DAYTON THERMAL PRODUCTS PLANT

SOIL VAPOR EXTRACTION SYSTEM

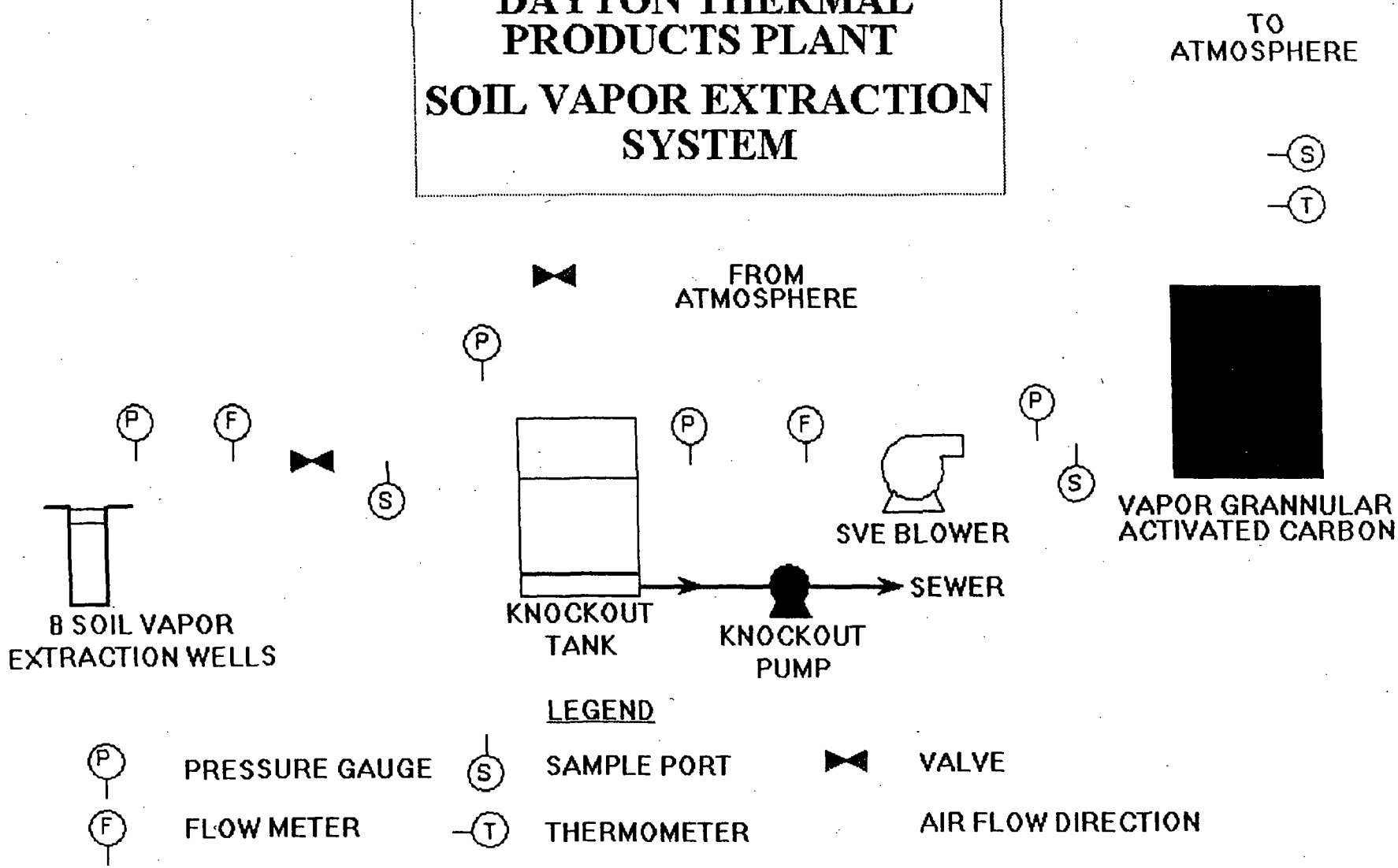

FIGURE: 1

Attachment 3
Site Map

draft

Attachment 4
Initial Air Emission Rate Calculations (table 1), and Sample Calculation 1

draft

Calculated by:_____
Date:_____
Checked by:_____

SAMPLE CALCULATION 1
SOIL VAPOR EXTRACTION SYSTEM, BUILDING 40B
AIR EMISSIONS CALCULATIONS
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

Calculated by: Rebecca Carlson
Checked by: Kristin Yahnke

STATEMENT OF PROBLEM:

Calculate the initial VOC air emissions rates for each compound detected during pilot test conducted 3/20/98. Assume an air flow rate of 440 scfm for the soil vapor extraction system at Dayton Thermal Products Plant, Dayton, Ohio.

GENERAL ASSUMPTIONS:

1. The maximum concentration of each contaminant observed during the 3/20/98 pilot test is used to calculate the initial emission rates for each contaminant.
2. Emission rates shown assume no controls.

STEP 1: Calculate the air emission limit:

$$\text{Air Emission Limit} = \frac{TLV}{42}$$

STEP 2: Convert maximum contaminent concentrations observed in 3/20/98 from mg/m3 to lb/ft3:

$$\left(\frac{mg}{m^3}\right) \bullet \left(\frac{m^3}{35.3 ft^3}\right) \bullet \left(\frac{2.204 \times 10^{-6} lb}{mg}\right) = \left(\frac{lb}{ft^3}\right)$$

STEP 3: Determine air emission rates in lb/min:

(Effluent Concentration lb/ft^3)* (Air Flow Rate scfm)= Air Emission Rate (lb/min)

STEP 4: Convert the air emission rate determined in STEP 3 from lb/min to lb/hour:

$$\frac{lb}{min.} \bullet \frac{min.}{hour} = \frac{lb}{hour}$$

STEP 5: Convert the air emission rate determined in STEP 4 from lb/hour to lb/day:

$$\frac{lb}{hour} \bullet \frac{hour}{day} = \frac{lb}{day} = M_o$$

Note: Summary results are shown in tables 1.

Attachment 5
Air Emission Rate Calculations (table 2), and Sample Calculation 2

draft

Calculated by:_____
Date:_____
Checked by:_____

Table 2
Dayton Thermal Products Plant
Dayton, OH

Air Emission Calculations Assuming Emission Rates Decay Exponentially

Compound Name	Mo (lb/day)	Molecular Weight	calculated k value
1,1-DCE	10.3	96.95	0.042
1,1-DCA	1.0	98.98	0.029
cis-1,2-DCE	1.9	96.95	0.033
1,1,1-TCA	2.1	133.42	0.034
TCE	13.8	131.4	0.044
PCE	2.7	165.9	0.035

Expected
Start-up date Jun-98
Air Flow: 440 scfm continuous

Detection
Limit: 5E-03 lb/day
Duration: 180 days

CALCULATION TABLE

		1,1-DCE				1,1-DCA			
Time (days)	Date	M_t (lb/day)	Mass Removed lbs	conc. (mg/m³)	conc. (PPMv)	M_t (lb/day)	Mass Removed lbs	conc. (mg/m³)	conc. (PPMv)
0	Jun-98	10.2859	0.0	257.7	63.95	0.989	0.0	25.0	6.08
30	Jul-98	2.8842	308.577	72.3	17.93	0.410	29.671	10.4	2.52
60	Jul-98	0.8088	86.527	20.3	5.03	0.170	12.292	4.3	1.04
90	Aug-98	0.2268	24.263	5.7	1.41	0.070	5.092	1.8	0.43
120	Sep-98	0.0636	6.803	1.6	0.40	0.029	2.110	0.7	0.18
150	Oct-98	0.0178	1.908	0.4	0.11	0.012	0.874	0.3	0.07
180	Nov-98	0.0050	0.535	0.1	0.03	0.005	0.362	0.1	0.03

		cis-1,2-DCE				1,1,1-TCA			
Time (days)	Date	M_t (lb/day)	Mass Removed lbs	conc. (mg/m³)	conc. (PPMv)	M_t (lb/day)	Mass Removed lbs	conc. (mg/m³)	conc. (PPMv)
0	Jun-98	1.938	0.0	49.0	12.2	2.136	0.0	54.0	9.74
30	Jul-98	0.718	58.155	18.1	4.5	0.778	64.089	19.7	3.55
60	Jul-98	0.266	21.536	6.7	1.7	0.284	23.353	7.2	1.29
90	Aug-98	0.098	7.975	2.5	0.6	0.103	8.509	2.6	0.47
120	Sep-98	0.036	2.954	0.9	0.2	0.038	3.101	1.0	0.17
150	Oct-98	0.014	1.094	0.3	0.1	0.014	1.130	0.3	0.06
180	Nov-98	0.005	0.405	0.1	0.0	0.005	0.412	0.1	0.02

		TCE				PCE			
Time (days)	Date	M_t (lb/day)	Mass Removed lbs	conc. (mg/m³)	conc. (PPMv)	M_t (lb/day)	Mass Removed lbs	conc. (mg/m³)	conc. (PPMv)
0	Jun-98	13.846	0.0	350.0	64.1	2.7	0.0	69.0	10.008
30	Jul-98	3.695	415.392	93.4	17.1	1.0	81.892	24.1	3.501
60	Jul-98	0.986	110.849	24.9	4.6	0.3	28.645	8.4	1.225
90	Aug-98	0.263	29.580	6.7	1.2	0.1	10.020	3.0	0.428
120	Sep-98	0.070	7.894	1.8	0.3	0.0	3.505	1.0	0.150
150	Oct-98	0.019	2.106	0.5	0.1	0.0	1.226	0.4	0.052
180	Nov-98	0.005	0.562	0.1	0.0	0.0	0.429	0.1	0.018

Calculated by:_____
Date:_____
Checked by:_____

SAMPLE CALCULATION 2
SOIL VAPOR EXTRACTION SYSTEM, BUILDING 40B
AIR EMISSIONS CALCULATIONS
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

Calculated by: Rebecca Carlson
Checked by: Kristin Yahnke

STATEMENT OF PROBLEM:

Calculate the VOC air emissions rates for each compound detected during pilot test conducted 3/20/98 at Dayton Thermal Products Plant, Dayton, Ohio.

GENERAL ASSUMPTIONS:

1. The M_o Value is based on the worst case emissions (see table 1) determined from a pilot test conducted 3/20/98. The initial concentration calculation assumes the system runs 24 hours/day, 365 days/year.
2. Air emission rates decay exponentially.
3. Air flow rate is 440 scfm total (8 wells running at 55 sfcm each).
4. Emission rates shown assume no controls.

STEP 1: Calculate decay constant k using the following equation:

$$M_t = M_o e^{-kt}$$

Where:
M_t= Mass removal (lb/day) at time t (days)
M_o= Initial mass removal (lb/day)
k = Exponential rate constant (day^{-1})
t = Time (days)

From the William's SVE Model (see attachment 5), clean-up will be completed within 3 months of system start-up:

$$M_{3Months} = 0 lb / day$$

Convert months to days:

$$3 \text{ months} * \left(\frac{30 \text{ days}}{\text{month}}\right) = 90 \text{ days}$$

SAMPLE CALCULATION 2
SOIL VAPOR EXTRACTION SYSTEM, BUILDING 40B
AIR EMISSIONS CALCULATIONS
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

Therefore:

$$M_{90\,days} = 0\,lb / day$$

Multiply the time by a safety factor of 2:

90 Days * 2= 180 Days

The equation becomes:

$$M_{180\,Days} = 0\,lb / day$$

Substitute known values and solve for k:

$M_{180\,days}$= Detection Limit, 5 E-3 lb/day
M_o= Initial mass removal (lb/day) see table 1 for values
k= Exponential rate constant (day^{-1})
t= 180 days

$$-\frac{1}{t}\ln\left(\frac{M_{180}}{M_o}\right) = k$$

STEP 2: Calculate M_t through time using the k value calculated in **STEP 1** and Mo values in table 1:

$$M_t = M_o e^{-kt}$$

Where: M_t= Mass removal (lb/day) at time t (days)
M_o= Initial mass removal (lb/day)
k= Exponential rate constant (day^{-1})
t= Time (days)

STEP 2: Calculate mass removed:

$$M_t\,(lbs / day) \bullet \text{number of days} = \text{mass removed (lbs)}$$

Calculated by:_____
Date:_____
Checked by:_____

SAMPLE CALCULATION 2
SOIL VAPOR EXTRACTION SYSTEM, BUILDING 40B
AIR EMISSIONS CALCULATIONS
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

STEP 3: Convert Mt from lb/day to mg/m3:

$$\left(\frac{lb}{ft^3}\right) \bullet \left(\frac{35.36 ft^3}{m^3}\right) \bullet \left(\frac{mg}{2.204 \times 10^{-6} lb}\right) = \left(\frac{mg}{m^3}\right)$$

STEP 4: Convert Mt from mg/m3 to PPMv:

$$\frac{\left(\frac{mg}{m^3}\right) \bullet (24.055)}{\text{Molecular Weight of Compound}} = \text{Concentration (PPMv)}$$

Note: Summary results listed in table 2.

Attachment 6
Pilot Test Analytical Results from 3/20/98

draft

PRECISION ENVIRONMENTAL

Field Monitoring and Testing Services

[illegible] Minneapolis, Minnesota 55-[illegible]
[illegible] 780-8737 • FAX 612 [illegible]

Report Date: 31-Mar-98

Analytical Report No: 98-046

Client Name: Leggette Brashears & Graham, Inc.
Address: 1210 W County Road E
City, State Zip: St. Paul, Minnesota 55112

Project Name: Dayton Thermal Products Plant
Sample collection/analysis date: 3/20/98 - 3/27/98

Sample I.D.:	AS/SVE-end	AS/SVE-end
Matrix:	Air	Air
Detection Limit / Units	1.0 µg/L	0.1PPMv
ANALYTES: 8260 + MDH 465D		
(F12) Dichlorodifluoromethane	ND	ND
Chloromethane	ND	ND
Vinyl Chloride	ND	ND
Bromomethane	ND	ND
Chloroethane	ND	ND
(F21) Dichlorofluoromethane	ND	ND
(F11) Trichlorofluoromethane	ND	ND
Ethyl Ether	ND	ND
1,1- Dichloroethene	**260**	**25**
(F13) Trichlorotrifluoroethane	ND	ND
Acetone	ND	ND
Allyl Chloride	ND	ND
Methylene Chloride	ND	ND
trans-1,2-Dichloroethene	ND	ND
Methyl tert-butyl ether	ND	ND
1,1-Dichloroethane	**25**	**5.7**
2,2-Dichloropropane	ND	ND
cis-1,2-Dichloroethene	**49**	**11**
Methyl Ethyl Ketone	ND	ND
Bromochloromethane	ND	ND
Tetrahydrofuran	ND	ND
Chloroform	ND	ND
1,1,1-Trichloroethane	**54**	**9.1**
1,1-Dichloropropene	ND	ND
Carbon tetrachloride	ND	ND
Benzene	ND	ND
1,2-Dichloroethane	ND	ND
Trichloroethene	**340**	**58**
1,2-Dichloropropane	ND	ND
Dibromomethane	ND	ND
Bromodichloromethane	ND	ND
cis-1,3-Dichloropropene	ND	ND
Methyl Isobutyl Ketone	ND	ND
Toluene	ND	ND
trans-1,3-Dichloropropene	ND	ND
1,1,2-Trichloroethane	ND	ND
Tetrachloroethene	**69**	**9.3**
1,3-Dichloropropane	ND	ND

PRECISION ENVIRONMENTAL

Field Monitoring and Testing Services

[illegible]
Minneapolis, Minnesota [illegible]
[illegible] 780-9787 • FAX [illegible]

Report Date:	31-Mar-98
Analytical Report No:	98-046
Client Name:	Leggette Brashears & Graham, Inc.
Address:	1210 W County Road E
City, State Zip:	St. Paul, Minnesota 55112
Project Name:	Dayton Thermal Products Plant
Sample collection/analysis date:	3/20/98 - 3/27/98

