services
Northpark Corporate Center
1210 W. County Road E, Suite 700
St. Paul, MN 55112
(651) 490-1405

DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

FREE-PHASE PRODUCT DISPOSAL

FILE: 3CHDA080.DWG | DATE: JULY 1999 | FIGURE: 1

EPA Region 5 Records Ctr.
349871

Quanterra Incorporated
4101 Shuffel Drive, NW
North Canton, Ohio 44720

330 497-9396 Telephone
330 497-0772 Fax

Quanterra
Environmental Services

ENTERED IN DATABASE
BY DATE DVS 12/22/97
CHECKED BY KMD
DATE 1/4/98

RFA 97-328-T
SDG 328C

ANALYTICAL REPORT

PROJECT NO. SC001

DAYTON THERMAL

Lot #: A7K210187

Cathy Dover

Compuchem Environmental

QUANTERRA INCORPORATED

Jeffrey Smith / R. Stout
Jeffrey C. Smith
Project Manager

December 17, 1997

CASE NARRATIVE

The following report contains the analytical results for seven solid and two water samples submitted to Quanterra-North Canton by Compuchem Environmental from the Dayton Thermal Site, project number SC001. The samples were received November 21, 1997, according to documented sample acceptance procedures.

Quanterra-North Canton utilizes only USEPA approved methods and instrumentation in all analytical work. The samples presented in this report were analyzed for the parameters listed on the method reference page in accordance with the methods indicated. Preliminary results were provided by facsimile transmission to Cathy Dover on December 9, 1997.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

Samples were received at the laboratory at a temperature of 0.5° C.

The sample ID on the chain-of-custody did not agree with the sample ID listed on the bottle labels for SP-0002. The sample ID on the chain-of-custody was used for log-in.

One 40ml Volatile vial for sample Trip Blank was received with headspace.

GC/MS VOLATILES

Surrogate recovery is outside acceptance limits in samples SP-0001 and SP-0002. Reextraction and/or reanalysis achieved similar results; therefore, the original data has been reported.

The matrix spike/matrix spike duplicate associated with batch 7334116 failed recovery criteria. The laboratory control sample associated with this batch was in control. This is believed to be a matrix effect; therefore, no further corrective action was taken.

ANALYTICAL METHODS SUMMARY

A7K210187

PARAMETER	ANALYTICAL METHOD
Total Residue as Percent Solids	MCAWW 160.3 MOD
Volatile Organics by GC/MS	SW846 8260A

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A7K210187

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CE687	001	SP-0001	11/19/97	09:25
CE688	002	SP-0002	11/19/97	09:30
CE689	003	PZ-09D 25-27	11/19/97	10:44
CE68A	004	PZ-09D 25-27 DUP	11/19/97	10:44
CE68C	005	PZ-09D 45-47	11/19/97	12:23
CE68F	006	PZ-14I 20-22	11/20/97	07:55
CE68H	007	PZ14I-E	11/20/97	08:00
CE68K	008	PZ-14I 30-32 (MS/MSD)	11/20/97	08:15
CE68N	009	T-112097	11/20/97	00:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

COMPUCHEM ENVIRONMENTAL

Client Sample ID: SP-0001

GC/MS Volatiles

Lot-Sample #...: A7K210187-001 **Work Order #...:** CE687102 **Matrix.....:** SOLID
Date Sampled...: 11/19/97 09:25 **Date Received..:** 11/21/97
Prep Date.....: 12/03/97 **Analysis Date..:** 12/03/97
Prep Batch #...: 7339168
Dilution Factor: 1
% Moisture.....: 12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	11	ug/kg	SW846 8260A
Bromomethane	ND	11	ug/kg	SW846 8260A
Vinyl chloride	ND	11	ug/kg	SW846 8260A
Chloroethane	ND	11	ug/kg	SW846 8260A
Methylene chloride	ND	5.7	ug/kg	SW846 8260A
Acetone	ND	23	ug/kg	SW846 8260A
Carbon disulfide	ND	5.7	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	5.7	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	5.7	ug/kg	SW846 8260A
1,2-Dichloroethene (total)	ND	5.7	ug/kg	SW846 8260A
Chloroform	ND	5.7	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	5.7	ug/kg	SW846 8260A
2-Butanone	ND	23	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	5.7	ug/kg	SW846 8260A
Carbon tetrachloride	ND	5.7	ug/kg	SW846 8260A
Bromodichloromethane	ND	5.7	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	5.7	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	5.7	ug/kg	SW846 8260A
Trichloroethene	ND	5.7	ug/kg	SW846 8260A
Dibromochloromethane	ND	5.7	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	5.7	ug/kg	SW846 8260A
Benzene	ND	5.7	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	5.7	ug/kg	SW846 8260A
Bromoform	ND	5.7	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	23	ug/kg	SW846 8260A
2-Hexanone	ND	23	ug/kg	SW846 8260A
Tetrachloroethene	ND	5.7	ug/kg	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	5.7	ug/kg	SW846 8260A
Toluene	ND	5.7	ug/kg	SW846 8260A
Chlorobenzene	ND	5.7	ug/kg	SW846 8260A
Ethylbenzene	ND	5.7	ug/kg	SW846 8260A
Styrene	ND	5.7	ug/kg	SW846 8260A
Xylenes (total)	ND	5.7	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	119 *	(61 - 115)
Toluene-d8	95	(82 - 129)
Bromofluorobenzene	89	(64 - 112)

(Continued on next page)

COMPUCHEM ENVIRONMENTAL

Client Sample ID: SP-0001

GC/MS Volatiles

Lot-Sample #...: A7K210187-001 Work Order #...: CE687102 Matrix.....: SOLID

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Surrogates outside acceptance criteria due to demonstrated matrix effect.

COMPUCHEM ENVIRONMENTAL

Client Sample ID: SP-0002

GC/MS Volatiles

Lot-Sample #...: A7K210187-002 **Work Order #...:** CE688102 **Matrix.....:** SOLID
Date Sampled...: 11/19/97 09:30 **Date Received..:** 11/21/97
Prep Date.....: 12/03/97 **Analysis Date..:** 12/03/97
Prep Batch #...: 7339168
Dilution Factor: 1
% Moisture.....: 20

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	12	ug/kg	SW846 8260A
Bromomethane	ND	12	ug/kg	SW846 8260A
Vinyl chloride	ND	12	ug/kg	SW846 8260A
Chloroethane	ND	12	ug/kg	SW846 8260A
Methylene chloride	ND	6.2	ug/kg	SW846 8260A
Acetone	ND	25	ug/kg	SW846 8260A
Carbon disulfide	ND	6.2	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	6.2	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	6.2	ug/kg	SW846 8260A
1,2-Dichloroethene (total)	ND	6.2	ug/kg	SW846 8260A
Chloroform	ND	6.2	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	6.2	ug/kg	SW846 8260A
2-Butanone	ND	25	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	6.2	ug/kg	SW846 8260A
Carbon tetrachloride	ND	6.2	ug/kg	SW846 8260A
Bromodichloromethane	ND	6.2	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	6.2	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	6.2	ug/kg	SW846 8260A
Trichloroethene	ND	6.2	ug/kg	SW846 8260A
Dibromochloromethane	ND	6.2	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	6.2	ug/kg	SW846 8260A
Benzene	ND	6.2	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	6.2	ug/kg	SW846 8260A
Bromoform	ND	6.2	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	25	ug/kg	SW846 8260A
2-Hexanone	ND	25	ug/kg	SW846 8260A
Tetrachloroethene	ND	6.2	ug/kg	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	6.2	ug/kg	SW846 8260A
Toluene	ND	6.2	ug/kg	SW846 8260A
Chlorobenzene	ND	6.2	ug/kg	SW846 8260A
Ethylbenzene	ND	6.2	ug/kg	SW846 8260A
Styrene	ND	6.2	ug/kg	SW846 8260A
Xylenes (total)	ND	6.2	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	119 *	(61 - 115)
Toluene-d8	92	(82 - 129)
Bromofluorobenzene	81	(64 - 112)

(Continued on next page)

COMPUCHEM ENVIRONMENTAL

Client Sample ID: SP-0002

GC/MS Volatiles

Lot-Sample #...: A7K210187-002 Work Order #...: CE688102 Matrix.....: SOLID

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Surrogates outside acceptance criteria due to demonstrated matrix effect.

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-09D 25-27

GC/MS Volatiles

Lot-Sample #...: A7K210187-003 **Work Order #...:** CE689102 **Matrix.....:** SOLID
Date Sampled...: 11/19/97 10:44 **Date Received..:** 11/21/97
Prep Date.....: 12/01/97 **Analysis Date..:** 12/02/97
Prep Batch #...: 7335266
Dilution Factor: 1
% Moisture.....: 16

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	1500	ug/kg	SW846 8260A
Bromomethane	ND	1500	ug/kg	SW846 8260A
Vinyl chloride	ND	1500	ug/kg	SW846 8260A
Chloroethane	ND	1500	ug/kg	SW846 8260A
Methylene chloride	ND	750	ug/kg	SW846 8260A
Acetone	ND	3000	ug/kg	SW846 8260A
Carbon disulfide	ND	750	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	750	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	750	ug/kg	SW846 8260A
1,2-Dichloroethene (total)	**1100**	**750**	**ug/kg**	**SW846 8260A**
Chloroform	ND	750	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	750	ug/kg	SW846 8260A
2-Butanone	ND	3000	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	750	ug/kg	SW846 8260A
Carbon tetrachloride	ND	750	ug/kg	SW846 8260A
Bromodichloromethane	ND	750	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	750	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	750	ug/kg	SW846 8260A
Trichloroethene	**4200**	**750**	**ug/kg**	**SW846 8260A**
Dibromochloromethane	ND	750	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	750	ug/kg	SW846 8260A
Benzene	ND	750	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	750	ug/kg	SW846 8260A
Bromoform	ND	750	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	3000	ug/kg	SW846 8260A
2-Hexanone	ND	3000	ug/kg	SW846 8260A
Tetrachloroethene	ND	750	ug/kg	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	750	ug/kg	SW846 8260A
Toluene	ND	750	ug/kg	SW846 8260A
Chlorobenzene	ND	750	ug/kg	SW846 8260A
Ethylbenzene	ND	750	ug/kg	SW846 8260A
Styrene	ND	750	ug/kg	SW846 8260A
Xylenes (total)	ND	750	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	95	(61 - 115)
Toluene-d8	93	(82 - 129)
Bromofluorobenzene	90	(64 - 112)

(Continued on next page)

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-09D 25-27

GC/MS Volatiles

Lot-Sample #...: A7K210187-003 Work Order #...: CE689102 Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-09D 25-27 DUP

GC/MS Volatiles

Lot-Sample #...: A7K210187-004 **Work Order #...:** CE68A102 **Matrix.....:** SOLID
Date Sampled...: 11/19/97 10:44 **Date Received..:** 11/21/97
Prep Date.....: 12/01/97 **Analysis Date..:** 12/02/97
Prep Batch #...: 7335266
Dilution Factor: 1
% Moisture.....: 20

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	1600	ug/kg	SW846 8260A
Bromomethane	ND	1600	ug/kg	SW846 8260A
Vinyl chloride	ND	1600	ug/kg	SW846 8260A
Chloroethane	ND	1600	ug/kg	SW846 8260A
Methylene chloride	ND	780	ug/kg	SW846 8260A
Acetone	ND	3100	ug/kg	SW846 8260A
Carbon disulfide	ND	780	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	780	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	780	ug/kg	SW846 8260A
1,2-Dichloroethene (total)	**1600**	**780**	**ug/kg**	**SW846 8260A**
Chloroform	ND	780	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	780	ug/kg	SW846 8260A
2-Butanone	ND	3100	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	780	ug/kg	SW846 8260A
Carbon tetrachloride	ND	780	ug/kg	SW846 8260A
Bromodichloromethane	ND	780	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	780	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	780	ug/kg	SW846 8260A
Trichloroethene	**7300**	**780**	**ug/kg**	**SW846 8260A**
Dibromochloromethane	ND	780	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	780	ug/kg	SW846 8260A
Benzene	ND	780	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	780	ug/kg	SW846 8260A
Bromoform	ND	780	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	3100	ug/kg	SW846 8260A
2-Hexanone	ND	3100	ug/kg	SW846 8260A
Tetrachloroethene	ND	780	ug/kg	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	780	ug/kg	SW846 8260A
Toluene	ND	780	ug/kg	SW846 8260A
Chlorobenzene	ND	780	ug/kg	SW846 8260A
Ethylbenzene	ND	780	ug/kg	SW846 8260A
Styrene	ND	780	ug/kg	SW846 8260A
Xylenes (total)	ND	780	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	94	(61 - 115)
Toluene-d8	90	(82 - 129)
Bromofluorobenzene	91	(64 - 112)

(Continued on next page)

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-09D 25-27 DUP

GC/MS Volatiles

Lot-Sample #...: A7K210187-004 **Work Order #...:** CE68A102 **Matrix.....:** SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-09D 45-47

GC/MS Volatiles

Lot-Sample #...: A7K210187-005 **Work Order #...:** CE68C102 **Matrix.....:** SOLID
Date Sampled...: 11/19/97 12:23 **Date Received..:** 11/21/97
Prep Date.....: 12/01/97 **Analysis Date..:** 12/02/97
Prep Batch #...: 7335266
Dilution Factor: 1
% Moisture.....: 11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	1400	ug/kg	SW846 8260A
Bromomethane	ND	1400	ug/kg	SW846 8260A
Vinyl chloride	ND	1400	ug/kg	SW846 8260A
Chloroethane	ND	1400	ug/kg	SW846 8260A
Methylene chloride	ND	700	ug/kg	SW846 8260A
Acetone	ND	2800	ug/kg	SW846 8260A
Carbon disulfide	ND	700	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	700	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	700	ug/kg	SW846 8260A
1,2-Dichloroethene (total)	ND	700	ug/kg	SW846 8260A
Chloroform	ND	700	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	700	ug/kg	SW846 8260A
2-Butanone	ND	2800	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	700	ug/kg	SW846 8260A
Carbon tetrachloride	ND	700	ug/kg	SW846 8260A
Bromodichloromethane	ND	700	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	700	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	700	ug/kg	SW846 8260A
Trichloroethene	**12000**	**700**	**ug/kg**	**SW846 8260A**
Dibromochloromethane	ND	700	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	700	ug/kg	SW846 8260A
Benzene	ND	700	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	700	ug/kg	SW846 8260A
Bromoform	ND	700	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	2800	ug/kg	SW846 8260A
2-Hexanone	ND	2800	ug/kg	SW846 8260A
Tetrachloroethene	ND	700	ug/kg	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	700	ug/kg	SW846 8260A
Toluene	ND	700	ug/kg	SW846 8260A
Chlorobenzene	ND	700	ug/kg	SW846 8260A
Ethylbenzene	ND	700	ug/kg	SW846 8260A
Styrene	ND	700	ug/kg	SW846 8260A
Xylenes (total)	ND	700	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	95	(61 - 115)
Toluene-d8	92	(82 - 129)
Bromofluorobenzene	93	(64 - 112)

(Continued on next page)

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-09D 45-47

GC/MS Volatiles

Lot-Sample #...: A7K210187-005 **Work Order #...:** CE68C102 **Matrix.....:** SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-14I 20-22

GC/MS Volatiles

Lot-Sample #...: A7K210187-006 **Work Order #...:** CE68F102 **Matrix.....:** SOLID
Date Sampled...: 11/20/97 07:55 **Date Received..:** 11/21/97
Prep Date.....: 12/04/97 **Analysis Date..:** 12/04/97
Prep Batch #...: 7339197
Dilution Factor: 1
% Moisture.....: 4.0