Sample I.D.:	AS/SVE-end	AS/SVE-end
Matrix:	Air	Air
Detection Limit / Units	1.0 µg/L	0.1PPMv
ANALYTES: 8260 + MDH 465D		
Dibromochloromethane	ND	ND
1,2-Dibromoethane	ND	ND
Chlorobenzene	ND	ND
1,1,1,2-Tetrachloroethane	ND	ND
Ethylbenzene	ND	ND
Xylenes	ND	ND
Styrene	ND	ND
Bromoform	ND	ND
Isopropylbenzene	ND	ND
Bromobenzene	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND
1,2,3-Trichloropropane	ND	ND
n-Propylbenzene	ND	ND
2-Chlorotoluene	ND	ND
1,3,5-Trimethylbenzene	ND	ND
4-Chlorotoluene	ND	ND
tert-Butylbenzene	ND	ND
1,2,4-Trimethylbenzene	ND	ND
sec-Butylbenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
p-Isooropyltoluene	ND	ND
1,4-Dichlorobenzene	ND	ND
1,2-Dichlorobenzene	ND	ND
n-Butylbenzene	ND	ND
1,2-Dibromo-3-chloropropane	ND	ND
1,2,4-Trichlorobenzene	ND	ND
Hexachlorobutadiene	ND	ND
Naphthalene	ND	ND
1,2,3-Trichlorobenzene	ND	ND

Analysis by GC PID/FID/ELCD (EPA method 18) modified TO-14 for 8260 analytes.
ND = not detected

Approved by,

Bruce J. Nasser
Analytical Services

Approved by,

Richard F. Dahl
Analytical Chemist

CHRYSLER CORPORATION

Chain-of-Custody

000174 A

~~CompuChem~~ Precision Labs 501 Madison Avenue Cary, NC 27513 Phone Number: 1-800-833-5097 Fax Number: (919) 379-4050	Project Name: Dayton Thermal Products Site Location: Dayton, Ohio Site Code: SC001 RFA Number: Chrysler PM: Gary Stanozak	Consultant: Leggette, Brashears & Graham Address: 1210 W County Road E St. Paul, MN 55112 Consultant PM: Ken Vogel Phone: 612 490 1405 Fax: 612 490 1426

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)

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	Compound List-Parameter/Method/Bottle Type/Preservative: Plus Vinyl Chloride list									Lab Use Only: Volatiles pH <2	Metals pH < 2	Cyanide pH > 12	Other ____	Remarks
A4/SVE end	3/26/98	1615	G	A	1	X													

Sampler(s)	Bottles Relinquished under Airbill No.			Samples Relinquished under Airbill No.			Temperature (corrected) ___ C
Brad Grimley	Relinquished by: Brad Grimley	Date: 3/26/98	Time: 1400	Received by: [illegible]	Date: 3/26/98	Time: 1400	Custody Seal Intact? Yes No
Cooler ID #	Relinquished by: [illegible]	Date: 3/27/98	Time: 0745	Received by: Paul Smith	Date: 3/27/98	Time: 7:45	Custody Seal Intact? Yes No
Is RFA sampling complete? Yes No	Relinquished by:	Date:	Time:	Received for Laboratory by:	Date:	Time:	Custody Seal Intact? 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

PRECISION ENVIRONMENTAL

Field Monitoring and Testing Services

8251 Main Street N.E.
Minneapolis, Minnesota 55432-1[illegible]
(612) 780-9787 • FAX (612) 78[illegible]

Report Date: 23-Mar-98

Analytical Report No: 98-034

Client Name: Leggette Brashears & Graham, Inc.
Address: 1210 W County Road E
City, State, Zip: St. Paul, Minnesota 55112

Project Name: Dayton Thermal Products Plant
Sample collection/analysis date: 3/18/98 - 3/19/98

Sample I.D.:	SVE-1S	SVE-1S	SVE-1D	SVE-1D
Matrix:	Air	Air	Air	Air
Detection Limit / Units	1.0 ug/L	0.01 PPMv	1.0 ug/L	0.01 PPMv
Analytes: 8260 + MDH 465D				
(F12) Dichlorodifluoromethane	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND
Vinyl Chloride	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND
(F21) Dichlorofluoromethane	ND	ND	ND	ND
(F11) Trichlorofluoromethane	ND	ND	ND	ND
Ethyl Ether	ND	ND	ND	ND
1,1-Dichloroethene	70	16	83	19
(F13) Trichlorotrifluoroethane	ND	ND	ND	ND
Acetone	ND	ND	ND	ND
Allyl Chloride	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND
Methyl tert-butyl ether	ND	ND	ND	ND
1,1-Dichloroethane	15	3.4	19	4.3
2,2-Dichloropropane	ND	ND	ND	ND
cis-1,2-Dichloroethene	46	11	38	8.8
Methyl Ethyl Ketone	ND	ND	ND	ND
Bromochloromethane	ND	ND	ND	ND
Tetrahydrofuran	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND
1,1,1-Trichloroethane	50	8.4	40	6.7
1,1-Dichloropropene	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND
Benzene	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND
Trichloroethene	350	60	250	43
1,2-Dichloropropane	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND
Methyl Isobutyl Ketone	ND	ND	ND	ND
Toluene	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND
Tetrachloroethene	29	3.9	43	5.8
1,3-Dichloropropane	ND	ND	ND	ND

PRECISION ENVIRONMENTAL

Field Monitoring and Testing Services

8251 Main Street
Minneapolis, Minnesota 55432-
(612) 780-9767 • FAX (612) 780-

Report Date: 23-Mar-98

Analytical Report No: 98-034

Client Name: Leggette Brashears & Graham, Inc.
Address: 1210 W County Road E
City, State Zip: St. Paul, Minnesota 55112

Project Name: Dayton Thermal Products Plant
Sample collection/analysis date: 3/18/98 - 3/19/98

Sample I.D.:	SVE-1S	SVE-1S	SVE-1D	SVE-1D
Matrix:	Air	Air	Air	Air
Detection Limit / Units	1.0 µg/L	0.01 PPMv	1.0 µg/L	0.01 PPMv
Analytes: 8260 + MDH 465D				
Dibromochloromethane	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND
Styrene	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND
Isopropylbenzene	ND	ND	ND	ND
Bromobenzene	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND
n-Propylbenzene	ND	ND	ND	ND
2-Chlorotoluene	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	ND
4-Chlorotoluene	ND	ND	ND	ND
tert-Butylbenzene	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	ND	ND	ND
sec-Butylbenzene	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND
p-Isopropyltoluene	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND
n-Butylbenzene	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND
1,2,3-Trichlorobenzene	ND	ND	ND	ND

Analysis by GC PID/FID/ELCD (EPA method 18) modified TO-14 for 8260 analytes.
ND = not detected

Approved by:

Bruce J. Nasser
Analytical Services

Reviewed by:

Richard R. Dahl
Analytical Chemist

CHRYSLER CORPORATION

Chain-of-Custody

0341

00934 A

Company: Precision Environmental 581 Madison Avenue Cary, NC 27513 Phone Number: 1-800-433-5097 Fax Number: (919) 379-4050	Project Name: Dayton Thermal Products Plant Site Location: Dayton OH Site Code: SC001 RFA Number: Chrysler PM: Gary Stynoski	Consultant: Leggette Brashears & Graham Inc. Address: 1210 W County Road E 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):

Compound List Parameter/Method/Bottle Type/Preservative: 8260 plus Vinyl Chloride 131

Matrix Codes: S - Soil; SW - Surface Water; GW - Groundwater; A - Air; Sed. - Sediment; O - Other (specify)

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	8260 plus Vinyl Chloride 131	Lab Use Only: Volatiles pH <2	Metals pH <2	Cyanide pH >12	Other	Remarks
SVE-15	3/18/98	9:05				X				1	After SVE Blower
SVE-10	3/18/98	11:15				X				2	After SVE Blower

Summa Canister
Canister Serial #'s
SVE-15 = 14247
SVE-10 = 14237

Sampler(s): Brad Gramley, Kristen Yahnke	Bottles Relinquished under Airbill No. 5024953306			Samples Relinquished under Airbill No. 5024953356		Temperature (corrected) ___ °C
	Relinquished by: Brad Gramley	Date: 3/18/98	Time: 1245	Received by:	Date:	Time:	Custody Seal Intact? Yes No
Cooler ID # ___	Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact? Yes No
Is RFA sampling complete? Yes No	Relinquished by:	Date:	Time:	Received for Laboratory by: [signature]	Date: 3-19-98	Time: 1030	Custody Seal Intact? 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

Revision No. 1
Created: September 23, 1993

Page 1 of 1

TOTAL P.04
FROM PRECISION ENVIRONMENTAL TO
P.04

PRECISION
ENVIRONMENTAL

Field Monitoring and Testing Services

FACSIMILE TRANSMITTAL

8251 Main Street Northeast
Minneapolis, Minnesota 55432
(612) 780-9787
Fax (612) 780-7157

Fax Number: (612) 490-1006

Total Pages: 4

Date: 03/23/98

Company: LBG

Attention: Kristen Yahnke

From: Bruce Nasser

Subject: Results

Message:

Attachment 7
SVE Modeling Explanation and Results

draft

Air Flow Modeling to Determine the Effective Radius of Influence

Data acquired from the SVE pilot test was evaluated by utilizing a pair of numerical subsurface air-flow models as described by Clarke, et al., (1988). The first model is a quasi-three-dimensional model that calculates soil-vapor velocity vectors using input data collected from pilot-testing results. The model assumes that the modeled domain can be described as an axially-symmetric region surrounding a SVE extraction well, and can be described using cylindrical coordinates. This cylindrical domain is assumed to consist of a homogeneous isotropic porous media that is bounded by a horizontal ground surface and a horizontal water table. The ground surface can be simulated as being open to the atmosphere (constant-head boundary) or may be covered with an impermeable liner (no-flow boundary). The ground-water table is simulated as a horizontal no-flow boundary.

A model run was made using SVE-1Sl with operating conditions of 31 scfm at 4.6 inches of WC. The operating conditions for each model run was determined using figures 12 and 13 as well as the geologic curves illustrated in figures 8 and 9. The largest radius of influence the model will accept is 95 feet, therefore the operating conditions that correspond to 95 feet were selected. The SVE-1S and vapor velocity fields, as determined by the first numerical model, are plotted as two-dimensional cross sections (figue 14 and 15, respectively).

The second numerical model is utilized to calculate VOC mass removal within the radius of influence of the extraction well. This model assumes that the soil within the observed radius of influence of the extraction well is uniformly impacted with the compound of concern and that uncontaminated air enters the domain.

The SVE extraction well is modeled as a point sink that is located along the axis of the cylindrical model domain. The loss of VOCs into the wells is handled by setting the VOC concentration in the model elements containing the well screen equal to zero. VOCs reaching these elements are assumed to have been removed from the subsurface.

The vapor is modeled as a compressible gas and the local equilibrium assumption is made. The model assumes VOC partitioning can be adequately described by Henry's Law. The modeling procedure involves the application of an effective Henry's Constant value that has been derived from bench-scale soil column tests (reported in literature).

After an effective Henry's Constant value has been determined for the compound of concern, the soil-vapor velocity field is calculated by the first model described above. The output of this model is then used as input within the VOC-mass removal model. The results of these model runs are then used as the basis for a full-scale system design.

Results of the VOC-mass removal model are presented as a grid of numbers representing a two-dimensional VOC-concentration cross section (figures 1 and 2). The extraction well is located on the left-hand side of the graphic. As stated above, the compound of concern is assumed to be evenly distributed throughout the model domain. A number between 0 and 10 is assigned to represent the VOC concentration at a particular location. For example, a value of 9 in the model array would indicate that a nominal value of 90 percent of the VOCs remained in the soil at that location, at that time, and that 0 to 10 percent of the VOCs have been removed. A value of 7 indicates 70 percent of the contamination remains and that 20 to 30 percent have been removed. Figure1 is the calculated VOC mass removal cross section for SVE-1S. The input parameters for the Wilson models and the corresponding numerical model output data is presented in the Appendix.

Using 52.5 scfm at 9 inches of WC as the design SVE operating conditions, the theoretical effective radius of influence for SVE-1D would be 95 feet. Based upon this spacing, the remediation time period would be approximately one and one-half years. Modeling of the SVE-1S data resulted in the same effective radius of influence and remediation time using 55 scfm at 8 inches WC.

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DAYTON THERMAL PRODUCTS
DAYTON, OHIO

INPUT PARAMETERS FOR WILSON'S MASS REMOVAL MODEL

Calculated by: Kristin S. Yahnke
Checked by: Matthew P. Peramaki

STATEMENT OF PROBLEM:

Determine input parameters for Wilson's mass removal model.

ASSUMPTIONS:

A steady state, radial low distribution has been achieved under steady barometric pressure.

INPUT PARAMETERS:

1.) Screened Radius of Well: 6 inch dia. bore hole or 3 inch radius = 0.1 meter

2.) Volume Fraction of Soil Water: Assume 5%

3.) Henry's Constant for TCE: 0.0063
(TCE most prevalent compound in remedial area.)
("Soil Cleanup by Insitu Aeration" Wilson, Todrigues-Maroto, and Gomez-Lahoz)

4.) Bulk Solute Concentration: 600 mg/kg
(December, 1997 soil sampling)

5.) Soil Density: Assumed 1.7 g/cm^3

6.) dT: 20,000 sec

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INPUT PARAMETERS FOR WILSON'S VELOCITY FIELD MODEL

Calculated by: Kristin S. Yahnke
Checked by: Matthew P. Peramaki

STATEMENT OF PROBLEM:

Determine input parameters for Wilson's velocity field model.

ASSUMPTIONS:

A steady state, radial low distribution has been achieved under steady barometric pressure.

INPUT PARAMETERS:

1.) Height of Sink Above Water Table: 15.5 feet = 5 meter

2.) Height of Ground Surface Above Water Table: 23.3 feet = 7 meter

3.) Radius of Impermeable Cap: 95 feet = 29 meter
(Model accepts value $\leq$ 29 meter)

4.) Zone of Influence: 95 feet = 29 meter
(Model accepts value $\leq$ 29 meter)

5.) Temperature: 10°C = 283 K

6.) Soil void fraction: Assume 28% = 0.28

7.) Screened Radius of Well: 6 inch dia. bore hole or 3 inch radius = 0.1 meter

8.) Well Pressure: 4.6 inches H_2O = 0.989 atm
(Determined from results of pilot testing)

9.) Molar Gas Flow Rate: 31 scfm = 0.62 mol/sec

FIELD MODEL FOR SOIL AERATION

For further information, contact
David J. Wilson
Dept. of Chemistry
Vanderbilt University
Nashville, Tennessee 37235

Program: CIBAHEN3
Velocity field file s:ötechö3chryödaytonöengineeröpilotöwilsonösvels.tst
Height of sink above the water table = 5 meters
Height of ground surface above the water table = 7 m
Radius of impermeable cap = 29 m
Radius of zone of influence = 29 m
Well pressure = .9890000224113464 atm
Temperature = 283 deg K
Soil voids fraction = .2800000011920929
Screened radius of well = .1000000014901161 m
Darcy's constant = 3.61997127532959 m^2/atm sec
Gas flow rate = .6000000238418579 mole/sec
Volumetric flow rate at 1 atm and 283 deg K = 1.393378991633654E-002 m^3/sec

Soil aeration by a single vent pipe.

This model assumes that the surrounding soil is free from contamination.