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	10	ug/kg	SW846 8260A
Bromomethane	ND	10	ug/kg	SW846 8260A
Vinyl chloride	ND	10	ug/kg	SW846 8260A
Chloroethane	ND	10	ug/kg	SW846 8260A
Methylene chloride	ND	5.2	ug/kg	SW846 8260A
Acetone	ND	21	ug/kg	SW846 8260A
Carbon disulfide	ND	5.2	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	5.2	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	5.2	ug/kg	SW846 8260A
1,2-Dichloroethene (total)	ND	5.2	ug/kg	SW846 8260A
Chloroform	ND	5.2	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	5.2	ug/kg	SW846 8260A
2-Butanone	ND	21	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	5.2	ug/kg	SW846 8260A
Carbon tetrachloride	ND	5.2	ug/kg	SW846 8260A
Bromodichloromethane	ND	5.2	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	5.2	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	5.2	ug/kg	SW846 8260A
Trichloroethene	ND	5.2	ug/kg	SW846 8260A
Dibromochloromethane	ND	5.2	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	5.2	ug/kg	SW846 8260A
Benzene	ND	5.2	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	5.2	ug/kg	SW846 8260A
Bromoform	ND	5.2	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	21	ug/kg	SW846 8260A
2-Hexanone	ND	21	ug/kg	SW846 8260A
Tetrachloroethene	**27**	**5.2**	**ug/kg**	**SW846 8260A**
1,1,2,2-Tetrachloroethane	ND	5.2	ug/kg	SW846 8260A
Toluene	ND	5.2	ug/kg	SW846 8260A
Chlorobenzene	ND	5.2	ug/kg	SW846 8260A
Ethylbenzene	ND	5.2	ug/kg	SW846 8260A
Styrene	ND	5.2	ug/kg	SW846 8260A
Xylenes (total)	ND	5.2	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	115	(61 - 115)
Toluene-d8	94	(82 - 129)
Bromofluorobenzene	93	(64 - 112)

(Continued on next page)

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-14I 20-22

GC/MS Volatiles

Lot-Sample #...: A7K210187-006 Work Order #...: CE68F102 Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ14I-E

GC/MS Volatiles

Lot-Sample #...: A7K210187-007 **Work Order #...:** CE68H101 **Matrix.....:** WATER
Date Sampled...: 11/20/97 08:00 **Date Received..:** 11/21/97
Prep Date.....: 11/29/97 **Analysis Date..:** 11/29/97
Prep Batch #...: 7334116
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	2.0	ug/L	SW846 8260A
Bromomethane	ND	2.0	ug/L	SW846 8260A
Vinyl chloride	ND	1.0	ug/L	SW846 8260A
Chloroethane	ND	2.0	ug/L	SW846 8260A
Methylene chloride	ND	1.0	ug/L	SW846 8260A
Acetone	ND	10	ug/L	SW846 8260A
Carbon disulfide	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260A
2-Butanone	ND	10	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260A
Bromodichloromethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	1.0	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Benzene	ND	1.0	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Bromoform	ND	1.0	ug/L	SW846 8260A
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260A
2-Hexanone	ND	10	ug/L	SW846 8260A
Tetrachloroethene	ND	1.0	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260A
Toluene	ND	1.0	ug/L	SW846 8260A
Chlorobenzene	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	1.0	ug/L	SW846 8260A
Styrene	ND	1.0	ug/L	SW846 8260A
Xylenes (total)	ND	1.0	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	85	(69 - 127)
Toluene-d8	98	(90 - 112)
Bromofluorobenzene	100	(87 - 114)

(MS/MSD) indicates an MS/MSD was run and is presented in the back
This is PZ-14I 30-32

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-14I 30-32 (MS/MSD)

GC/MS Volatiles

Lot-Sample #...: A7K210187-008 **Work Order #...:** CE68K102 **M**
Date Sampled...: 11/20/97 08:15 **Date Received..:** 11/21/97
Prep Date.....: 12/01/97 **Analysis Date..:** 12/02/97
Prep Batch #...: 7335266
Dilution Factor: 1
% Moisture.....: 9.5

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	1400	ug/kg	SW846 8260A
Bromomethane	ND	1400	ug/kg	SW846 8260A
Vinyl chloride	ND	1400	ug/kg	SW846 8260A
Chloroethane	ND	1400	ug/kg	SW846 8260A
Methylene chloride	ND	690	ug/kg	SW846 8260A
Acetone	ND	2800	ug/kg	SW846 8260A
Carbon disulfide	ND	690	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	690	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	690	ug/kg	SW846 8260A
1,2-Dichloroethene (total)	ND	690	ug/kg	SW846 8260A
Chloroform	ND	690	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	690	ug/kg	SW846 8260A
2-Butanone	ND	2800	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	690	ug/kg	SW846 8260A
Carbon tetrachloride	ND	690	ug/kg	SW846 8260A
Bromodichloromethane	ND	690	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	690	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	690	ug/kg	SW846 8260A
Trichloroethene	ND	690	ug/kg	SW846 8260A
Dibromochloromethane	ND	690	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	690	ug/kg	SW846 8260A
Benzene	ND	690	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	690	ug/kg	SW846 8260A
Bromoform	ND	690	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	2800	ug/kg	SW846 8260A
2-Hexanone	ND	2800	ug/kg	SW846 8260A
Tetrachloroethene	**6700**	**690**	**ug/kg**	**SW846 8260A**
1,1,2,2-Tetrachloroethane	ND	690	ug/kg	SW846 8260A
Toluene	ND	690	ug/kg	SW846 8260A
Chlorobenzene	ND	690	ug/kg	SW846 8260A
Ethylbenzene	ND	690	ug/kg	SW846 8260A
Styrene	ND	690	ug/kg	SW846 8260A
Xylenes (total)	ND	690	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	97	(61 - 115)
Toluene-d8	93	(82 - 129)
Bromofluorobenzene	95	(64 - 112)

(Continued on next page)

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-14I 30-32 (MS/MSD)

GC/MS Volatiles

Lot-Sample #...: A7K210187-008 **Work Order #...:** CE68K102 **Matrix.....:** SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

COMPUCHEM ENVIRONMENTAL

Client Sample ID: T-112097

GC/MS Volatiles

Lot-Sample #...: A7K210187-009 **Work Order #...:** CE68N101 **Matrix.....:** WATER
Date Sampled...: 11/20/97 00:00 **Date Received..:** 11/21/97
Prep Date.....: 11/29/97 **Analysis Date..:** 11/29/97
Prep Batch #...: 7334116
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	2.0	ug/L	SW846 8260A
Bromomethane	ND	2.0	ug/L	SW846 8260A
Vinyl chloride	ND	1.0	ug/L	SW846 8260A
Chloroethane	ND	2.0	ug/L	SW846 8260A
Methylene chloride	ND	1.0	ug/L	SW846 8260A
Acetone	ND	10	ug/L	SW846 8260A
Carbon disulfide	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260A
2-Butanone	ND	10	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260A
Bromodichloromethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	1.0	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Benzene	ND	1.0	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Bromoform	ND	1.0	ug/L	SW846 8260A
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260A
2-Hexanone	ND	10	ug/L	SW846 8260A
Tetrachloroethene	ND	1.0	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260A
Toluene	ND	1.0	ug/L	SW846 8260A
Chlorobenzene	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	1.0	ug/L	SW846 8260A
Styrene	ND	1.0	ug/L	SW846 8260A
Xylenes (total)	ND	1.0	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	89	(69 - 127)
Toluene-d8	98	(90 - 112)
Bromofluorobenzene	98	(87 - 114)

QUALITY CONTROL SECTION

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

Quanterra® Incorporated conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. Quanterra requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). Failure of the RPDs to fall within the laboratory-generated acceptance windows requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the MS/MSD RPDs are within acceptance criteria, the batch is acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except for the common laboratory contaminants indicated below.

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

* *for analyses run on TJA Trace ICP or GFAA only*

METHOD BLANK (continued)

The listed volatile and semivolatile compounds may be present in concentrations up to 5 times the reporting limits. The listed metals may be present in concentrations up to 2 times the reporting limit or must be twenty fold less than the results of the environmental samples. Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. When these values fail to meet acceptance criteria, the data is reviewed to determine the cause. If, in the analyst's judgment, sample matrix effects are indicated, no corrective action is performed. Otherwise, the MS/MSD and the environmental sample used to prepare them are reprepared and reanalyzed.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

The acceptance criteria do not apply to samples that are diluted. If the dilution is more than 5X, the recoveries will be reported as diluted out. All other surrogate recoveries will be reported. If the LCS, LCSD, or the Method Blank surrogates fail to meet recovery criteria (exception for dilutions), the entire batch of samples is reprepared and reanalyzed.

If the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch may be acceptable based on the analyst's judgment that sample matrix effects are indicated.