Grid size is 29 x 7
Volume fraction of soil water = 5.000000074505806E-002
Henry's Constant = 6.300000008195639E-003
Bulk solute concentration = 600 mg/kg
Soil density = 1.700000047683716 gm/cm^3
Initial total solute mass = 18864.435546875 kg
t = 20000 sec
= 60000 sec. residual solute mass = 18487.853515625 kg.
= 120000 sec. residual solute mass = 18115.2265625 kg.
= 180000 sec. residual solute mass = 17794.20703125 kg.
= 240000 sec. residual solute mass = 17466.212890625 kg.
= 300000 sec. residual solute mass = 17139.376953125 kg.
= 360000 sec. residual solute mass = 16882.037109375 kg.
= 420000 sec. residual solute mass = 16580.3203125 kg.
= 480000 sec. residual solute mass = 16276.8955078125 kg.
= 540000 sec. residual solute mass = 15976.208984375 kg.
= 600000 sec. residual solute mass = 15686.94921875 kg.
= 660000 sec. residual solute mass = 15405.55859375 kg.
= 720000 sec. residual solute mass = 15130 kg.
= 780000 sec. residual solute mass = 14860.1015625 kg.
= 840000 sec. residual solute mass = 14595.779296875 kg.
= 900000 sec. residual solute mass = 14336.998046875 kg.
= 960000 sec. residual solute mass = 14083.82421875 kg.
= 1020000 sec. residual solute mass = 13836.3994140625 kg.
= 1080000 sec. residual solute mass = 13595.068359375 kg.
= 1140000 sec. residual solute mass = 13360.4267578125 kg.
= 1200000 sec. residual solute mass = 13129.1005859375 kg.
= 1260000 sec. residual solute mass = 12886.373046875 kg.
= 1320000 sec. residual solute mass = 12650.69140625 kg.
= 1380000 sec. residual solute mass = 12436.6396484375 kg.
= 1440000 sec. residual solute mass = 12214.6591796875 kg.
= 1500000 sec. residual solute mass = 12001.3681640625 kg.
= 1560000 sec. residual solute mass = 11791.107421875 kg.

t =	1620000	sec.	residual solute mass =	11584.66796875	kg.
t =	1680000	sec.	residual solute mass =	11382.0263671875	kg.
t =	1740000	sec.	residual solute mass =	11183.126953125	kg.
t =	1800000	sec.	residual solute mass =	10987.845703125	kg.
t =	1860000	sec.	residual solute mass =	10796.1474609375	kg.
t =	1920000	sec.	residual solute mass =	10607.923828125	kg.
t =	1980000	sec.	residual solute mass =	10423.134765625	kg.
t =	2040000	sec.	residual solute mass =	10241.6904296875	kg.
t =	2100000	sec.	residual solute mass =	10063.5126953125	kg.
t =	2160000	sec.	residual solute mass =	9888.5625	kg.
t =	2220000	sec.	residual solute mass =	9716.748046875	kg.
t =	2280000	sec.	residual solute mass =	9548.02734375	kg.
t =	2340000	sec.	residual solute mass =	9382.3251953125	kg.
t =	2400000	sec.	residual solute mass =	9219.5849609375	kg.
t =	2460000	sec.	residual solute mass =	9059.748046875	kg.
t =	2520000	sec.	residual solute mass =	8902.755859375	kg.
t =	2580000	sec.	residual solute mass =	8748.5595703125	kg.
t =	2640000	sec.	residual solute mass =	8597.099609375	kg.
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t =	2760000	sec.	residual solute mass =	8302.1875	kg.
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=	8700000	sec.	residual	solute	mass =	1483.625366210938	kg.
=	8760000	sec.	residual	solute	mass =	1457.911010742188	kg.

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t =  12120000  sec.    residual solute mass =  546.772216796875  kg.
t =  12180000  sec.    residual solute mass =  537.2769775390625  kg.
t =  12240000  sec.    residual solute mass =  527.9462280273438  kg.
t =  12300000  sec.    residual solute mass =  518.77734375  kg.
t =  12360000  sec.    residual solute mass =  509.7681884765625  kg.
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: =	13740000	sec.	residual solute mass =	340.7666625976562	kg.
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: =	13860000	sec.	residual solute mass =	329.0452575683594	kg.
: =	13920000	sec.	residual solute mass =	323.3368835449219	kg.
: =	13980000	sec.	residual solute mass =	317.7281188964844	kg.
: =	14040000	sec.	residual solute mass =	312.2166748046875	kg.
: =	14100000	sec.	residual solute mass =	306.8013000488281	kg.
: =	14160000	sec.	residual solute mass =	301.4799499511719	kg.
=	14220000	sec.	residual solute mass =	296.2514038085938	kg.
=	14280000	sec.	residual solute mass =	291.1138000488281	kg.
=	14340000	sec.	residual solute mass =	286.0654907226562	kg.
=	14400000	sec.	residual solute mass =	281.1052551269531	kg.
=	14460000	sec.	residual solute mass =	276.2311706542969	kg.
=	14520000	sec.	residual solute mass =	271.4417114257812	kg.
=	14580000	sec.	residual solute mass =	266.7357788085938	kg.
=	14640000	sec.	residual solute mass =	262.1116943359375	kg.
=	14700000	sec.	residual solute mass =	257.5679931640625	kg.
=	14760000	sec.	residual solute mass =	253.1033477783203	kg.
=	14820000	sec.	residual solute mass =	248.7163848876953	kg.
=	14880000	sec.	residual solute mass =	244.4056854248047	kg.
=	14940000	sec.	residual solute mass =	240.1699523925781	kg.
=	15000000	sec.	residual solute mass =	236.0079803466797	kg.
=	15060000	sec.	residual solute mass =	231.9182739257812	kg.
=	15120000	sec.	residual solute mass =	227.8999176025391	kg.
=	15180000	sec.	residual solute mass =	223.9512634277344	kg.
=	15240000	sec.	residual solute mass =	220.0712738037109	kg.
=	15300000	sec.	residual solute mass =	216.2588195800781	kg.
=	15360000	sec.	residual solute mass =	212.5127868652344	kg.
=	15420000	sec.	residual solute mass =	208.8317565917969	kg.
=	15480000	sec.	residual solute mass =	205.2148132324219	kg.
=	15540000	sec.	residual solute mass =	201.6605529785156	kg.
=	15600000	sec.	residual solute mass =	198.1681671142578	kg.
=	15660000	sec.	residual solute mass =	194.7365264892578	kg.
=	15720000	sec.	residual solute mass =	191.3647766113281	kg.
=	15780000	sec.	residual solute mass =	188.0514373779297	kg.
=	15840000	sec.	residual solute mass =	184.7956085205078	kg.
=	15900000	sec.	residual solute mass =	181.5964965820312	kg.
=	15960000	sec.	residual solute mass =	178.4528961181641	kg.

t =	16020000	sec.	residual	solute	mass =	175.3640594482422	kg.
t =	16080000	sec.	residual	solute	mass =	172.3287658691406	kg.
t =	16140000	sec.	residual	solute	mass =	169.3463287353516	kg.
t =	16200000	sec.	residual	solute	mass =	166.4156951904297	kg.
t =	16260000	sec.	residual	solute	mass =	163.5360107421875	kg.
t =	16320000	sec.	residual	solute	mass =	160.7063751220703	kg.
t =	16380000	sec.	residual	solute	mass =	157.9257965087891	kg.
t =	16440000	sec.	residual	solute	mass =	155.1935119628906	kg.
t =	16500000	sec.	residual	solute	mass =	152.5087738037109	kg.
t =	16560000	sec.	residual	solute	mass =	149.87060546875	kg.
t =	16620000	sec.	residual	solute	mass =	147.2784576416016	kg.
t =	16680000	sec.	residual	solute	mass =	144.7311401367188	kg.
t =	16740000	sec.	residual	solute	mass =	142.2281341552734	kg.
t =	16800000	sec.	residual	solute	mass =	139.7685546875	kg.
t =	16860000	sec.	residual	solute	mass =	137.351806640625	kg.
t =	16920000	sec.	residual	solute	mass =	134.9768371582031	kg.
t =	16980000	sec.	residual	solute	mass =	132.6432952880859	kg.
t =	17040000	sec.	residual	solute	mass =	130.3501129150391	kg.
t =	17100000	sec.	residual	solute	mass =	128.0968475341797	kg.
t =	17160000	sec.	residual	solute	mass =	125.8826217651367	kg.
t =	17220000	sec.	residual	solute	mass =	123.706916809082	kg.
t =	17280000	sec.	residual	solute	mass =	121.5690002441406	kg.
t =	17340000	sec.	residual	solute	mass =	119.4680709838867	kg.
t =	17400000	sec.	residual	solute	mass =	117.4035949707031	kg.
t =	17460000	sec.	residual	solute	mass =	115.375114440918	kg.
t =	17520000	sec.	residual	solute	mass =	113.3817596435547	kg.
t =	17580000	sec.	residual	solute	mass =	111.4228820800781	kg.
t =	17640000	sec.	residual	solute	mass =	109.4981460571289	kg.
t =	17700000	sec.	residual	solute	mass =	107.6067352294922	kg.
t =	17760000	sec.	residual	solute	mass =	105.7480773925781	kg.
t =	17820000	sec.	residual	solute	mass =	103.9217910766602	kg.
t =	17880000	sec.	residual	solute	mass =	102.1269836425781	kg.
t =	17940000	sec.	residual	solute	mass =	100.3635787963867	kg.
=	18000000	sec.	residual	solute	mass =	98.63050842285156	kg.
=	18060000	sec.	residual	solute	mass =	96.92760467529297	kg.
=	18120000	sec.	residual	solute	mass =	95.25428009033203	kg.
=	18180000	sec.	residual	solute	mass =	93.60987854003906	kg.
=	18240000	sec.	residual	solute	mass =	91.99400329589844	kg.
=	18300000	sec.	residual	solute	mass =	90.40620422363281	kg.
=	18360000	sec.	residual	solute	mass =	88.84586334228516	kg.
=	18420000	sec.	residual	solute	mass =	87.31256103515625	kg.
=	18480000	sec.	residual	solute	mass =	85.80593872070312	kg.
=	18540000	sec.	residual	solute	mass =	84.32529449462891	kg.
=	18600000	sec.	residual	solute	mass =	82.87041473388672	kg.
=	18660000	sec.	residual	solute	mass =	81.44066619873047	kg.
=	18720000	sec.	residual	solute	mass =	80.03571319580078	kg.
=	18780000	sec.	residual	solute	mass =	78.6551513671875	kg.
=	18840000	sec.	residual	solute	mass =	77.29848480224609	kg.
=	18900000	sec.	residual	solute	mass =	75.96528625488281	kg.
=	18960000	sec.	residual	solute	mass =	74.65518951416016	kg.
=	19020000	sec.	residual	solute	mass =	73.36783599853516	kg.
=	19080000	sec.	residual	solute	mass =	72.10276031494141	kg.
=	19140000	sec.	residual	solute	mass =	70.85955047607422	kg.
=	19200000	sec.	residual	solute	mass =	69.63792419433594	kg.
=	19260000	sec.	residual	solute	mass =	68.43740081787109	kg.
=	19320000	sec.	residual	solute	mass =	67.2576904296875	kg.
=	19380000	sec.	residual	solute	mass =	66.09836578369141	kg.
=	19440000	sec.	residual	solute	mass =	64.95912933349609	kg.
=	19500000	sec.	residual	solute	mass =	63.83963775634766	kg.
=	19560000	sec.	residual	solute	mass =	62.7395133972168	kg.

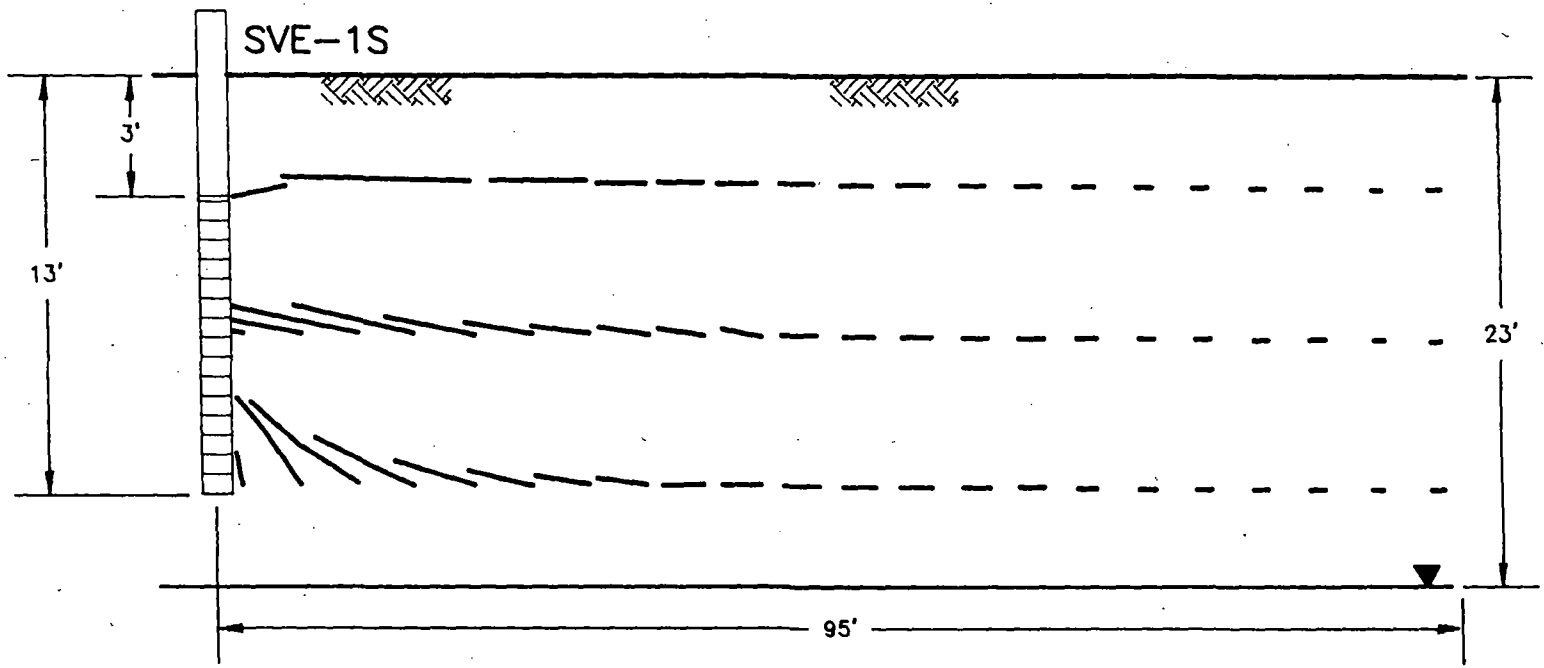
t =	19620000	sec.	residual	solute	mass =	61.6584358215332	kg.
t =	19680000	sec.	residual	solute	mass =	60.59601974487305	kg.
t =	19740000	sec.	residual	solute	mass =	59.55203628540039	kg.
t =	19800000	sec.	residual	solute	mass =	58.52610015869141	kg.
t =	19860000	sec.	residual	solute	mass =	57.51792144775391	kg.
t =	19920000	sec.	residual	solute	mass =	56.52719497680664	kg.
t =	19980000	sec.	residual	solute	mass =	55.55358505249023	kg.
t =	20040000	sec.	residual	solute	mass =	54.5968017578125	kg.
t =	20100000	sec.	residual	solute	mass =	53.65659713745117	kg.
t =	20160000	sec.	residual	solute	mass =	52.732666015625	kg.
t =	20220000	sec.	residual	solute	mass =	51.82465362548828	kg.
t =	20280000	sec.	residual	solute	mass =	50.93236541748047	kg.
t =	20340000	sec.	residual	solute	mass =	50.05551528930664	kg.
t =	20400000	sec.	residual	solute	mass =	49.19383239746094	kg.
t =	20460000	sec.	residual	solute	mass =	48.34702682495117	kg.
t =	20520000	sec.	residual	solute	mass =	47.51488494873047	kg.
t =	20580000	sec.	residual	solute	mass =	46.69709014892578	kg.
t =	20640000	sec.	residual	solute	mass =	45.89347839355469	kg.
t =	20700000	sec.	residual	solute	mass =	45.10371017456055	kg.
t =	20760000	sec.	residual	solute	mass =	44.32762145996094	kg.
t =	20820000	sec.	residual	solute	mass =	43.56491851806641	kg.
t =	20880000	sec.	residual	solute	mass =	42.81540298461914	kg.
t =	20940000	sec.	residual	solute	mass =	42.07882690429688	kg.
t =	21000000	sec.	residual	solute	mass =	41.35497283935547	kg.
t =	21060000	sec.	residual	solute	mass =	40.64363861083984	kg.
t =	21120000	sec.	residual	solute	mass =	39.94458389282227	kg.
t =	21180000	sec.	residual	solute	mass =	39.25761413574219	kg.
t =	21240000	sec.	residual	solute	mass =	38.5825080871582	kg.
t =	21300000	sec.	residual	solute	mass =	37.91904067993164	kg.
t =	21360000	sec.	residual	solute	mass =	37.26705551147461	kg.
t =	21420000	sec.	residual	solute	mass =	36.62628936767578	kg.
t =	21480000	sec.	residual	solute	mass =	35.99660110473633	kg.
t =	21540000	sec.	residual	solute	mass =	35.37778854370117	kg.
t =	21600000	sec.	residual	solute	mass =	34.76966094970703	kg.
t =	21660000	sec.	residual	solute	mass =	34.1720085144043	kg.
t =	21720000	sec.	residual	solute	mass =	33.58467864990234	kg.
t =	21780000	sec.	residual	solute	mass =	33.00750350952148	kg.
t =	21840000	sec.	residual	solute	mass =	32.44025039672852	kg.
t =	21900000	sec.	residual	solute	mass =	31.8828067779541	kg.
t =	21960000	sec.	residual	solute	mass =	31.33499145507812	kg.
t =	22020000	sec.	residual	solute	mass =	30.79660797119141	kg.
t =	22080000	sec.	residual	solute	mass =	30.26751899719238	kg.
t =	22140000	sec.	residual	solute	mass =	29.74756622314453	kg.
t =	22200000	sec.	residual	solute	mass =	29.2365608215332	kg.
t =	22260000	sec.	residual	solute	mass =	28.73437881469727	kg.
t =	22320000	sec.	residual	solute	mass =	28.24085807800293	kg.
t =	22380000	sec.	residual	solute	mass =	27.7558479309082	kg.
t =	22440000	sec.	residual	solute	mass =	27.27920913696289	kg.
t =	22500000	sec.	residual	solute	mass =	26.81076812744141	kg.
t =	22560000	sec.	residual	solute	mass =	26.35041046142578	kg.
t =	22620000	sec.	residual	solute	mass =	25.89798736572266	kg.
t =	22680000	sec.	residual	solute	mass =	25.45336723327637	kg.
t =	22740000	sec.	residual	solute	mass =	25.01638984680176	kg.
t =	22800000	sec.	residual	solute	mass =	24.58697128295898	kg.
t =	22860000	sec.	residual	solute	mass =	24.16493606567383	kg.
t =	22920000	sec.	residual	solute	mass =	23.75016975402832	kg.
t =	22980000	sec.	residual	solute	mass =	23.34256362915039	kg.
t =	23040000	sec.	residual	solute	mass =	22.94197845458984	kg.
t =	23100000	sec.	residual	solute	mass =	22.54828071594238	kg.
t =	23160000	sec.	residual	solute	mass =	22.16138076782227	kg.

t =	23220000	sec.	residual	solute	mass =	21.78112983703613	kg.
t =	23280000	sec.	residual	solute	mass =	21.40743637084961	kg.
t =	23340000	sec.	residual	solute	mass =	21.04018211364746	kg.
t =	23400000	sec.	residual	solute	mass =	20.67923736572266	kg.
t =	23460000	sec.	residual	solute	mass =	20.32451057434082	kg.
t =	23520000	sec.	residual	solute	mass =	19.97591781616211	kg.
t =	23580000	sec.	residual	solute	mass =	19.63328552246094	kg.
t =	23640000	sec.	residual	solute	mass =	19.29657363891602	kg.
t =	23700000	sec.	residual	solute	mass =	18.96565628051758	kg.
t =	23760000	sec.	residual	solute	mass =	18.64043617248535	kg.
t =	23820000	sec.	residual	solute	mass =	18.32081031799316	kg.
t =	23880000	sec.	residual	solute	mass =	18.00669288635254	kg.
t =	23940000	sec.	residual	solute	mass =	17.69796562194824	kg.
t =	24000000	sec.	residual	solute	mass =	17.39457511901855	kg.
t =	24060000	sec.	residual	solute	mass =	17.09638023376465	kg.
t =	24120000	sec.	residual	solute	mass =	16.80332374572754	kg.
t =	24180000	sec.	residual	solute	mass =	16.51531028747559	kg.
t =	24240000	sec.	residual	solute	mass =	16.23225784301758	kg.
t =	24300000	sec.	residual	solute	mass =	15.95406150817871	kg.
t =	24360000	sec.	residual	solute	mass =	15.68064785003662	kg.
t =	24420000	sec.	residual	solute	mass =	15.41195487976074	kg.
t =	24480000	sec.	residual	solute	mass =	15.14786720275879	kg.
t =	24540000	sec.	residual	solute	mass =	14.88831996917725	kg.
t =	24600000	sec.	residual	solute	mass =	14.63324928283691	kg.
t =	24660000	sec.	residual	solute	mass =	14.38255310058594	kg.
t =	24720000	sec.	residual	solute	mass =	14.13616275787354	kg.
t =	24780000	sec.	residual	solute	mass =	13.89402103424072	kg.
t =	24840000	sec.	residual	solute	mass =	13.65602779388428	kg.
t =	24900000	sec.	residual	solute	mass =	13.42214393615723	kg.
t =	24960000	sec.	residual	solute	mass =	13.19225978851318	kg.
t =	25020000	sec.	residual	solute	mass =	12.96633052825928	kg.
t =	25080000	sec.	residual	solute	mass =	12.74429225921631	kg.
t =	25140000	sec.	residual	solute	mass =	12.52606105804443	kg.
t =	25200000	sec.	residual	solute	mass =	12.31158924102783	kg.
t =	25260000	sec.	residual	solute	mass =	12.10079383850098	kg.
t =	25320000	sec.	residual	solute	mass =	11.89362812042236	kg.
t =	25380000	sec.	residual	solute	mass =	11.69000720977783	kg.
t =	25440000	sec.	residual	solute	mass =	11.48989105224609	kg.
t =	25500000	sec.	residual	solute	mass =	11.2932186126709	kg.
t =	25560000	sec.	residual	solute	mass =	11.09991455078125	kg.
t =	25620000	sec.	residual	solute	mass =	10.90993595123291	kg.
t =	25680000	sec.	residual	solute	mass =	10.7232141494751	kg.
t =	25740000	sec.	residual	solute	mass =	10.53970050811768	kg.
t =	25800000	sec.	residual	solute	mass =	10.35934638977051	kg.
t =	25860000	sec.	residual	solute	mass =	10.18207836151123	kg.
t =	25920000	sec.	residual	solute	mass =	10.00785160064697	kg.
t =	25980000	sec.	residual	solute	mass =	9.836625099182129	kg.
t =	26040000	sec.	residual	solute	mass =	9.668336868286133	kg.
t =	26100000	sec.	residual	solute	mass =	9.502933502197266	kg.
t =	26160000	sec.	residual	solute	mass =	9.340367317199707	kg.
t =	26220000	sec.	residual	solute	mass =	9.180594444274902	kg.
t =	26280000	sec.	residual	solute	mass =	9.023564338684082	kg.
t =	26340000	sec.	residual	solute	mass =	8.86922550201416	kg.
t =	26400000	sec.	residual	solute	mass =	8.717532157897949	kg.
t =	26460000	sec.	residual	solute	mass =	8.568448066711426	kg.
t =	26520000	sec.	residual	solute	mass =	8.421916961669922	kg.
t =	26580000	sec.	residual	solute	mass =	8.277904510498047	kg.
t =	26640000	sec.	residual	solute	mass =	8.136355400085449	kg.
t =	26700000	sec.	residual	solute	mass =	7.997239112854004	kg.
t =	26760000	sec.	residual	solute	mass =	7.860511779785156	kg.

t =	26820000	sec.	residual solute mass =	7.726124286651611	kg.
t =	26880000	sec.	residual solute mass =	7.594040870666504	kg.
t =	26940000	sec.	residual solute mass =	7.464223861694336	kg.
t =	27000000	sec.	residual solute mass =	7.336634159088135	kg.
t =	27060000	sec.	residual solute mass =	7.211230754852295	kg.
t =	27120000	sec.	residual solute mass =	7.087981700897217	kg.
t =	27180000	sec.	residual solute mass =	6.966834545135498	kg.
t =	27240000	sec.	residual solute mass =	6.847772598266602	kg.
t =	27300000	sec.	residual solute mass =	6.730754375457764	kg.
t =	27360000	sec.	residual solute mass =	6.615732669830322	kg.
t =	27420000	sec.	residual solute mass =	6.502688884735107	kg.
t =	27480000	sec.	residual solute mass =	6.391580104827881	kg.
t =	27540000	sec.	residual solute mass =	6.282379627227783	kg.
t =	27600000	sec.	residual solute mass =	6.175042152404785	kg.
t =	27660000	sec.	residual solute mass =	6.069553852081299	kg.
t =	27720000	sec.	residual solute mass =	5.965864658355713	kg.
t =	27780000	sec.	residual solute mass =	5.863957405090332	kg.
t =	27840000	sec.	residual solute mass =	5.763790607452393	kg.
t =	27900000	sec.	residual solute mass =	5.665342807769775	kg.
t =	27960000	sec.	residual solute mass =	5.568581104278564	kg.
t =	28020000	sec.	residual solute mass =	5.473476886749268	kg.
t =	28080000	sec.	residual solute mass =	5.380001068115234	kg.
t =	28140000	sec.	residual solute mass =	5.28812837600708	kg.
t =	28200000	sec.	residual solute mass =	5.197827816009521	kg.
t =	28260000	sec.	residual solute mass =	5.109073638916016	kg.
t =	28320000	sec.	residual solute mass =	5.021838188171387	kg.
t =	28380000	sec.	residual solute mass =	4.936096668243408	kg.
t =	28440000	sec.	residual solute mass =	4.851826190948486	kg.
t =	28500000	sec.	residual solute mass =	4.768994808197021	kg.
t =	28560000	sec.	residual solute mass =	4.687581062316895	kg.
t =	28620000	sec.	residual solute mass =	4.607565402984619	kg.
t =	28680000	sec.	residual solute mass =	4.528916835784912	kg.
=	28740000	sec.	residual solute mass =	4.451611042022705	kg.
=	28800000	sec.	residual solute mass =	4.375630378723145	kg.
=	28860000	sec.	residual solute mass =	4.300955295562744	kg.
=	28920000	sec.	residual solute mass =	4.227553844451904	kg.
=	28980000	sec.	residual solute mass =	4.15540599822998	kg.
=	29040000	sec.	residual solute mass =	4.084496974945068	kg.
=	29100000	sec.	residual solute mass =	4.014800071716309	kg.
=	29160000	sec.	residual solute mass =	3.946295499801636	kg.
=	29220000	sec.	residual solute mass =	3.878960371017456	kg.
=	29280000	sec.	residual solute mass =	3.812782049179077	kg.
=	29340000	sec.	residual solute mass =	3.747732639312744	kg.
=	29400000	sec.	residual solute mass =	3.683799028396606	kg.
=	29460000	sec.	residual solute mass =	3.620954036712646	kg.
=	29520000	sec.	residual solute mass =	3.559186935424805	kg.
=	29580000	sec.	residual solute mass =	3.498476505279541	kg.
=	29640000	sec.	residual solute mass =	3.438802480697632	kg.
=	29700000	sec.	residual solute mass =	3.380149602890015	kg.
=	29760000	sec.	residual solute mass =	3.322497606277466	kg.
=	29820000	sec.	residual solute mass =	3.265835046768188	kg.
=	29880000	sec.	residual solute mass =	3.210139036178589	kg.
=	29940000	sec.	residual solute mass =	3.155397176742554	kg.
=	30000000	sec.	residual solute mass =	3.101591825485229	kg.
=	30060000	sec.	residual solute mass =	3.048703193664551	kg.
=	30120000	sec.	residual solute mass =	2.996721982955933	kg.
=	30180000	sec.	residual solute mass =	2.945625305175781	kg.
=	30240000	sec.	residual solute mass =	2.895405054092407	kg.
=	30300000	sec.	residual solute mass =	2.846042156219482	kg.
=	30360000	sec.	residual solute mass =	2.797523498535156	kg.

```
t =  30420000  sec.    residual solute mass =  2.749835491180 42  kg.
t =  30480000  sec.    residual solute mass =  2.702959060668945  kg.
t =  30540000  sec.    residual solute mass =  2.656883955001831  kg.
t =  30600000  sec.    residual solute mass =  2.611598491668701  kg.
t =  30660000  sec.    residual solute mass =  2.567085266113281  kg.
t =  30720000  sec.    residual solute mass =  2.523333549499512  kg.
t =  30780000  sec.    residual solute mass =  2.480329275131226  kg.
t =  30840000  sec.    residual solute mass =  2.438059091567993  kg.
t =  30900000  sec.    residual solute mass =  2.396510362625122  kg.
t =  30960000  sec.    residual solute mass =  2.355672597885132  kg.
t =  31020000  sec.    residual solute mass =  2.315531253814697  kg.
t =  31080000  sec.    residual solute mass =  2.276076793670654  kg.
t =  31140000  sec.    residual solute mass =  2.23729395866394  kg.
t =  31200000  sec.    residual solute mass =  2.199175596237183  kg.
t =  31260000  sec.    residual solute mass =  2.161707878112793  kg.
t =  31320000  sec.    residual solute mass =  2.124880075454712  kg.
t =  31380000  sec.    residual solute mass =  2.088679313659668  kg.
t =  31440000  sec.    residual solute mass =  2.053098917007446  kg.
t =  31500000  sec.    residual solute mass =  2.018125534057617  kg.
t =  31560000  sec.    residual solute mass =  1.983749270439148  kg.
: =  31620000  sec.    residual solute mass =  1.949958443641663  kg.
: =  31680000  sec.    residual solute mass =  1.916746616363525  kg.
: =  31740000  sec.    residual solute mass =  1.88409960269928  kg.
: =  31800000  sec.    residual solute mass =  1.852011442184448  kg.
: =  31860000  sec.    residual solute mass =  1.820471048355103  kg.
: =  31920000  sec.    residual solute mass =  1.789469003677368  kg.
: =  31980000  sec.    residual solute mass =  1.758994817733765  kg.
: =  32040000  sec.    residual solute mass =  1.729041337966919  kg.
: =  32100000  sec.    residual solute mass =  1.699598431587219  kg.
: =  32160000  sec.    residual solute mass =  1.670658826828003  kg.
: =  32220000  sec.    residual solute mass =  1.642213344573975  kg.
. =  32280000  sec.    residual solute mass =  1.614253282546997  kg.
  =  32340000  sec.    residual solute mass =  1.586770415306091  kg.
  =  32400000  sec.    residual solute mass =  1.559755206108093  kg.
  =  32460000  sec.    residual solute mass =  1.533200263977051  kg.
  =  32520000  sec.    residual solute mass =  1.507094860076904  kg.
  =  32580000  sec.    residual solute mass =  1.481430888175964  kg.
  =  32640000  sec.    residual solute mass =  1.456196308135986  kg.
  =  32700000  sec.    residual solute mass =  1.431377649307251  kg.
  =  32760000  sec.    residual solute mass =  1.406952619552612  kg.
  =  32820000  sec.    residual solute mass =  1.3828946352005  kg.
  =  32880000  sec.    residual solute mass =  1.359154343605042  kg.
  =  32940000  sec.    residual solute mass =  1.335651516914368  kg.
  =  33000000  sec.    residual solute mass =  1.313628554344177  kg.
  =  33060000  sec.    residual solute mass =  1.29118287563324  kg.
  =  33120000  sec.    residual solute mass =  1.269210934638977  kg.
  =  33180000  sec.    residual solute mass =  1.247612476348877  kg.
  =  33240000  sec.    residual solute mass =  1.226383328437805  kg.
  =  33300000  sec.    residual solute mass =  1.20551598072052  kg.
  =  33360000  sec.    residual solute mass =  1.185005068778992  kg.
  =  33420000  sec.    residual solute mass =  1.164843082427979  kg.
  =  33480000  sec.    residual solute mass =  1.145025134086609  kg.
  =  33540000  sec.    residual solute mass =  1.125545263290405  kg.
  =  33600000  sec.    residual solute mass =  1.106397032737732  kg.
  =  33660000  sec.    residual solute mass =  1.08757495880127  kg.
  =  33720000  sec.    residual solute mass =  1.069073677062988  kg.
  =  33780000  sec.    residual solute mass =  1.050888657569885  kg.
  =  33840000  sec.    residual solute mass =  1.033012986183167  kg.
  =  33900000  sec.    residual solute mass =  1.01544189453125  kg.
ration of run =  33940000  sec
```