For the GC/MS BNA methods, the surrogate criteria is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, TPH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

COMPUCHE

Client Sample

GC/MS

Lot-Sample #...: A7K210187

NOTE(S):

Results and reporting limits have been adjusted for dry

Lot-Sample #...: A7K210187-005 Work Orde
Date Sampled...: 11/19/97 12:23 Date Rece
Prep Date.....: 12/01/97 Analysis
Prep Batch #...: 7335266
Dilution Factor: 1
% Moisture.....: 11

Lot-Sample #

NOTE(S):

Results and reporting lin

PARAMETER	RESULT
Chloromethane	ND
Bromomethane	ND
Vinyl chloride	ND
Chloroethane	ND
Methylene chloride	ND
Acetone	ND
Carbon disulfide	ND
1,1-Dichloroethene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethene (total)	ND
Chloroform	ND
1,2-Dichloroethane	ND
2-Butanone	ND
1,1,1-Trichloroethane	ND
Carbon tetrachloride	ND
Bromodichloromethane	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
Trichloroethene	**12000**
Dibromochloromethane	ND
1,1,2-Trichloroethane	ND
Benzene	ND
trans-1,3-Dichloropropene	ND
Bromoform	ND
4-Methyl-2-pentanone	ND
2-Hexanone	ND
Tetrachloroethene	ND
1,1,2,2-Tetrachloroethane	ND
Toluene	ND
Chlorobenzene	ND
Ethylbenzene	ND
Styrene	ND
Xylenes (total)	ND

SURROGATE	PERCENT RECOVERY
1,2-Dichloroethane-d4	95
Toluene-d8	92
Bromofluorobenzene	93

(Continued

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-09D 25-27 DUP

GC/MS Volatiles

Lot-Sample #...: A7K210187-004 **Work Order #...:** CE68A102 **Matrix.....:** SOLID
Date Sampled...: 11/19/97 10:44 **Date Received..:** 11/21/97
Prep Date.....: 12/01/97 **Analysis Date..:** 12/02/97
Prep Batch #...: 7335266
Dilution Factor: 1
% Moisture.....: 20

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	1600	ug/kg	SW846 8260A
Bromomethane	ND	1600	ug/kg	SW846 8260A
Vinyl chloride	ND	1600	ug/kg	SW846 8260A
Chloroethane	ND	1600	ug/kg	SW846 8260A
Methylene chloride	ND	780	ug/kg	SW846 8260A
Acetone	ND	3100	ug/kg	SW846 8260A
Carbon disulfide	ND	780	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	780	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	780	ug/kg	SW846 8260A
1,2-Dichloroethene (total)	**1600**	**780**	**ug/kg**	**SW846 8260A**
Chloroform	ND	780	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	780	ug/kg	SW846 8260A
2-Butanone	ND	3100	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	780	ug/kg	SW846 8260A
Carbon tetrachloride	ND	780	ug/kg	SW846 8260A
Bromodichloromethane	ND	780	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	780	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	780	ug/kg	SW846 8260A
Trichloroethene	**7300**	**780**	**ug/kg**	**SW846 8260A**
Dibromochloromethane	ND	780	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	780	ug/kg	SW846 8260A
Benzene	ND	780	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	780	ug/kg	SW846 8260A
Bromoform	ND	780	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	3100	ug/kg	SW846 8260A
2-Hexanone	ND	3100	ug/kg	SW846 8260A
Tetrachloroethene	ND	780	ug/kg	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	780	ug/kg	SW846 8260A
Toluene	ND	780	ug/kg	SW846 8260A
Chlorobenzene	ND	780	ug/kg	SW846 8260A
Ethylbenzene	ND	780	ug/kg	SW846 8260A
Styrene	ND	780	ug/kg	SW846 8260A
Xylenes (total)	ND	780	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	94	(61 - 115)
Toluene-d8	90	(82 - 129)
Bromofluorobenzene	91	(64 - 112)

(Continued on next page)

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-09D 25-27

GC/MS Volatiles

Lot-Sample #...: A7K210187-
Date Sampled...: 11/20/97 0
Prep Date.....: 12/04/97
Prep Batch #...: 7339197
Dilution Factor: 1
% Moisture.....: 4.0

Lot-Sample #...: A7K210187-003 **Work Order #...:** CE689102

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

PARAMETER
Chloromethane
Bromomethane
Vinyl chloride
Chloroethane
Methylene chloride
Acetone
Carbon disulfide
1,1-Dichloroethene
1,1-Dichloroethane
1,2-Dichloroethene (total)
Chloroform
1,2-Dichloroethane
2-Butanone
1,1,1-Trichloroethane
Carbon tetrachloride
Bromodichloromethane
1,2-Dichloropropane
cis-1,3-Dichloropropene
Trichloroethene
Dibromochloromethane
1,1,2-Trichloroethane
Benzene
trans-1,3-Dichloropropene
Bromoform
4-Methyl-2-pentanone
2-Hexanone
Tetrachloroethene
1,1,2,2-Tetrachloroethane
Toluene
Chlorobenzene
Ethylbenzene
Styrene
Xylenes (total)

SURROGATE
1,2-Dichloroethane-d4
Toluene-d8
Bromofluorobenzene

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-14I 20-22

GC/MS Volatiles

Lot-Sample #...: A7K210187-006 **Work Order #...:** CE68F102 **Matrix.....:** SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ14I-E

GC/MS Volatiles

Lot-Sample #...: A7K210187-007 **Work Order #...:** CE68H101 **Matrix.....:** WATER
Date Sampled...: 11/20/97 08:00 **Date Received..:** 11/21/97
Prep Date.....: 11/29/97 **Analysis Date..:** 11/29/97
Prep Batch #...: 7334116
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	2.0	ug/L	SW846 8260A
Bromomethane	ND	2.0	ug/L	SW846 8260A
Vinyl chloride	ND	1.0	ug/L	SW846 8260A
Chloroethane	ND	2.0	ug/L	SW846 8260A
Methylene chloride	ND	1.0	ug/L	SW846 8260A
Acetone	ND	10	ug/L	SW846 8260A
Carbon disulfide	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260A
2-Butanone	ND	10	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260A
Bromodichloromethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	1.0	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Benzene	ND	1.0	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Bromoform	ND	1.0	ug/L	SW846 8260A
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260A
2-Hexanone	ND	10	ug/L	SW846 8260A
Tetrachloroethene	ND	1.0	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260A
Toluene	ND	1.0	ug/L	SW846 8260A
Chlorobenzene	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	1.0	ug/L	SW846 8260A
Styrene	ND	1.0	ug/L	SW846 8260A
Xylenes (total)	ND	1.0	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	85	(69 - 127)
Toluene-d8	98	(90 - 112)
Bromofluorobenzene	100	(87 - 114)

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-14I 30-32 (MS/MSD)

This is PZ-14I 30-32 the MS/MSD results are in the back

GC/MS Volatiles

Lot-Sample #...: A7K210187-008 **Work Order #...:** CE68K102
Date Sampled...: 11/20/97 08:15 **Date Received..:** 11/21/97
Prep Date.....: 12/01/97 **Analysis Date..:** 12/02/97
Prep Batch #...: 7335266
Dilution Factor: 1
% Moisture.....: 9.5

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	1400	ug/kg	SW846 8260A
Bromomethane	ND	1400	ug/kg	SW846 8260A
Vinyl chloride	ND	1400	ug/kg	SW846 8260A
Chloroethane	ND	1400	ug/kg	SW846 8260A
Methylene chloride	ND	690	ug/kg	SW846 8260A
Acetone	ND	2800	ug/kg	SW846 8260A
Carbon disulfide	ND	690	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	690	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	690	ug/kg	SW846 8260A
1,2-Dichloroethene (total)	ND	690	ug/kg	SW846 8260A
Chloroform	ND	690	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	690	ug/kg	SW846 8260A
2-Butanone	ND	2800	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	690	ug/kg	SW846 8260A
Carbon tetrachloride	ND	690	ug/kg	SW846 8260A
Bromodichloromethane	ND	690	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	690	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	690	ug/kg	SW846 8260A
Trichloroethene	ND	690	ug/kg	SW846 8260A
Dibromochloromethane	ND	690	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	690	ug/kg	SW846 8260A
Benzene	ND	690	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	690	ug/kg	SW846 8260A
Bromoform	ND	690	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	2800	ug/kg	SW846 8260A
2-Hexanone	ND	2800	ug/kg	SW846 8260A
Tetrachloroethene	**6700**	**690**	**ug/kg**	**SW846 8260A**
1,1,2,2-Tetrachloroethane	ND	690	ug/kg	SW846 8260A
Toluene	ND	690	ug/kg	SW846 8260A
Chlorobenzene	ND	690	ug/kg	SW846 8260A
Ethylbenzene	ND	690	ug/kg	SW846 8260A
Styrene	ND	690	ug/kg	SW846 8260A
Xylenes (total)	ND	690	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	97	(61 - 115)
Toluene-d8	93	(82 - 129)
Bromofluorobenzene	95	(64 - 112)