Initial total mass = 18595.83984375 gm
Final total mass = 1.003894329071045 gm
Initial mean concn = 17.257272116778 gm/mL
Final mean concn = 9.316319004055094E-004 gm/mL



MODEL ASSUMPTIONS

SUBSURFACE TEMPERATURE: 50°F
POROSITY: 28%
SVE WELL RADIUS: 0.10 METERS
WELLHEAD VACUUM: 4.6" OF WATER
FLOW RATE: 31 CFM

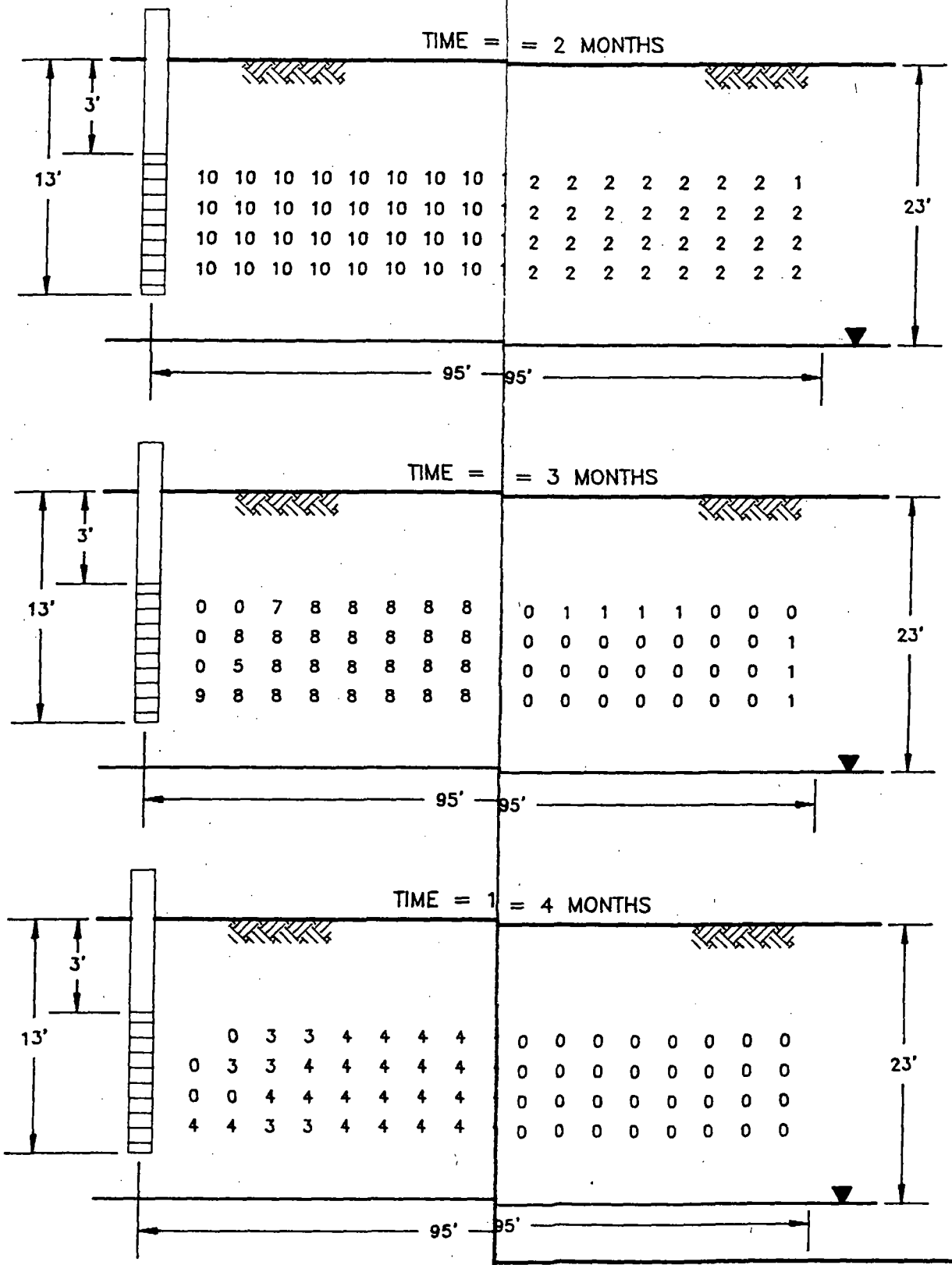
NOT TO SCALE

DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

2-D SVE WELL VELOCITY FIELD FROM SVE-1S

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
		(612) 490-1405

FILE:	3CHDA04N.DWG	DATE:	APRIL 1998	FIGURE:	4



TON THERMAL PRODUCTS PLANT
DAYTON, OHIO

2-D REMEDIATION CROSS-SECTIONS
VE-1S WITH CONCENTRATION OF 600 mg/kg

04L.DWG	DATE: APRIL 1998	FIGURE:	3

10160/875289 /4166540-47

DAIMLERCHRYSLER — Chain-of-Custody

3859 B

Lancaster Laboratories	Project Name: DCX - Dayton Thermal	Consultant: EarthTech	
2425 New Holland Pike	Site Location: Dayton, OH.	Address: 4135 Technology Pkwy	
Lancaster, PA 17601	Site Code:	Sheboygan WI 43083	
Phone Number: (717) 656-2300	RFA Number: ET 03076	Consultant PM: Rob Stenson	
Fax Number: (717) 656-2681	DaimlerChrysler PM: Gary Stanczuk	Phone: 920-457-2407 Fax: 920-458-0550	

Turn-around Time Request: (circle)
24 calendar hrs.
48 calendar hrs.
7 calendar days
(14) calendar days

Data Package Deliverables: (circle)
DaimlerChrysler Level (1)
DaimlerChrysler Level 2
CLP

Matrix Codes
S - Soil; SW - Surface Water; GW - Groundwater; A - Air; Sed. - Sediment; O - Other (specify)

Are aqueous samples field filtered for metals? Yes No

EPA Region 5 Records Ctr. 349420

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	TOC	8015B	SO_3	NO_2	NO_3	COD	COD (dissolved)	Fe^{2+}	T. Hard	Remarks
MW 34S-111703	11/17/03	1425	G	GW	10	X	X	X	X	X	X	X	X	X	
PZ 34I-111703	↓	1530	↓	↓	↓	X	X	X	X	X	X	X	X	X	
PZ 34D-111703	↓	1425	↓	↓	↓	X	X	X	X	X	X	X	X	X	
MW C001-111703	↓	1640	↓	↓	↓	X	X	X	X	X	X	X	X	X	COD bottle was rec'd broken @ lab } KAW 11/18/03
MW B001-111703	↓	1705	↓	↓	↓	X	X	X	X	X	X	X	X	X	COD bottle was rec'd broken @ lab. } KAW 11/18/03

Sampler(s)	Cooler ID #	Samples Relinquished under Airbill No.	Temperature (corrected)
DD/KZ/DH	C06762-C07845-C07851-C07132	842249102537	4.5°, 5.2°, 5.2°

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact?
D. Decenzler	11/17/03	1830				Yes No

Is RFA sampling complete?	Relinquished by:	Date:	Time:	Received for Laboratory by:	Date:	Time:	Custody Seal Intact?
Yes (No)				Kathy Brinkley	11-18-03	0945	(Yes) No

DaimlerChrysler Corporation 800 Chrysler Drive, CIMS 482-00-53, Auburn Hills, Michigan 48326-2757

Distribution: White copy: Data package Yellow : Retained by laboratory Pink: Retained by sampler

Revision No. 3
Created: July 9, 1999

10160/875289/4166540-49

DAIMLERCHRYSLER — Chain-of-Custody

3857 B

Lancaster Laboratories	Project Name: DCX - Dayton Thermal	Consultant: Earth Tech	
2425 New Holland Pike	Site Location: Dayton, OH	Address: 4135 Technology Pkwy	
Lancaster, PA 17601	Site Code:	Sheboygan WI 43083	
Phone Number: (717) 656-2300	RFA Number: ET 03076	Consultant PM: Rob Stenson	
Fax Number: (717) 656-2681	DaimlerChrysler PM: Gary Stanczuk	Phone: 920-451-2407	Fax: 920-458-0550

Turn-around Time Request: (circle)
24 calendar hrs.
48 calendar hrs.
7 calendar days
14 calendar days

Data Package Deliverables: (circle)
DaimlerChrysler Level 1
DaimlerChrysler Level 2
CLP

Matrix Codes
S - Soil
SW - Surface Water
GW - Groundwater
A - Air
Sed. - Sediment
O - Other (specify) _____

Are aqueous samples field filtered for metals? Yes No

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	Mn Fe	SO4	Alkalinity	Fe (Dissolved)						Remarks
MW34S-111703	11/17/03	1425	G	GW	4	X	X	X	X						
PZ34I-111703	↓	1530	↓	↓	↓	X	X	X	X						
PZ34D-111703	↓	1425	↓	↓	↓	X	X	X	X						
MWC001-111703	↓	1640	↓	↓	↓	X	X	X	X						
MWB001-111703	↓	1705	↓	↓	↓	X	X	X	X						

Sampler(s)	Cooler ID # C06762-C07845-C07851/C07132			Samples Relinquished under Airbill No. 842249102537			Temperature (corrected) 4.5, 5.2, 5.3
DD/KZ/DH	Relinquished by: P. December	Date: 11/17/03	Time: 1830	Received by:	Date:	Time:	~~Custody Seal Intact?~~ Yes No
Is RFA sampling complete? Yes (No)	Relinquished by:	Date:	Time:	Received for Laboratory by: Kathy Binkley	Date: 11-18-03	Time: 0945	Custody Seal Intact? (Yes) No

DaimlerChrysler 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

Revision No. 3
Created: July 9, 1999

Lancaster Laboratories

ANALYTICAL RESULTS

Prepared for:

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

248-576-5741

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 875289. Samples arrived at the laboratory on Tuesday, November 18, 2003. The PO# for this group is N99C403749-B.

Client Description	Lancaster Labs Number
MW34S-111703 Grab Water Sample	4166540
MW34S-111703 Filtered Grab Water Sample	4166541
PZ34I-111703 Grab Water Sample	4166542
PZ34I-111703 Filtered Grab Water Sample	4166543
PZ34D-111703 Grab Water Sample	4166544
PZ34D-111703 Filtered Grab Water Sample	4166545
MWC001-111703 Grab Water Sample	4166546
MWC001-111703 Filtered Grab Water Sample	4166547
MWB001-111703 Grab Water Sample	4166548
MWB001-111703 Filtered Grab Water Sample	4166549

1 COPY TO	Earth Tech	Attn: Ms. Lisa Smith
1 COPY TO	Earth Tech	Attn: Mr. Rob Stenson

Lancaster Laboratories

Questions? Contact your Client Services Representative
Katherine A Klinefelter at (717) 656-2300.

Respectfully Submitted,

Elizabeth A. Smith
Senior Chemist

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166540

MW34S-111703 Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 14:25 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

MW34S SDG#: DCN83-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01754	Iron	7439-89-6	0.696	0.0453	mg/l	1
02268	Ferric Iron	n.a.	0.70	0.045	mg/l	1
07058	Manganese	7439-96-5	0.519	0.00051	mg/l	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	0.41	mg/l as CaCO3	1
00202	Alkalinity to pH 4.5	n.a.	362.	0.41	mg/l as CaCO3	1
00216	Total Hardness	471-34-1	546.	2.5	mg/l as CaCO3	5
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00229	Sulfite	14265-45-3	N.D.	1.2	mg/l	1
	The 40 CFR Part 136 requires that analysis for sulfite be performed immediately (within 15 minutes) upon sample collection. Although this analysis is performed promptly upon receipt at the laboratory, the results may not be acceptable for NPDES compliance monitoring.					
00273	Total Organic Carbon	n.a.	1.5 J	0.50	mg/l	1
01125	Sulfate (turbidimetric)	14808-79-8	138.	7.5	mg/l	5
04001	Chemical Oxygen Demand	n.a.	16.2 J	8.2	mg/l	1
08344	Ferrous Iron	n.a.	N.D.	0.0080	mg/l	1
07105	Volatile Headspace Hydrocarbon					
07107	Ethane	74-84-0	N.D.	1.0	ug/l	1
07108	Ethene	74-85-1	N.D.	1.0	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	11/24/2003 06:58	Joanne M Gates	1
02268	Ferric Iron	SW-846 6010B modified	1	11/26/2003 13:15	Tessa R Marshall	1
07058	Manganese	SW-846 6010B	1	11/24/2003 06:58	Joanne M Gates	1
00201	Alkalinity to pH 8.3	EPA 310.1	1	11/19/2003 17:30	Justin M Bowers	1
00202	Alkalinity to pH 4.5	EPA 310.1	1	11/19/2003 17:30	Justin M Bowers	1
00216	Total Hardness	EPA 130.2 (modified)	1	11/18/2003 13:35	Susan A Engle	5

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166540

MW34S-111703 Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 14:25 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

MW34S SDG#: DCN83-01

00219	Nitrite Nitrogen	EPA 353.2	1	11/19/2003 08:29	Michelle A Bolton	1
00220	Nitrate Nitrogen	EPA 353.2	1	11/21/2003 18:58	Venia B McFadden	1
00229	Sulfite	EPA 377.1	1	11/19/2003 07:00	Michele L Graham	1
00273	Total Organic Carbon	EPA 415.1	1	11/20/2003 03:04	Timothy M Petree	1
01125	Sulfate (turbidimetric)	EPA 375.4	1	11/20/2003 08:50	Susan A Engle	5
04001	Chemical Oxygen Demand	EPA 410.4	1	11/19/2003 09:40	Susan A Engle	1
08344	Ferrous Iron	SM 18, 3500-Fe D (modified)	1	11/18/2003 20:20	Daniel S Smith	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B, modified	1	11/20/2003 21:16	Tiffany A George	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/23/2003 20:45	James L Mertz	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166541

MW34S-111703 Filtered Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 14:25 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

W34SF SDG#: DCN83-02

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
01754	Iron	7439-89-6	N.D.		0.0453	mg/l	1
04001	Chemical Oxygen Demand	n.a.	20.8	J	8.2	mg/l	1

This sample was field filtered for dissolved metals and COD.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	11/24/2003 07:03	Joanne M Gates	1
04001	Chemical Oxygen Demand	EPA 410.4	1	11/19/2003 09:40	Susan A Engle	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/23/2003 20:45	James L Mertz	1

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166542

PZ34I-111703 Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 15:30 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