(Continued on next page)

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-14I 30-32 (MS/MSD)

GC/MS Volatiles

Lot-Sample #...: A7K210187-008 **Work Order #...:** CE68K102 **Matrix.....:** SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

COMPUCHEM ENVIRONMENTAL

Client Sample ID: T-112097

GC/MS Volatiles

Lot-Sample #...: A7K210187-009 **Work Order #...:** CE68N101 **Matrix.....:** WATER
Date Sampled...: 11/20/97 00:00 **Date Received..:** 11/21/97
Prep Date.....: 11/29/97 **Analysis Date..:** 11/29/97
Prep Batch #...: 7334116
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	2.0	ug/L	SW846 8260A
Bromomethane	ND	2.0	ug/L	SW846 8260A
Vinyl chloride	ND	1.0	ug/L	SW846 8260A
Chloroethane	ND	2.0	ug/L	SW846 8260A
Methylene chloride	ND	1.0	ug/L	SW846 8260A
Acetone	ND	10	ug/L	SW846 8260A
Carbon disulfide	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260A
2-Butanone	ND	10	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260A
Bromodichloromethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	1.0	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Benzene	ND	1.0	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Bromoform	ND	1.0	ug/L	SW846 8260A
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260A
2-Hexanone	ND	10	ug/L	SW846 8260A
Tetrachloroethene	ND	1.0	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260A
Toluene	ND	1.0	ug/L	SW846 8260A
Chlorobenzene	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	1.0	ug/L	SW846 8260A
Styrene	ND	1.0	ug/L	SW846 8260A
Xylenes (total)	ND	1.0	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	89	(69 - 127)
Toluene-d8	98	(90 - 112)
Bromofluorobenzene	98	(87 - 114)

QUALITY CONTROL SECTION

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

Quanterra® Incorporated conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. Quanterra requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). Failure of the RPDs to fall within the laboratory-generated acceptance windows requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the MS/MSD RPDs are within acceptance criteria, the batch is acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except for the common laboratory contaminants indicated below.

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS (continued)

METHOD BLANK (continued)

The listed volatile and semivolatile compounds may be present in concentrations up to 5 times the reporting limits. The listed metals may be present in concentrations up to 2 times the reporting limit or must be twenty fold less than the results of the environmental samples. Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. When these values fail to meet acceptance criteria, the data is reviewed to determine the cause. If, in the analyst's judgment, sample matrix effects are indicated, no corrective action is performed. Otherwise, the MS/MSD and the environmental sample used to prepare them are reprepared and reanalyzed.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

The acceptance criteria do not apply to samples that are diluted. If the dilution is more than 5X, the recoveries will be reported as diluted out. All other surrogate recoveries will be reported. If the LCS, LCSD, or the Method Blank surrogates fail to meet recovery criteria (exception for dilutions), the entire batch of samples is reprepared and reanalyzed.

If the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch may be acceptable based on the analyst's judgment that sample matrix effects are indicated.

For the GC/MS BNA methods, the surrogate criteria is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, TPH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7K210187 **Work Order #...:** CEAGN102 **Matrix.....:** SOLID
LCS Lot-Sample#: A7L010000-266
Prep Date.....: 12/01/97 **Analysis Date..:** 12/02/97
Prep Batch #...: 7335266
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1-Dichloroethene	83	(60 - 119)	SW846 8260A
Trichloroethene	89	(74 - 115)	SW846 8260A
Chlorobenzene	93	(85 - 116)	SW846 8260A
Toluene	93	(87 - 118)	SW846 8260A
Benzene	94	(83 - 118)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	103	(61 - 115)
Toluene-d8	101	(82 - 129)
Bromofluorobenzene	94	(64 - 112)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7K210187 **Work Order #...:** CEA35102 **Matrix.....:** WATER
LCS Lot-Sample#: A7K300000-116
Prep Date.....: 11/29/97 **Analysis Date..:** 11/29/97
Prep Batch #...: 7334116
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1-Dichloroethene	105	(87 - 113)	SW846 8260A
Trichloroethene	103	(89 - 115)	SW846 8260A
Chlorobenzene	101	(89 - 119)	SW846 8260A
Toluene	99	(81 - 117)	SW846 8260A
Benzene	108	(77 - 126)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	91	(69 - 127)
Toluene-d8	98	(90 - 112)
Bromofluorobenzene	97	(87 - 114)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7K210187 **Work Order #...:** CEDL8102 **Matrix.....:** SOLID
LCS Lot-Sample#: A7L050000-168
Prep Date.....: 12/03/97 **Analysis Date..:** 12/03/97
Prep Batch #...: 7339168
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1-Dichloroethene	100	(60 - 119)	SW846 8260A
Trichloroethene	98	(74 - 115)	SW846 8260A
Chlorobenzene	102	(85 - 116)	SW846 8260A
Toluene	97	(87 - 118)	SW846 8260A
Benzene	102	(83 - 118)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	105	(61 - 115)
Toluene-d8	96	(82 - 129)
Bromofluorobenzene	94	(64 - 112)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7K210187 **Work Order #...:** CEDP0102 **Matrix.....:** SOLID
LCS Lot-Sample#: A7L050000-197
Prep Date.....: 12/04/97 **Analysis Date..:** 12/04/97
Prep Batch #...: 7339197
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1-Dichloroethene	97	(60 - 119)	SW846 8260A
Trichloroethene	95	(74 - 115)	SW846 8260A
Chlorobenzene	103	(85 - 116)	SW846 8260A
Toluene	96	(87 - 118)	SW846 8260A
Benzene	102	(83 - 118)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	108	(61 - 115)
Toluene-d8	95	(82 - 129)
Bromofluorobenzene	95	(64 - 112)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7K210187 **Work Order #...:** CEAGN101 **Matrix.....:** SOLID
MB Lot-Sample #: A7L010000-266

Prep Date.....: 12/01/97
Analysis Date..: 12/02/97 **Prep Batch #...:** 7335266
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	1200	ug/kg	SW846 8260A
Bromomethane	ND	1200	ug/kg	SW846 8260A
Vinyl chloride	ND	1200	ug/kg	SW846 8260A
Chloroethane	ND	1200	ug/kg	SW846 8260A
Methylene chloride	ND	620	ug/kg	SW846 8260A
Acetone	ND	2500	ug/kg	SW846 8260A
Carbon disulfide	ND	620	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	620	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	620	ug/kg	SW846 8260A
1,2-Dichloroethene (total)	ND	620	ug/kg	SW846 8260A
Chloroform	ND	620	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	620	ug/kg	SW846 8260A
2-Butanone	ND	2500	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	620	ug/kg	SW846 8260A
Carbon tetrachloride	ND	620	ug/kg	SW846 8260A
Bromodichloromethane	ND	620	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	620	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	620	ug/kg	SW846 8260A
Trichloroethene	ND	620	ug/kg	SW846 8260A
Dibromochloromethane	ND	620	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	620	ug/kg	SW846 8260A
Benzene	ND	620	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	620	ug/kg	SW846 8260A
Bromoform	ND	620	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	2500	ug/kg	SW846 8260A
2-Hexanone	ND	2500	ug/kg	SW846 8260A
Tetrachloroethene	ND	620	ug/kg	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	620	ug/kg	SW846 8260A
Toluene	ND	620	ug/kg	SW846 8260A
Chlorobenzene	ND	620	ug/kg	SW846 8260A
Ethylbenzene	ND	620	ug/kg	SW846 8260A
Styrene	ND	620	ug/kg	SW846 8260A
Xylenes (total)	ND	620	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	99	(61 - 115)
Toluene-d8	96	(82 - 129)
Bromofluorobenzene	96	(64 - 112)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7K210187 **Work Order #...:** CEA35101 **Matrix.....:** WATER
MB Lot-Sample #: A7K300000-116

Prep Date.....: 11/29/97
Analysis Date..: 11/29/97 **Prep Batch #...:** 7334116
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	2.0	ug/L	SW846 8260A
Bromomethane	ND	2.0	ug/L	SW846 8260A
Vinyl chloride	ND	1.0	ug/L	SW846 8260A
Chloroethane	ND	2.0	ug/L	SW846 8260A
Methylene chloride	ND	1.0	ug/L	SW846 8260A
Acetone	ND	10	ug/L	SW846 8260A
Carbon disulfide	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260A
2-Butanone	ND	10	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260A
Bromodichloromethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	1.0	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Benzene	ND	1.0	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Bromoform	ND	1.0	ug/L	SW846 8260A
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260A
2-Hexanone	ND	10	ug/L	SW846 8260A
Tetrachloroethene	ND	1.0	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260A
Toluene	ND	1.0	ug/L	SW846 8260A
Chlorobenzene	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	1.0	ug/L	SW846 8260A
Styrene	ND	1.0	ug/L	SW846 8260A
Xylenes (total)	ND	1.0	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	91	(69 - 127)
Toluene-d8	99	(90 - 112)
Bromofluorobenzene	98	(87 - 114)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7K210187 **Work Order #...:** CEDL8101 **Matrix.....:** SOLID
MB Lot-Sample #: A7L050000-168

Prep Date.....: 12/03/97
Analysis Date..: 12/03/97 **Prep Batch #...:** 7339168
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	10	ug/kg	SW846 8260A
Bromomethane	ND	10	ug/kg	SW846 8260A
Vinyl chloride	ND	10	ug/kg	SW846 8260A
Chloroethane	ND	10	ug/kg	SW846 8260A
Methylene chloride	ND	5.0	ug/kg	SW846 8260A
Acetone	ND	20	ug/kg	SW846 8260A
Carbon disulfide	ND	5.0	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	5.0	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	5.0	ug/kg	SW846 8260A
1,2-Dichloroethene (total)	ND	5.0	ug/kg	SW846 8260A
Chloroform	ND	5.0	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	5.0	ug/kg	SW846 8260A
2-Butanone	ND	20	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	5.0	ug/kg	SW846 8260A
Carbon tetrachloride	ND	5.0	ug/kg	SW846 8260A
Bromodichloromethane	ND	5.0	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	5.0	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	5.0	ug/kg	SW846 8260A
Trichloroethene	ND	5.0	ug/kg	SW846 8260A
Dibromochloromethane	ND	5.0	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	5.0	ug/kg	SW846 8260A
Benzene	ND	5.0	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	5.0	ug/kg	SW846 8260A
Bromoform	ND	5.0	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	20	ug/kg	SW846 8260A
2-Hexanone	ND	20	ug/kg	SW846 8260A
Tetrachloroethene	ND	5.0	ug/kg	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	SW846 8260A
Toluene	ND	5.0	ug/kg	SW846 8260A
Chlorobenzene	ND	5.0	ug/kg	SW846 8260A
Ethylbenzene	ND	5.0	ug/kg	SW846 8260A
Styrene	ND	5.0	ug/kg	SW846 8260A
Xylenes (total)	ND	5.0	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	107	(61 - 115)
Toluene-d8	96	(82 - 129)
Bromofluorobenzene	96	(64 - 112)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7K210187 **Work Order #...:** CEDP0101 **Matrix.....:** SOLID
MB Lot-Sample #: A7L050000-197

Prep Date.....: 12/04/97
Analysis Date..: 12/04/97 **Prep Batch #...:** 7339197
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	10	ug/kg	SW846 8260A
Bromomethane	ND	10	ug/kg	SW846 8260A
Vinyl chloride	ND	10	ug/kg	SW846 8260A
Chloroethane	ND	10	ug/kg	SW846 8260A
Methylene chloride	ND	5.0	ug/kg	SW846 8260A
Acetone	ND	20	ug/kg	SW846 8260A
Carbon disulfide	ND	5.0	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	5.0	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	5.0	ug/kg	SW846 8260A
1,2-Dichloroethene (total)	ND	5.0	ug/kg	SW846 8260A
Chloroform	ND	5.0	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	5.0	ug/kg	SW846 8260A
2-Butanone	ND	20	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	5.0	ug/kg	SW846 8260A
Carbon tetrachloride	ND	5.0	ug/kg	SW846 8260A
Bromodichloromethane	ND	5.0	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	5.0	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	5.0	ug/kg	SW846 8260A
Trichloroethene	ND	5.0	ug/kg	SW846 8260A
Dibromochloromethane	ND	5.0	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	5.0	ug/kg	SW846 8260A
Benzene	ND	5.0	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	5.0	ug/kg	SW846 8260A
Bromoform	ND	5.0	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	20	ug/kg	SW846 8260A
2-Hexanone	ND	20	ug/kg	SW846 8260A
Tetrachloroethene	ND	5.0	ug/kg	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	SW846 8260A
Toluene	ND	5.0	ug/kg	SW846 8260A
Chlorobenzene	ND	5.0	ug/kg	SW846 8260A
Ethylbenzene	ND	5.0	ug/kg	SW846 8260A
Styrene	ND	5.0	ug/kg	SW846 8260A
Xylenes (total)	ND	5.0	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	112	(61 - 115)
Toluene-d8	95	(82 - 129)
Bromofluorobenzene	95	(64 - 112)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7K210187 **Work Order #...:** CE5HJ10F-MS **Matrix.....:** SOLID
MS Lot-Sample #: A7K210125-006 CE5HJ10G-MSD
Date Sampled...: 11/20/97 13:00 **Date Received..:** 11/21/97
Prep Date.....: 12/03/97 **Analysis Date..:** 12/03/97
Prep Batch #...: 7339168
Dilution Factor: 1 **% Moisture.....:** 17

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	102	(75 - 113)			SW846 8260A
	104	(75 - 113)	1.9	(0-20)	SW846 8260A
Trichloroethene	95	(71 - 110)			SW846 8260A
	97	(71 - 110)	2.2	(0-22)	SW846 8260A
Chlorobenzene	108	(81 - 115)			SW846 8260A
	109	(81 - 115)	1.3	(0-18)	SW846 8260A
Toluene	101	(78 - 126)			SW846 8260A
	99	(78 - 126)	2.5	(0-24)	SW846 8260A
Benzene	118 a	(78 - 117)			SW846 8260A
	114	(78 - 117)	3.8	(0-17)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	119 *	(61 - 115)
	113	(61 - 115)
Toluene-d8	89	(82 - 129)
	90	(82 - 129)
Bromofluorobenzene	81	(64 - 112)
	87	(64 - 112)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

a Spiked analyte recovery is outside stated control limits.

* Surrogate recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7K210187 **Work Order #...:** CE5HV110-MS **Matrix.....:** SOLID
MS Lot-Sample #: A7K210125-012 CE5HV111-MSD
Date Sampled...: 11/20/97 12:02 **Date Received..:** 11/21/97
Prep Date.....: 12/04/97 **Analysis Date..:** 12/04/97
Prep Batch #...: 7339197
Dilution Factor: 1 **% Moisture.....:** 17

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	93	(75 - 113)			SW846 8260A
	93	(75 - 113)	0.61	(0-20)	SW846 8260A
Trichloroethene	93	(71 - 110)			SW846 8260A
	90	(71 - 110)	3.5	(0-22)	SW846 8260A
Chlorobenzene	104	(81 - 115)			SW846 8260A
	101	(81 - 115)	2.2	(0-18)	SW846 8260A
Toluene	94	(78 - 126)			SW846 8260A
	90	(78 - 126)	3.4	(0-24)	SW846 8260A
Benzene	109	(78 - 117)			SW846 8260A
	106	(78 - 117)	3.2	(0-17)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	121 *	(61 - 115)
	120 *	(61 - 115)
Toluene-d8	91	(82 - 129)
	91	(82 - 129)
Bromofluorobenzene	85	(64 - 112)
	87	(64 - 112)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

* Surrogate recovery is outside stated control limits.