PZ34I SDG#: DCN83-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01754	Iron	7439-89-6	1.93	0.0453	mg/l	1
02268	Ferric Iron	n.a.	N.D.	0.080	mg/l	1
07058	Manganese	7439-96-5	0.158	0.00051	mg/l	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	0.41	mg/l as CaCO3	1
00202	Alkalinity to pH 4.5	n.a.	385.	0.41	mg/l as CaCO3	1
00216	Total Hardness	471-34-1	526.	2.5	mg/l as CaCO3	5
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00229	Sulfite	14265-45-3	N.D.	1.2	mg/l	1
	The 40 CFR Part 136 requires that analysis for sulfite be performed immediately (within 15 minutes) upon sample collection. Although this analysis is performed promptly upon receipt at the laboratory, the results may not be acceptable for NPDES compliance monitoring.					
00273	Total Organic Carbon	n.a.	1.5 J	0.50	mg/l	1
01125	Sulfate (turbidimetric)	14808-79-8	104.	7.5	mg/l	5
04001	Chemical Oxygen Demand	n.a.	13.9 J	8.2	mg/l	1
08344	Ferrous Iron	n.a.	2.3	0.080	mg/l	10
07105	Volatile Headspace Hydrocarbon					
07107	Ethane	74-84-0	N.D.	1.0	ug/l	1
07108	Ethene	74-85-1	N.D.	1.0	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	11/24/2003 07:16	Joanne M Gates	1
02268	Ferric Iron	SW-846 6010B modified	1	11/26/2003 13:18	Tessa R Marshall	1
07058	Manganese	SW-846 6010B	1	11/24/2003 07:16	Joanne M Gates	1
00201	Alkalinity to pH 8.3	EPA 310.1	1	11/19/2003 17:30	Justin M Bowers	1
00202	Alkalinity to pH 4.5	EPA 310.1	1	11/19/2003 17:30	Justin M Bowers	1
00216	Total Hardness	EPA 130.2 (modified)	1	11/18/2003 13:35	Susan A Engle	5

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166542

PZ34I-111703 Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 15:30 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

PZ34I SDG#: DCN83-03

00219	Nitrite Nitrogen	EPA 353.2	1	11/19/2003 08:33	Michelle A Bolton	1
00220	Nitrate Nitrogen	EPA 353.2	1	11/21/2003 20:45	Venia B McFadden	1
00229	Sulfite	EPA 377.1	1	11/19/2003 07:00	Michele L Graham	1
00273	Total Organic Carbon	EPA 415.1	1	11/20/2003 03:49	Timothy M Petree	1
01125	Sulfate (turbidimetric)	EPA 375.4	1	11/20/2003 08:50	Susan A Engle	5
04001	Chemical Oxygen Demand	EPA 410.4	1	11/19/2003 09:40	Susan A Engle	1
08344	Ferrous Iron	SM 18, 3500-Fe D (modified)	1	11/18/2003 20:20	Daniel S Smith	10
07105	Volatile Headspace Hydrocarbon	SW-846 8015B, modified	1	11/20/2003 21:26	Tiffany A George	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/23/2003 20:45	James L Mertz	1

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166543

PZ34I-111703 Filtered Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 15:30 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

Z34IF SDG#: DCN83-04

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
01754	Iron	7439-89-6	1.85		0.0453	mg/l	1
04001	Chemical Oxygen Demand	n.a.	25.5	J	8.2	mg/l	1

This sample was field filtered for dissolved metals and COD.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	11/24/2003 07:20	Joanne M Gates	1
04001	Chemical Oxygen Demand	EPA 410.4	1	11/19/2003 09:40	Susan A Engle	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/23/2003 20:45	James L Mertz	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166544

PZ34D-111703 Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 14:25 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

PZ34D SDG#: DCN83-05

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
01754	Iron	7439-89-6	2.44		0.0453	mg/l	1
02268	Ferric Iron	n.a.	0.38	J	0.080	mg/l	1
07058	Manganese	7439-96-5	0.177		0.00051	mg/l	1
00201	Alkalinity to pH 8.3	n.a.	N.D.		0.41	mg/l as CaCO3	1
00202	Alkalinity to pH 4.5	n.a.	390.		0.41	mg/l as CaCO3	1
00216	Total Hardness	471-34-1	530.		2.5	mg/l as CaCO3	5
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.		0.040	mg/l	1
00229	Sulfite	14265-45-3	N.D.		1.2	mg/l	1
	The 40 CFR Part 136 requires that analysis for sulfite be performed immediately (within 15 minutes) upon sample collection. Although this analysis is performed promptly upon receipt at the laboratory, the results may not be acceptable for NPDES compliance monitoring.						
00273	Total Organic Carbon	n.a.	1.5	J	0.50	mg/l	1
01125	Sulfate (turbidimetric)	14808-79-8	94.9		7.5	mg/l	5
04001	Chemical Oxygen Demand	n.a.	16.2	J	8.2	mg/l	1
08344	Ferrous Iron	n.a.	2.1		0.080	mg/l	10
07105	Volatile Headspace Hydrocarbon						
07107	Ethane	74-84-0	N.D.		1.0	ug/l	1
07108	Ethene	74-85-1	N.D.		1.0	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	11/24/2003 07:25	Joanne M Gates	1
02268	Ferric Iron	SW-846 6010B modified	1	11/26/2003 13:20	Tessa R Marshall	1
07058	Manganese	SW-846 6010B	1	11/24/2003 07:25	Joanne M Gates	1
00201	Alkalinity to pH 8.3	EPA 310.1	1	11/19/2003 17:30	Justin M Bowers	1
00202	Alkalinity to pH 4.5	EPA 310.1	1	11/19/2003 17:30	Justin M Bowers	1
00216	Total Hardness	EPA 130.2 (modified)	1	11/18/2003 13:35	Susan A Engle	5

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166544

PZ34D-111703 Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 14:25 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

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PO Box 537933
Livonia MI 48153-7933

PZ34D SDG#: DCN83-05

00219	Nitrite Nitrogen	EPA 353.2	1	11/19/2003 08:34	Michelle A Bolton	1
00220	Nitrate Nitrogen	EPA 353.2	1	11/21/2003 18:57	Venia B McFadden	1
00229	Sulfite	EPA 377.1	1	11/19/2003 07:00	Michele L Graham	1
00273	Total Organic Carbon	EPA 415.1	1	11/20/2003 03:52	Timothy M Petree	1
01125	Sulfate (turbidimetric)	EPA 375.4	1	11/20/2003 08:50	Susan A Engle	5
04001	Chemical Oxygen Demand	EPA 410.4	1	11/19/2003 09:40	Susan A Engle	1
08344	Ferrous Iron	SM 18, 3500-Fe D (modified)	1	11/18/2003 20:20	Daniel S Smith	10
07105	Volatile Headspace Hydrocarbon	SW-846 8015B, modified	1	11/20/2003 21:05	Tiffany A George	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/23/2003 20:45	James L Mertz	1

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Lancaster Laboratories Sample No. WW 4166545

PZ34D-111703 Filtered Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 14:25 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
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Z34DF SDG#: DCN83-06

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
01754	Iron	7439-89-6	2.05		0.0453	mg/l	1
04001	Chemical Oxygen Demand	n.a.	18.5	J	8.2	mg/l	1

This sample was field filtered for dissolved metals and COD.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	11/24/2003 07:29	Joanne M Gates	1
04001	Chemical Oxygen Demand	EPA 410.4	1	11/19/2003 09:40	Susan A Engle	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/23/2003 20:45	James L Mertz	1

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166546

MWC001-111703 Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH

Collected:11/17/2003 16:40 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

DaimlerChrysler Corporation
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Livonia MI 48153-7933

W0001 SDG#: DCN83-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01754	Iron	7439-89-6	2.63	0.0453	mg/l	1
02268	Ferric Iron	n.a.	N.D.	0.080	mg/l	1
07058	Manganese	7439-96-5	0.0588	0.00051	mg/l	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	0.41	mg/l as CaCO3	1
00202	Alkalinity to pH 4.5	n.a.	305.	0.41	mg/l as CaCO3	1
00216	Total Hardness	471-34-1	435.	2.5	mg/l as CaCO3	5
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00229	Sulfite	14265-45-3	N.D.	1.2	mg/l	1
	The 40 CFR Part 136 requires that analysis for sulfite be performed immediately (within 15 minutes) upon sample collection. Although this analysis is performed promptly upon receipt at the laboratory, the results may not be acceptable for NPDES compliance monitoring.					
00273	Total Organic Carbon	n.a.	1.1 J	0.50	mg/l	1
01125	Sulfate (turbidimetric)	14808-79-8	61.3	7.5	mg/l	5
08344	Ferrous Iron	n.a.	2.5	0.080	mg/l	10
07105	Volatile Headspace Hydrocarbon					
07107	Ethane	74-84-0	N.D.	1.0	ug/l	1
07108	Ethene	74-85-1	N.D.	1.0	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	11/24/2003 07:33	Joanne M Gates	1
02268	Ferric Iron	SW-846 6010B modified	1	11/26/2003 13:23	Tessa R Marshall	1
07058	Manganese	SW-846 6010B	1	11/24/2003 07:33	Joanne M Gates	1
00201	Alkalinity to pH 8.3	EPA 310.1	1	11/19/2003 17:30	Justin M Bowers	1
00202	Alkalinity to pH 4.5	EPA 310.1	1	11/19/2003 17:30	Justin M Bowers	1
00216	Total Hardness	EPA 130.2 (modified)	1	11/18/2003 13:35	Susan A Engle	5
00219	Nitrite Nitrogen	EPA 353.2	1	11/19/2003 08:35	Michelle A Bolton	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166546

MWC001-111703 Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 16:40 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

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W0001 SDG#: DCN83-07

00220	Nitrate Nitrogen	EPA 353.2	1	11/25/2003 14:20	Katherine D Webster	1
00229	Sulfite	EPA 377.1	1	11/19/2003 07:00	Michele L Graham	1
00273	Total Organic Carbon	EPA 415.1	1	11/20/2003 04:00	Timothy M Petree	1
01125	Sulfate (turbidimetric)	EPA 375.4	1	11/20/2003 08:50	Susan A Engle	5
08344	Ferrous Iron	SM 18, 3500-Fe D (modified)	1	11/18/2003 20:20	Daniel S Smith	10
07105	Volatile Headspace Hydrocarbon	SW-846 8015B, modified	1	11/20/2003 21:37	Tiffany A George	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/23/2003 20:45	James L Mertz	1

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166547

MWC001-111703 Filtered Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 16:40 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

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PO Box 537933
Livonia MI 48153-7933

0001F SDG#: DCN83-08

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
01754	Iron	7439-89-6	2.44		0.0453	mg/l	1
04001	Chemical Oxygen Demand	n.a.	13.9	J	8.2	mg/l	1

This sample was field filtered for dissolved metals and COD.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	11/24/2003 06:32	Joanne M Gates	1
04001	Chemical Oxygen Demand	EPA 410.4	1	11/19/2003 09:40	Susan A Engle	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/23/2003 20:45	James L Mertz	1

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166548

MWB001-111703 Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 17:05 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

WB001 SDG#: DCN83-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01754	Iron	7439-89-6	22.3	0.0453	mg/l	1
02268	Ferric Iron	n.a.	20.8	0.045	mg/l	1
07058	Manganese	7439-96-5	0.305	0.00051	mg/l	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	0.41	mg/l as CaCO3	1
00202	Alkalinity to pH 4.5	n.a.	360.	0.41	mg/l as CaCO3	1
00216	Total Hardness	471-34-1	1,040.	4.9	mg/l as CaCO3	10
00219	Nitrite Nitrogen	14797-65-0	0.46	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00229	Sulfite	14265-45-3	N.D.	1.2	mg/l	1
	The 40 CFR Part 136 requires that analysis for sulfite be performed immediately (within 15 minutes) upon sample collection. Although this analysis is performed promptly upon receipt at the laboratory, the results may not be acceptable for NPDES compliance monitoring.					
00273	Total Organic Carbon	n.a.	4.3	0.50	mg/l	1
01125	Sulfate (turbidimetric)	14808-79-8	63.6	7.5	mg/l	5
08344	Ferrous Iron	n.a.	1.5	0.040	mg/l	5
07105	Volatile Headspace Hydrocarbon					
07107	Ethane	74-84-0	N.D.	1.0	ug/l	1
07108	Ethene	74-85-1	N.D.	1.0	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	11/24/2003 07:38	Joanne M Gates	1
02268	Ferric Iron	SW-846 6010B modified	1	11/26/2003 13:25	W. John Delaney III	1
07058	Manganese	SW-846 6010B	1	11/24/2003 07:38	Joanne M Gates	1
00201	Alkalinity to pH 8.3	EPA 310.1	1	11/19/2003 17:30	Justin M Bowers	1
00202	Alkalinity to pH 4.5	EPA 310.1	1	11/19/2003 17:30	Justin M Bowers	1
00216	Total Hardness	EPA 130.2 (modified)	1	11/18/2003 13:35	Susan A Engle	10
00219	Nitrite Nitrogen	EPA 353.2	1	11/19/2003 08:36	Michelle A Bolton	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166548

MWB001-111703 Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 17:05 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

WB001 SDG#: DCN83-09

00220	Nitrate Nitrogen	EPA 353.2	1	11/25/2003 14:24	Katherine D Webster	1
00229	Sulfite	EPA 377.1	1	11/19/2003 07:00	Michele L Graham	1
00273	Total Organic Carbon	EPA 415.1	1	11/20/2003 04:09	Timothy M Petree	1
01125	Sulfate (turbidimetric)	EPA 375.4	1	11/20/2003 08:50	Susan A Engle	5
08344	Ferrous Iron	SM 18, 3500-Fe D (modified)	1	11/18/2003 20:20	Daniel S Smith	5
07105	Volatile Headspace Hydrocarbon	SW-846 8015B, modified	1	11/20/2003 21:47	Tiffany A George	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/23/2003 20:45	James L Mertz	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166549

MWB001-111703 Filtered Grab Water Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 17:05 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:30
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

B001F SDG#: DCN83-10*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
01754	Iron	7439-89-6	0.998		0.0453	mg/l	1
04001	Chemical Oxygen Demand	n.a.	9.2	J	8.2	mg/l	1

This sample was field filtered for dissolved metals and COD.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	11/24/2003 07:42	Joanne M Gates	1
04001	Chemical Oxygen Demand	EPA 410.4	1	11/19/2003 09:40	Susan A Engle	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/23/2003 20:45	James L Mertz	1

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Lancaster Laboratories

Quality Control Summary

Client Name: DaimlerChrysler Corporation
Reported: 12/01/03 at 10:30 AM

Group Number: 875289

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 03322021602A	Sample number(s): 4166540,4166542,4166544,4166546,4166548							
Total Hardness	N.D.	0.49	mg/l as Ca	100		98-107		
Batch number: 03322834401A	Sample number(s): 4166540,4166542,4166544,4166546,4166548							
Ferrous Iron	N.D.	0.0080	mg/l	100		92-105		
Batch number: 03323011112A	Sample number(s): 4166540,4166542,4166544,4166546,4166548							
Total Organic Carbon	1.4 J	0.50	mg/l	95		89-115		
Batch number: 03323020201B	Sample number(s): 4166540,4166542,4166544,4166546,4166548							
Alkalinity to pH 4.5				100		98-103		
Batch number: 03323022901A	Sample number(s): 4166540,4166542,4166544,4166546,4166548							
Sulfite	N.D.	1.2	mg/l	76		68-103		
Batch number: 03323105101A	Sample number(s): 4166540,4166542,4166544,4166546,4166548							
Nitrite Nitrogen	N.D.	0.015	mg/l	100		89-110		
Batch number: 03323400101A	Sample number(s): 4166540-4166545,4166547,4166549							
Chemical Oxygen Demand				99		95-107		
Batch number: 033240025A	Sample number(s): 4166540,4166542,4166544,4166546,4166548							
Ethane	N.D.	1.0	ug/l	95		80-120		
Ethene	N.D.	1.0	ug/l	95		80-120		
Batch number: 03324112501A	Sample number(s): 4166540,4166542,4166544,4166546,4166548							
Sulfate (turbidimetric)	N.D.	1.5	mg/l	97		90-110		
Batch number: 03325106101B	Sample number(s): 4166540,4166544							
Nitrate Nitrogen	N.D.	0.040	mg/l	106		89-110		
Batch number: 03325106102B	Sample number(s): 4166542							
Nitrate Nitrogen	N.D.	0.040	mg/l	103		89-110		
Batch number: 033271848003	Sample number(s): 4166540-4166549							
Iron	N.D.	0.0453	mg/l	104		91-114		
Manganese	N.D.	0.00051	mg/l	103		93-110		
Batch number: 03329106101A	Sample number(s): 4166546,4166548							
Nitrate Nitrogen	N.D.	0.040	mg/l	99		89-110		

Sample Matrix Quality Control

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

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717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Quality Control Summary

Client Name: DaimlerChrysler Corporation Group Number: 875289
Reported: 12/01/03 at 10:30 AM

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 03322021602A	Sample number(s): 4166540,4166542,4166544,4166546,4166548								
Total Hardness	99	100	93-115	1	2	147.	148.	1	4
Batch number: 03322834401A	Sample number(s): 4166540,4166542,4166544,4166546,4166548								
Ferrous Iron	95	93	76-119	1	5	2.5	2.4	4 (1)	20
Batch number: 03323011112A	Sample number(s): 4166540,4166542,4166544,4166546,4166548								
Total Organic Carbon	95		63-136			1.5 J	1.6 J	1 (1)	3
Batch number: 03323020201B	Sample number(s): 4166540,4166542,4166544,4166546,4166548								
Alkalinity to pH 8.3						N.D.	N.D.	0 (1)	4
Alkalinity to pH 4.5	83	90	64-130	2	2	362.	366.	1	4
Batch number: 03323022901A	Sample number(s): 4166540,4166542,4166544,4166546,4166548								
Sulfite	75	78	29-104	4	20	N.D.	N.D.	0 (1)	20
Batch number: 03323105101A	Sample number(s): 4166540,4166542,4166544,4166546,4166548								
Nitrite Nitrogen	100		90-110			N.D.	N.D.	0 (1)	20
Batch number: 03323400101A	Sample number(s): 4166540-4166545,4166547,4166549								
Chemical Oxygen Demand	96	96	90-110	0	2	9.2 J	11.5 J	22* (1)	4
Batch number: 033240025A	Sample number(s): 4166540,4166542,4166544,4166546,4166548								
Ethane	98	98	71-128	0	20				
Ethene	98	98	68-142	0	20				
Batch number: 03324112501A	Sample number(s): 4166540,4166542,4166544,4166546,4166548								
Sulfate (turbidimetric)	93	93	69-124	0	4	61.3	54.2	12* (1)	4
Batch number: 03325106101B	Sample number(s): 4166540,4166544								
Nitrate Nitrogen	103		90-110			0.42	0.43	3* (1)	2
Batch number: 03325106102B	Sample number(s): 4166542								
Nitrate Nitrogen	102		90-110			N.D.	N.D.	0 (1)	2
Batch number: 033271848003	Sample number(s): 4166540-4166549								
Iron	98	94	75-125	1	20	2.44	2.39	2	20
Manganese	102	102	85-111	0	20	0.0557	0.0544	2	20
Batch number: 03329106101A	Sample number(s): 4166546,4166548								
Nitrate Nitrogen	103		90-110			N.D.	N.D.	0 (1)	2

Surrogate Quality Control

Analysis Name: Volatile Headspace Hydrocarbon

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

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2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Quality Control Summary

Client Name: DaimlerChrysler Corporation
Reported: 12/01/03 at 10:30 AM

Group Number: 875289

Surrogate Quality Control

Batch number: 033240025A

	Propene
4166540	86
4166542	83
4166544	85
4166546	87
4166548	86
Blank	99
LCS	97
MS	93
MSD	93
Limits:	58-129

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

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717-656-2300 Fax: 717-656-2681

10160/875300/4166614-33

DAIMLERCHRYSLER Chain-of-Custody

3854 B

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17601 Phone Number: (717) 656-2300 Fax Number: (717) 656-2681	Project Name: Dcx - Dayton Thermal Site Location: Dayton, OH Site Code: RFA Number: ET 03076 DaimlerChrysler PM: Gary Stanczuk	Consultant: Earth Tech Address: 4135 Technology Pkwy Sheboygan, WI 43083 Consultant PM Rob Stenson Phone: 920-451-2407 Fax: 920-458-0550	

Turn-around Time Request: (circle)
24 calendar hrs.
48 calendar hrs.
7 calendar days
14 calendar days

Data Package Deliverables: (circle)
DaimlerChrysler Level 1
DaimlerChrysler Level 2
CLP

Matrix Codes
S - Soil SW - Surface Water
GW - Groundwater A - Air
Sed. - Sediment
O - Other (specify) _____

Are aqueous samples field filtered for metals? Yes No

EPA Region 5 Records Ctr.
349421

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOCs								Remarks
MW32S-111403	11/14/03	1705	G	GW	3	X								
TW14-111503	11/15/03	0940			3	X								
TW15-111503		1023			3	X								
TW15-111503-02		1023			3	X								
TW12-111503		1154			3	X								
PZ38D-111503		1515			3	X								
TW7-111503		1404			3	X								
MW38S-111503		1500			3	X								
MW38S-111503		1505			3	X								
PZ38I-111503		1545			3	X								

Sampler(s) DP/DH/KZ/RE	Cooler ID # C07662-C07845-C07851-C07132			Samples Relinquished under Airbill No. 842249102537		Temperature (corrected) 4.5°C, 5°, 5°, 3°
	Relinquished by: D Decenzo	Date: 11/17/03	Time: 1830	Received by:	Date:	Time:	~~Custody Seal Intact?~~ Yes No
Is RFA sampling complete? Yes No	Relinquished by:	Date:	Time:	Received for Laboratory by: Kathy Binkley	Date: 11-18-03	Time: 0945	Custody Seal Intact? Yes No

DaimlerChrysler 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

Revision No. 3
Created July 9, 1999

10160/875300/4166614-33

DAIMLERCHRYSLER — Chain-of-Custody

3855 B

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17601 Phone Number: (717) 656-2300 Fax Number: (717) 656-2681	Project Name: Dix-Dayton Thermal Site Location: Dayton, OH Site Code: RFA Number: ET 03076 DaimlerChrysler PM: Gary Stoczynski	Consultant: Quality Tech Address: 4135 ~~Sheboygan~~ Technology Pkwy Sheboygan Wi. 43083 Consultant PM: Rob Stenson Phone: 920-451-2467 Fax: 920-458-0550

Turn-around Time Request: (circle)
24 calendar hrs.
48 calendar hrs.
7 calendar days
(14) calendar days

Data Package Deliverables: (circle)
DaimlerChrysler Level (1)
DaimlerChrysler Level 2
CLP

Matrix Codes
S - Soil; SW - Surface Water; GW - Groundwater; A - Air; Sed. - Sediment; O - Other (specify) _____

Are aqueous samples field filtered for metals? Yes No

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC									Remarks
MW35S-111503	11/15/03	1635	G	GW	3	X									
PZ35D-111503	↓	1640	↓	↓	↓	X									
PZ35I-111503	↓	1705	↓	↓	↓	X									
PZ30D-111603	11/16/03	0855	↓	↓	↓	X									
PZ30I-111603	↓	0855	↓	↓	↓	X									
MW30S-111603	↓	0935	↓	↓	↓	X									
MW36S-111603	↓	1050	↓	↓	↓	X									
PZ36D-111603	↓	1040	↓	↓	↓	X									
PZ36I-111603	↓	1125	↓	↓	↓	X									
PZ17I-111603	↓	1310	↓	↓	↓	X									

Sampler(s): DD/DH/KZ/RE

Cooler ID # C06762-C07845-C07851 C07133 Samples Relinquished under Airbill No. 842249102537 Temperature (corrected) 4.5°C, 5.3°, 5.3°, 8.3°

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact?
P. Decouter	11/17/03	1830				Yes No

Is RFA sampling complete? Yes (No)

Relinquished by:	Date:	Time:	Received for Laboratory by:	Date:	Time:	Custody Seal Intact?
			Kathy Brinkos	11-18-03	0745	(Yes) No

DaimlerChrysler 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

Revision No. 3
Created July 9, 1999

Analysis Report

Lancaster Laboratories

ANALYTICAL RESULTS

Prepared for:

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

248-576-5741

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 875300. Samples arrived at the laboratory on Tuesday, November 18, 2003. The PO# for this group is N99C403749-B.

Client Description	Lancaster Labs Number
MW32S-111403 Grab Groundwater Sample	4166614
TW14-111503 Grab Groundwater Sample	4166615
TW15-111503 Grab Groundwater Sample	4166616
TW15-111503-02 Grab Groundwater Sample	4166617
TW12-111503 Grab Groundwater Sample	4166618
PZ38D-111503 Grab Groundwater Sample	4166619
TW7-111503 Grab Groundwater Sample	4166620
MW38S-111503 Grab Groundwater Sample	4166621
MW38S-111503 Grab Groundwater Sample	4166622
PZ38I-111503 Grab Groundwater Sample	4166623
MW35S-111503 Grab Groundwater Sample	4166624
PZ35D-111503 Grab Groundwater Sample	4166625
PZ35I-111503 Grab Groundwater Sample	4166626
PZ30D-111603 Grab Groundwater Sample	4166627
PZ30I-111603 Grab Groundwater Sample	4166628
MW30S-111603 Grab Groundwater Sample	4166629
MW36S-111603 Grab Groundwater Sample	4166630
PZ36D-111603 Grab Groundwater Sample	4166631
PZ36I-111603 Grab Groundwater Sample	4166632
PZ17I-111603 Grab Groundwater Sample	4166633

1 COPY TO	Earth Tech	Attn: Ms. Lisa Smith
1 COPY TO	Earth Tech	Attn: Mr. Rob Stenson

Lancaster Laboratories

Questions? Contact your Client Services Representative
Katherine A Klinefelter at (717) 656-2300.

Respectfully Submitted,

Lawrence M. Taylor
Sr. Chemist

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166614

MW32S-111403 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/14/2003 17:05 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-32S- SDG#: DCN85-01

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.		1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.		1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.		1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.		1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.		0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.		2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	2.	J	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	7.		0.8	ug/l	1
05396	Chloroform	67-66-3	0.8	J	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	6.		0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.		1.	ug/l	1
05401	Benzene	71-43-2	N.D.		0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	250.		1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.		1.	ug/l	1
05407	Toluene	108-88-3	N.D.		0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	0.9	J	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.		1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.		0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.		0.8	ug/l	1
05418	Styrene	100-42-5	N.D.		1.	ug/l	1
05419	Bromoform	75-25-2	N.D.		1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.	ug/l	1
06302	Acetone	67-64-1	N.D.		6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.		1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.		3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.		3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.		3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166614

MW32S-111403 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/14/2003 17:05 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-32S- SDG#: DCN85-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 12:51	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 12:51	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166615

TW14-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 09:40 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

T14-- SDG#: DCN85-02

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.		1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.		1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.		1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.		1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.		0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.		2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.		1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.		0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.		0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.		0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.		1.	ug/l	1
05401	Benzene	71-43-2	N.D.		0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.		1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.		1.	ug/l	1
05407	Toluene	108-88-3	N.D.		0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	1.	J	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.		1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.		0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.		0.8	ug/l	1
05418	Styrene	100-42-5	N.D.		1.	ug/l	1
05419	Bromoform	75-25-2	N.D.		1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.	ug/l	1
06302	Acetone	67-64-1	N.D.		6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.		1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.		3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.		3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.		3.	ug/l	1

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PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166615

TW14-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 09:40 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

T14-- SDG#: DCN85-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 13:37	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 13:37	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166616

TW15-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 10:23 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

T15-- SDG#: DCN85-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166616

TW15-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 10:23 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

T15-- SDG#: DCN85-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 14:00	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 14:00	Trent S Sprenkle	n.a.

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166617

TW15-111503-02 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 10:23 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

T1502 SDG#: DCN85-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166617

TW15-111503-02 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 10:23 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

T1502 SDG#: DCN85-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 14:24	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 14:24	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166618

TW12-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 11:54 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

T12-- SDG#: DCN85-05

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.		1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.		1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.		1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.		1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.		0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.		2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.		1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.		0.8	ug/l	1
05396	Chloroform	67-66-3	2.	J	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.		0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.		1.	ug/l	1
05401	Benzene	71-43-2	N.D.		0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.		1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.		1.	ug/l	1
05407	Toluene	108-88-3	N.D.		0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.		0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.		1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.		0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.		0.8	ug/l	1
05418	Styrene	100-42-5	N.D.		1.	ug/l	1
05419	Bromoform	75-25-2	N.D.		1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.	ug/l	1
06302	Acetone	67-64-1	N.D.		6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.		1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.		3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.		3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.		3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166618

TW12-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 11:54 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

T12-- SDG#: DCN85-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 14:47	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 14:47	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166619

PZ38D-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 15:15 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

38D-- SDG#: DCN85-06

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.		1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.		1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.		1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.		1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.		0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.		2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	0.8	J	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	1.	J	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	12.		0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.		0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.		0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.		1.	ug/l	1
05401	Benzene	71-43-2	N.D.		0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	240.		1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.		1.	ug/l	1
05407	Toluene	108-88-3	N.D.		0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.		0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.		1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.		0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.		0.8	ug/l	1
05418	Styrene	100-42-5	N.D.		1.	ug/l	1
05419	Bromoform	75-25-2	N.D.		1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.	ug/l	1
06302	Acetone	67-64-1	N.D.		6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.		1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.		3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.		3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.		3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166619

PZ38D-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 15:15 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

38D-- SDG#: DCN85-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 15:10	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 15:10	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166620

TW7-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 14:04 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

T7--- SDG#: DCN85-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166620

TW7-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 14:04 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

T7--- SDG#: DCN85-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 15:33	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 15:33	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166621

MW38S-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 15:00 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-38S- SDG#: DCN85-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	6.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	8.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	130.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	7.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	670.	5.	ug/l	5
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166621

MW38S-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 15:00 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-38S- SDG#: DCN85-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 15:56	Trent S Sprenkle	1
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 11:07	Trent S Sprenkle	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 15:56	Trent S Sprenkle	n.a.
01163	GC/MS VOA Water Prep	SW-846 5030B	2	11/23/2003 11:07	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166622

MW38S-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 15:05 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

--38S SDG#: DCN85-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	6.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	8.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	120.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	7.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	670.	5.	ug/l	5
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166622

MW38S-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 15:05 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

--38S SDG#: DCN85-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 16:19	Trent S Sprenkle	1
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 11:30	Trent S Sprenkle	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 16:19	Trent S Sprenkle	n.a.
01163	GC/MS VOA Water Prep	SW-846 5030B	2	11/23/2003 11:30	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166623

PZ38I-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 15:45 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

38I-- SDG#: DCN85-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	4. J	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	6.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	86.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	5.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	1,900.	20.	ug/l	20
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166623

PZ38I-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 15:45 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

38I-- SDG#: DCN85-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 16:42	Trent S Sprenkle	1
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 11:53	Trent S Sprenkle	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 16:42	Trent S Sprenkle	n.a.
01163	GC/MS VOA Water Prep	SW-846 5030B	2	11/23/2003 11:53	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166624

MW35S-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 16:35 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