Surrogates outside acceptance criteria due to demonstrated matrix effect.

Surrogates outside acceptance criteria due to demonstrated matrix effect.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7K210187 **Work Order #...:** CE653102-MS **Matrix.....:** WATER
MS Lot-Sample #: A7K210175-001 CE653103-MSD
Date Sampled...: 11/19/97 00:00 **Date Received..:** 11/21/97
Prep Date.....: 11/29/97 **Analysis Date..:** 11/29/97
Prep Batch #...: 7334116
Dilution Factor: 10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	111	(75 - 113)			SW846 8260A
	121 a	(75 - 113)	8.6	(0-20)	SW846 8260A
Trichloroethene	109	(71 - 110)			SW846 8260A
	116 a	(71 - 110)	6.7	(0-22)	SW846 8260A
Chlorobenzene	100	(81 - 115)			SW846 8260A
	107	(81 - 115)	6.5	(0-18)	SW846 8260A
Toluene	102	(78 - 126)			SW846 8260A
	108	(78 - 126)	6.1	(0-24)	SW846 8260A
Benzene	108	(78 - 117)			SW846 8260A
	117	(78 - 117)	7.6	(0-17)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	91	(69 - 127)
	88	(69 - 127)
Toluene-d8	100	(90 - 112)
	100	(90 - 112)
Bromofluorobenzene	96	(87 - 114)
	100	(87 - 114)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7K210187 **Work Order #...:** CE68K103-MS **Matrix.....:** SOLID
MS Lot-Sample #: A7K210187-008 CE68K104-MSD
Date Sampled...: 11/20/97 08:15 **Date Received..:** 11/21/97
Prep Date.....: 12/01/97 **Analysis Date..:** 12/03/97
Prep Batch #...: 7335266
Dilution Factor: 1 **% Moisture.....:** 9.5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	83	(75 - 113)			SW846 8260A
	96	(75 - 113)	14	(0-20)	SW846 8260A
Trichloroethene	97	(71 - 110)			SW846 8260A
	101	(71 - 110)	4.4	(0-22)	SW846 8260A
Benzene	95	(78 - 117)			SW846 8260A
	103	(78 - 117)	8.1	(0-17)	SW846 8260A
Toluene	103	(78 - 126)			SW846 8260A
	111	(78 - 126)	8.0	(0-24)	SW846 8260A
Chlorobenzene	100	(81 - 115)			SW846 8260A
	106	(81 - 115)	5.3	(0-18)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	87	(61 - 115)
	93	(61 - 115)
Toluene-d8	85	(82 - 129)
	93	(82 - 129)
Bromofluorobenzene	86	(64 - 112)
	94	(64 - 112)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

CHRYSLER CORPORATION

Chain-of-Custody

00084 A

CompuChem
501 Madison Avenue
Cary, NC 27513
Phone Number: 1-800-833-5097
Fax Number: (919) 379-4050

Project Name: DAYTON THERMAL
Site Location: DAYTON, OHIO
Site Code: 9C001 228-T
RFA Number: YGQP970028-T
Chrysler PM: GARY STANCZUK

Consultant: LEGGETTE, BRASHEARS & GRAHAM
Address: 1210 W. COUNTY RD. E, SUITE 700 ST. PAUL, MN 55112
Consultant PM: KEN VOGEL
Phone: 612-490-1405 Fax: 612-490-1006

Turn-around Time Request:
24 calendar hrs.
48 calendar hrs.
10 days
28 days

Data Package Deliverables: (circle)
Chrysler Level 1
Chrysler Level 2
Other (specify):

Matrix Codes
S - Soil
SW - Surface Water
GW - Groundwater
A - Air
Sed. - Sediment
O - Other (specify) PURGE WATER

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC8260 4oz GLASS/NONE	VOC8260 40ml GLASS/HCL							Volatiles pH <2	Metals pH <2	Cyanide pH > 12	Other ___	Remarks
SP-0001	11/19/97	09:25	G	S	1	X												
SP-0002	11/19/97	09:30	G	S	1	X												
PZ-09D 25-27	11/19/97	10:44	G	S	1	X												
PZ-09D 25-27 DUP	11/19/97	10:44	G	S	1	X												DUPLICATE SAMPLE
PZ-09D 45-47	11/19/97	12:23	G	S	1	X												
PZ-14I 20-22	11/20/97	07:55	G	S	1	X												
PZ14I-E	11/20/97	08:00	G	O	3		X											EQUIPMENT BLANK
PZ-14I 30-32	11/20/97	08:15	G	S	1	X												
PZ-14I 30-32 MS/MSD	11/20/97	08:15	G	S	1	X												MS/MSD
T-112097	11/20/97						X											TRIP BLANK

Sampler(s): DAVID STRAND, MARK HEMSTREET

Bottles Relinquished under Airbill No. 6586268-555/253/356/4 52/651 Samples Relinquished under Airbill No. 3930051064

Temperature (corrected) ___ C

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact?
Mark P. Hemstreet	11/20/97	18:40	Mark Bruce	11/21/97	15:07	Yes No
Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact? Yes No
Relinquished by:	Date:	Time:	Received for Laboratory by:	Date:	Time:	Custody Seal Intact? Yes No

Cooler ID # 99

Is RFA sampling complete? Yes No

Chrysler Corporation 800 Chrysler Drive, CIMS 482-00-51, Auburn Hills, Michigan 48326-2757

Distribution: White copy: Data package Yellow : Retained by laboratory Pink: Retained by sampler

SDG-228C IS COMPLETE. PROCEED WITH ANALYSIS.

Revision No 1
Created September 23, 1997

EPA Region 5 Records Ctr.
349872

ENTERED BY RC 3/16/98
CHECKED BY DVS
DATE 3/18/98

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-17D-E

GC/MS Volatiles

Lot-Sample #...: A7L030153-001 **Work Order #...:** CECKL101 **Matrix.....:** WATER
Date Sampled...: 12/02/97 09:10 **Date Received..:** 12/03/97
Prep Date.....: 12/10/97 **Analysis Date..:** 12/10/97
Prep Batch #...: 7345161
Dilution Factor: 1

RFA 97-228

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	2.0	ug/L	SW846 8260A
Bromomethane	ND	2.0	ug/L	SW846 8260A
Vinyl chloride	ND	1.0	ug/L	SW846 8260A
Chloroethane	ND	2.0	ug/L	SW846 8260A
Methylene chloride	ND	1.0	ug/L	SW846 8260A
Acetone	ND	10	ug/L	SW846 8260A
Carbon disulfide	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260A
2-Butanone	ND	10	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260A
Bromodichloromethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	1.0	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Benzene	ND	1.0	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Bromoform	ND	1.0	ug/L	SW846 8260A
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260A
2-Hexanone	ND	10	ug/L	SW846 8260A
Tetrachloroethene	ND	1.0	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260A
Toluene	ND	1.0	ug/L	SW846 8260A
Chlorobenzene	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	1.0	ug/L	SW846 8260A
Styrene	ND	1.0	ug/L	SW846 8260A
Xylenes (total)	ND	1.0	ug/L	SW846 8260A
cis-1,2-Dichloroethylene	ND	0.50	ug/L	SW846 8260A
trans-1,2-Dichloroethylene	ND	0.50	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	114	(69 - 127)
Toluene-d8	105	(90 - 112)
Bromofluorobenzene	104	(87 - 114)

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-17D (20-22)

GC/MS Volatiles

Lot-Sample #...: A7L030153-002 **Work Order #...:** CECKM102 **Matrix.....:** SOLID
Date Sampled...: 12/02/97 09:02 **Date Received..:** 12/03/97
Prep Date.....: 12/10/97 **Analysis Date..:** 12/10/97
Prep Batch #...: 7345223
Dilution Factor: 1
% Moisture.....: 3.7

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	10	ug/kg	SW846 8260A
Bromomethane	ND	10	ug/kg	SW846 8260A
Vinyl chloride	ND	10	ug/kg	SW846 8260A
Chloroethane	ND	10	ug/kg	SW846 8260A
Methylene chloride	ND	5.2	ug/kg	SW846 8260A
Acetone	ND	21	ug/kg	SW846 8260A
Carbon disulfide	ND	5.2	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	5.2	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	5.2	ug/kg	SW846 8260A
Chloroform	ND	5.2	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	5.2	ug/kg	SW846 8260A
2-Butanone	ND	21	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	5.2	ug/kg	SW846 8260A
Carbon tetrachloride	ND	5.2	ug/kg	SW846 8260A
Bromodichloromethane	ND	5.2	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	5.2	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	5.2	ug/kg	SW846 8260A
Trichloroethene	ND	5.2	ug/kg	SW846 8260A
Dibromochloromethane	ND	5.2	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	5.2	ug/kg	SW846 8260A
Benzene	ND	5.2	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	5.2	ug/kg	SW846 8260A
Bromoform	ND	5.2	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	21	ug/kg	SW846 8260A
2-Hexanone	ND	21	ug/kg	SW846 8260A
Tetrachloroethene	**86**	**5.2**	**ug/kg**	**SW846 8260A**
1,1,2,2-Tetrachloroethane	ND	5.2	ug/kg	SW846 8260A
Toluene	ND	5.2	ug/kg	SW846 8260A
Chlorobenzene	ND	5.2	ug/kg	SW846 8260A
Ethylbenzene	ND	5.2	ug/kg	SW846 8260A
Styrene	ND	5.2	ug/kg	SW846 8260A
Xylenes (total)	ND	5.2	ug/kg	SW846 8260A
cis-1,2-Dichloroethylene	ND	2.6	ug/kg	SW846 8260A
trans-1,2-Dichloroethylene	ND	2.6	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	105	(61 - 115)
Toluene-d8	95	(82 - 129)
Bromofluorobenzene	91	(64 - 112)

(Continued on next page)

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-17D (20-22)

GC/MS Volatiles

Lot-Sample #...: A7L030153-002 Work Order #...: CECKM102 Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-17D (30-32)

GC/MS Volatiles

Lot-Sample #...: A7L030153-003 **Work Order #...:** CECKN102 **Matrix.....:** SOLID
Date Sampled...: 12/02/97 09:40 **Date Received..:** 12/03/97
Prep Date.....: 12/11/97 **Analysis Date..:** 12/11/97
Prep Batch #...: 7345196
Dilution Factor: 1
% Moisture.....: 12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	1400	ug/kg	SW846 8260A
Bromomethane	ND	1400	ug/kg	SW846 8260A
Vinyl chloride	ND	1400	ug/kg	SW846 8260A
Chloroethane	ND	1400	ug/kg	SW846 8260A
Methylene chloride	ND	710	ug/kg	SW846 8260A
Acetone	ND	2800	ug/kg	SW846 8260A
Carbon disulfide	ND	710	ug/kg	SW846 8260A
1,1-Dichloroethene	ND	710	ug/kg	SW846 8260A
1,1-Dichloroethane	ND	710	ug/kg	SW846 8260A
Chloroform	ND	710	ug/kg	SW846 8260A
1,2-Dichloroethane	ND	710	ug/kg	SW846 8260A
2-Butanone	ND	2800	ug/kg	SW846 8260A
1,1,1-Trichloroethane	ND	710	ug/kg	SW846 8260A
Carbon tetrachloride	ND	710	ug/kg	SW846 8260A
Bromodichloromethane	ND	710	ug/kg	SW846 8260A
1,2-Dichloropropane	ND	710	ug/kg	SW846 8260A
cis-1,3-Dichloropropene	ND	710	ug/kg	SW846 8260A
Trichloroethene	ND	710	ug/kg	SW846 8260A
Dibromochloromethane	ND	710	ug/kg	SW846 8260A
1,1,2-Trichloroethane	ND	710	ug/kg	SW846 8260A
Benzene	ND	710	ug/kg	SW846 8260A
trans-1,3-Dichloropropene	ND	710	ug/kg	SW846 8260A
Bromoform	ND	710	ug/kg	SW846 8260A
4-Methyl-2-pentanone	ND	2800	ug/kg	SW846 8260A
2-Hexanone	ND	2800	ug/kg	SW846 8260A
Tetrachloroethene	**12000**	**710**	**ug/kg**	**SW846 8260A**
1,1,2,2-Tetrachloroethane	ND	710	ug/kg	SW846 8260A
Toluene	ND	710	ug/kg	SW846 8260A
Chlorobenzene	ND	710	ug/kg	SW846 8260A
Ethylbenzene	ND	710	ug/kg	SW846 8260A
Styrene	ND	710	ug/kg	SW846 8260A
Xylenes (total)	ND	710	ug/kg	SW846 8260A
trans-1,2-Dichloroethene	ND	350	ug/kg	SW846 8260A
cis-1,2-Dichloroethene	ND	350	ug/kg	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	101	(61 - 115)
Toluene-d8	96	(82 - 129)
Bromofluorobenzene	97	(64 - 112)

(Continued on next page)

COMPUCHEM ENVIRONMENTAL

Client Sample ID: PZ-17D (30-32)

GC/MS Volatiles

Lot-Sample #...: A7L030153-003 Work Order #...: CECKN102 Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

COMPUCHEM ENVIRONMENTAL

Client Sample ID: TB120297

GC/MS Volatiles

Lot-Sample #...: A7L030153-004 **Work Order #...:** CECKP101 **Matrix.....:** WATER
Date Sampled...: 12/02/97 00:00 **Date Received..:** 12/03/97
Prep Date.....: 12/10/97 **Analysis Date..:** 12/10/97
Prep Batch #...: 7345161
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	2.0	ug/L	SW846 8260A
Bromomethane	ND	2.0	ug/L	SW846 8260A
Vinyl chloride	ND	1.0	ug/L	SW846 8260A
Chloroethane	ND	2.0	ug/L	SW846 8260A
Methylene chloride	ND	1.0	ug/L	SW846 8260A
Acetone	ND	10	ug/L	SW846 8260A
Carbon disulfide	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260A
2-Butanone	ND	10	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260A
Bromodichloromethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	1.0	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Benzene	ND	1.0	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Bromoform	ND	1.0	ug/L	SW846 8260A
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260A
2-Hexanone	ND	10	ug/L	SW846 8260A
Tetrachloroethene	ND	1.0	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260A
Toluene	ND	1.0	ug/L	SW846 8260A
Chlorobenzene	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	1.0	ug/L	SW846 8260A
Styrene	ND	1.0	ug/L	SW846 8260A
Xylenes (total)	ND	1.0	ug/L	SW846 8260A
cis-1,2-Dichloroethylene	ND	0.50	ug/L	SW846 8260A
trans-1,2-Dichloroethylene	ND	0.50	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	107	(69 - 127)
Toluene-d8	105	(90 - 112)
Bromofluorobenzene	106	(87 - 114)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A7L030153 **Work Order #...:** CEGC3101 **Matrix.....:** WATER
MB Lot-Sample #: A7L110000-161

Prep Date.....: 12/10/97
Analysis Date..: 12/10/97 **Prep Batch #...:** 7345161
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	2.0	ug/L	SW846 8260A
Bromomethane	ND	2.0	ug/L	SW846 8260A
Vinyl chloride	ND	1.0	ug/L	SW846 8260A
Chloroethane	ND	2.0	ug/L	SW846 8260A
Methylene chloride	ND	1.0	ug/L	SW846 8260A
Acetone	ND	10	ug/L	SW846 8260A
Carbon disulfide	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260A
2-Butanone	ND	10	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260A
Bromodichloromethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	1.0	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Benzene	ND	1.0	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
Bromoform	ND	1.0	ug/L	SW846 8260A
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260A
2-Hexanone	ND	10	ug/L	SW846 8260A
Tetrachloroethene	ND	1.0	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260A
Toluene	ND	1.0	ug/L	SW846 8260A
Chlorobenzene	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	1.0	ug/L	SW846 8260A
Styrene	ND	1.0	ug/L	SW846 8260A
Xylenes (total)	ND	1.0	ug/L	SW846 8260A
cis-1,2-Dichloroethylene	ND	0.50	ug/L	SW846 8260A
trans-1,2-Dichloroethylen	ND	0.50	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	111	(69 - 127)
Toluene-d8	104	(90 - 112)
Bromofluorobenzene	105	(87 - 114)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.