35S-- SDG#: DCN85-11

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.		1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.		1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.		1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.		1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.		0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.		2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	5.	J	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	16.		1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	62.		0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.		0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	9.		0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.		1.	ug/l	1
05401	Benzene	71-43-2	N.D.		0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	220.		1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.		1.	ug/l	1
05407	Toluene	108-88-3	N.D.		0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	3.	J	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.		1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.		0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.		0.8	ug/l	1
05418	Styrene	100-42-5	N.D.		1.	ug/l	1
05419	Bromoform	75-25-2	N.D.		1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.	ug/l	1
06302	Acetone	67-64-1	N.D.		6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.		1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.		3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.		3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.		3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166624

MW35S-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 16:35 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

35S-- SDG#: DCN85-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 17:06	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 17:06	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166625

PZ35D-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 16:40 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

35D-- SDG#: DCN85-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166625

PZ35D-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 16:40 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

35D-- SDG#: DCN85-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 17:29	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 17:29	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166626

PZ35I-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 17:05 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

35I-- SDG#: DCN85-13

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.		1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.		1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.		1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.		1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.		0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.		2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	2.	J	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	9.		1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	13.		0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.		0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	13.		0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.		1.	ug/l	1
05401	Benzene	71-43-2	N.D.		0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	79.		1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.		1.	ug/l	1
05407	Toluene	108-88-3	N.D.		0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	1.	J	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.		1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.		0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.		0.8	ug/l	1
05418	Styrene	100-42-5	N.D.		1.	ug/l	1
05419	Bromoform	75-25-2	N.D.		1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.	ug/l	1
06302	Acetone	67-64-1	N.D.		6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.		1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.		3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.		3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.		3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166626

PZ35I-111503 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/15/2003 17:05 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

35I-- SDG#: DCN85-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 17:52	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 17:52	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166627

PZ30D-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 08:55 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-30D- SDG#: DCN85-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166627

PZ30D-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 08:55 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-30D- SDG#: DCN85-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 18:15	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 18:15	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166628

PZ30I-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 08:55 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-30I- SDG#: DCN85-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166628

PZ30I-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 08:55 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-30I- SDG#: DCN85-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 18:38	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 18:38	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166629

MW30S-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 09:35 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-30S- SDG#: DCN85-16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	1. J	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166629

MW30S-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 09:35 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-30S- SDG#: DCN85-16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 19:01	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 19:01	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166630

MW36S-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 10:50 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-36S- SDG#: DCN85-17

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.		1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.		1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.		1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.		1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.		0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.		2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	3.	J	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	1.	J	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	120.		0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.		0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	2.	J	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.		1.	ug/l	1
05401	Benzene	71-43-2	N.D.		0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	720.		5.	ug/l	5
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.		1.	ug/l	1
05407	Toluene	108-88-3	N.D.		0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.		0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.		1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.		0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.		0.8	ug/l	1
05418	Styrene	100-42-5	N.D.		1.	ug/l	1
05419	Bromoform	75-25-2	N.D.		1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.	ug/l	1
06302	Acetone	67-64-1	N.D.		6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.		1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.		3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.		3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.		3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166630

MW36S-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 10:50 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-36S- SDG#: DCN85-17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 19:25	Trent S Sprenkle	1
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 12:17	Trent S Sprenkle	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 19:25	Trent S Sprenkle	n.a.
01163	GC/MS VOA Water Prep	SW-846 5030B	2	11/23/2003 12:17	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166631

PZ36D-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 10:40 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-36D- SDG#: DCN85-18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	11.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166631

PZ36D-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 10:40 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-36D- SDG#: DCN85-18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 19:48	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 19:48	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166632

PZ36I-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 11:25 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-36I- SDG#: DCN85-19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166632

PZ36I-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 11:25 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-36I- SDG#: DCN85-19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 20:11	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 20:11	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166633

PZ17I-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 13:10 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-17I- SDG#: DCN85-20*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.		1.	ug/l	1
05386	Vinyl Chloride	75-01-4	2.	J	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.		1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.		1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.		0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.		2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	5.	J	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.		1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	50.		0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.		0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	16.		0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.		1.	ug/l	1
05401	Benzene	71-43-2	N.D.		0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	64.		1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.		1.	ug/l	1
05407	Toluene	108-88-3	N.D.		0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	950.		4.	ug/l	5
05411	Dibromochloromethane	124-48-1	N.D.		1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.		0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.		0.8	ug/l	1
05418	Styrene	100-42-5	N.D.		1.	ug/l	1
05419	Bromoform	75-25-2	N.D.		1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.	ug/l	1
06302	Acetone	67-64-1	N.D.		6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.		1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.		3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.		3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.		3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166633

PZ17I-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 13:10 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:33
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-17I- SDG#: DCN85-20*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/22/2003 20:34	Trent S Sprenkle	1
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 12:40	Trent S Sprenkle	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2003 20:34	Trent S Sprenkle	n.a.
01163	GC/MS VOA Water Prep	SW-846 5030B	2	11/23/2003 12:40	Trent S Sprenkle	n.a.

Lancaster Laboratories

Quality Control Summary

Client Name: DaimlerChrysler Corporation
Reported: 12/01/03 at 10:34 AM

Group Number: 875300

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Y033261AA	Sample number(s): 4166614-4166633							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	99	97	77-127	2	30
Chloromethane	N.D.	1.	ug/l	95	93	69-136	2	30
Vinyl Chloride	N.D.	1.	ug/l	100	100	71-129	0	30
Bromomethane	N.D.	1.	ug/l	70	66	46-138	6	30
Chloroethane	N.D.	1.	ug/l	91	91	59-133	0	30
1,1-Dichloroethene	N.D.	0.8	ug/l	100	101	79-130	1	30
Methylene Chloride	N.D.	2.	ug/l	100	100	80-128	0	30
trans-1,2-Dichloroethene	N.D.	0.8	ug/l	97	98	81-124	1	30
1,1-Dichloroethane	N.D.	1.	ug/l	99	99	83-127	1	30
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	97	98	84-117	1	30
Chloroform	N.D.	0.8	ug/l	99	99	86-124	0	30
1,1,1-Trichloroethane	N.D.	0.8	ug/l	100	99	83-127	1	30
Carbon Tetrachloride	N.D.	1.	ug/l	101	100	77-130	1	30
Benzene	N.D.	0.5	ug/l	100	100	85-117	0	30
1,2-Dichloroethane	N.D.	1.	ug/l	104	102	77-132	2	30
Trichloroethene	N.D.	1.	ug/l	98	99	87-117	1	30
1,2-Dichloropropane	N.D.	1.	ug/l	99	98	80-117	1	30
Bromodichloromethane	N.D.	1.	ug/l	98	98	83-121	0	30
Toluene	N.D.	0.7	ug/l	98	98	85-115	0	30
1,1,2-Trichloroethane	N.D.	0.8	ug/l	98	97	86-113	1	30
Tetrachloroethene	N.D.	0.8	ug/l	102	104	82-126	2	30
Dibromochloromethane	N.D.	1.	ug/l	94	96	78-119	1	30
Chlorobenzene	N.D.	0.8	ug/l	99	100	85-115	0	30
Ethylbenzene	N.D.	0.8	ug/l	100	101	82-119	1	30
Styrene	N.D.	1.	ug/l	99	99	84-117	0	30
Bromoform	N.D.	1.	ug/l	93	93	63-122	0	30
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/l	97	95	72-119	2	30
Acetone	N.D.	6.	ug/l	121	116	22-179	4	30
Carbon Disulfide	N.D.	1.	ug/l	98	97	80-139	1	30
2-Butanone	N.D.	3.	ug/l	115	107	45-154	7	30
trans-1,3-Dichloropropene	N.D.	1.	ug/l	94	94	79-114	0	30
cis-1,3-Dichloropropene	N.D.	1.	ug/l	95	95	78-114	0	30
4-Methyl-2-pentanone	N.D.	3.	ug/l	99	98	65-125	1	30
2-Hexanone	N.D.	3.	ug/l	107	103	49-141	4	30
Xylene (Total)	N.D.	0.8	ug/l	101	102	84-120	1	30
Batch number: Y033261AB	Sample number(s): 4166621-4166623,4166630,4166633							
Trichloroethene	N.D.	1.	ug/l	98	99	87-117	1	30
Tetrachloroethene	N.D.	0.8	ug/l	102	104	82-126	2	30

Sample Matrix Quality Control

MS	MSD	MS/MSD	RPD	BKG	DUP	DUP	Dup RPD

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

Lancaster Laboratories

Quality Control Summary

Client Name: DaimlerChrysler Corporation Group Number: 875300
Reported: 12/01/03 at 10:34 AM

Analysis Name	%REC	%REC Limits	RPD	MAX	Conc	Conc	RPD	Max
Batch number: Y033261AA	Sample number(s): 4166614-4166633							
Methyl Tertiary Butyl Ether	98	69-134						
Chloromethane	89	70-148						
Vinyl Chloride	99	64-148						
Bromomethane	72	52-140						
Chloroethane	91	63-142						
1,1-Dichloroethene	107	78-146						
Methylene Chloride	100	79-133						
trans-1,2-Dichloroethene	105	82-133						
1,1-Dichloroethane	104	85-135						
cis-1,2-Dichloroethene	99	83-126						
Chloroform	102	82-131						
1,1,1-Trichloroethane	105	82-135						
Carbon Tetrachloride	108	73-144						
Benzene	103	83-128						
1,2-Dichloroethane	104	73-136						
Trichloroethene	(2)	75-135						
1,2-Dichloropropane	100	81-121						
Bromodichloromethane	98	83-121						
Toluene	101	83-127						
1,1,2-Trichloroethane	97	77-125						
Tetrachloroethene	103	75-143						
Dibromochloromethane	93	73-119						
Chlorobenzene	101	83-120						
Ethylbenzene	104	82-129						
Styrene	100	72-133						
Bromoform	89	64-119						
1,1,2,2-Tetrachloroethane	98	69-121						
Acetone	78	16-147						
Carbon Disulfide	102	77-155						
2-Butanone	94	42-140						
trans-1,3-Dichloropropene	91	75-117						
cis-1,3-Dichloropropene	94	76-117						
4-Methyl-2-pentanone	97	61-126						
2-Hexanone	101	48-133						
Xylene (Total)	104	82-130						
Batch number: Y033261AB	Sample number(s): 4166621-4166623,4166630,4166633							
Trichloroethene	(2)	75-135						
Tetrachloroethene	103	75-143						

Surrogate Quality Control

Analysis Name: TCL by 8260 (water)
Batch number: Y033261AA

Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

Lancaster Laboratories

Quality Control Summary

Client Name: DaimlerChrysler Corporation Group Number: 875300
Reported: 12/01/03 at 10:34 AM

Surrogate Quality Control

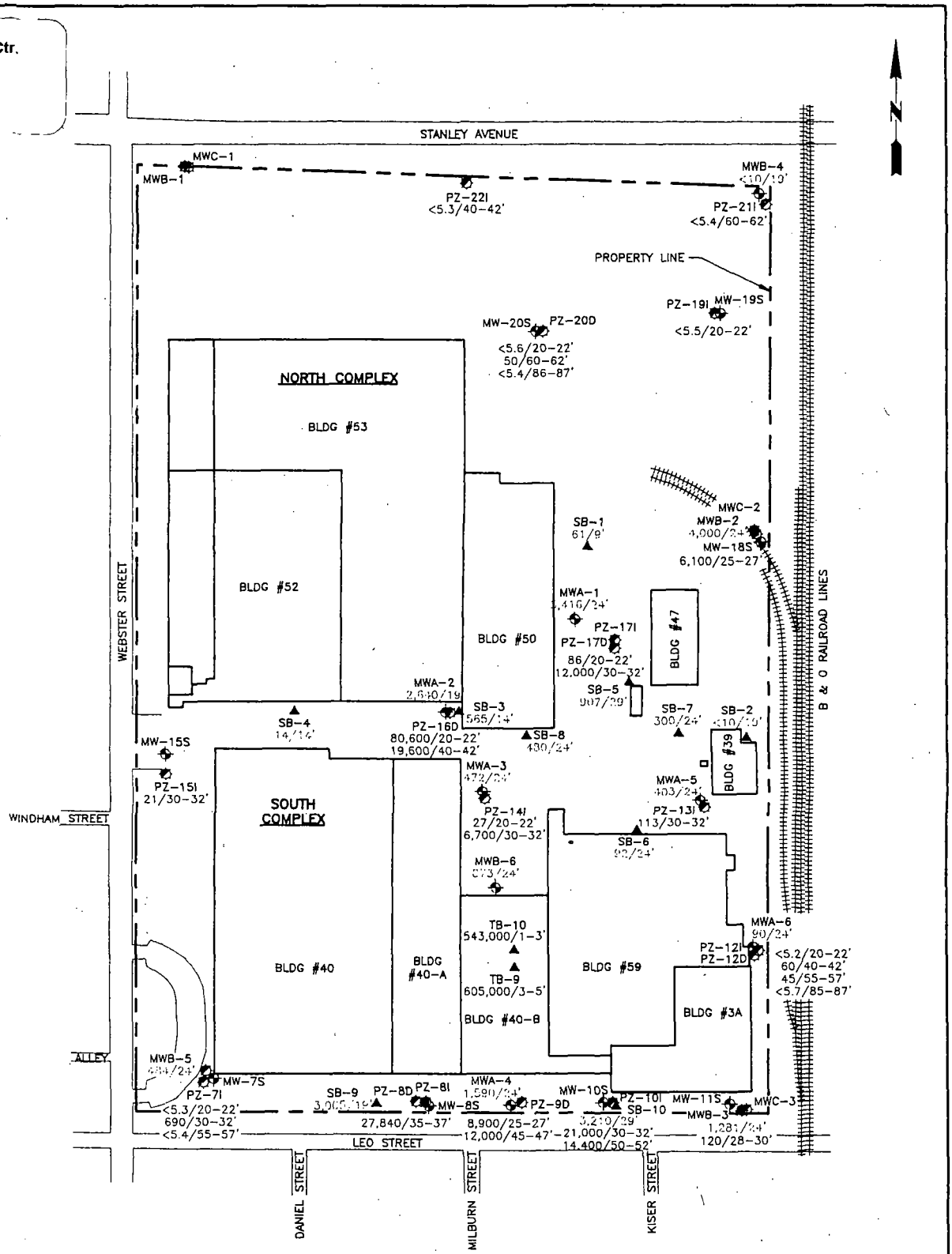
4166614	94	92	95	93
4166615	94	92	95	93
4166616	94	93	95	94
4166617	95	91	95	94
4166618	95	92	95	93
4166619	96	91	95	93
4166620	94	91	95	93
4166621	95	91	95	93
4166622	96	91	95	94
4166623	95	92	96	93
4166624	95	91	96	94
4166625	95	91	95	93
4166626	95	91	95	93
4166627	96	92	95	93
4166628	94	92	95	93
4166629	96	92	94	93
4166630	95	92	95	93
4166631	95	92	95	93
4166632	95	92	95	93
4166633	95	91	95	93
Blank	95	92	94	94
LCS	95	92	96	95
LCSD	95	94	96	94
MS	94	92	96	94
Limits:	81-120	82-112	85-112	83-113

Analysis Name: 8260 Master Scan (water)
Batch number: Y033261AB

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	95	91	94	93
LCS	95	92	96	95
LCSD	95	94	96	94
MS	94	92	96	94
Limits:	81-120	82-112	85-112	83-113

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

EPA Region 5 Records Ctr.
349422



ATTORNEY/CLIENT COMMUNICATION PRIVILEGED AND CONFIDENTIAL

LEGEND

◆	MONITOR WELL LOCATION
◆	PIEZOMETER LOCATION
▲	SOIL BORING LOCATION
<5.5/30-32'	CONCENTRATION/FEET BELOW GRADE (NOV 1997)
<10/19'	CONCENTRATION/FEET BELOW GRADE (OCT-NOV 1994)
(ug/kg)	MICROGRAMS PER KILOGRAM

0 200
APPROX. SCALE IN FEET

DATE	REVISED

Prepared By:
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Professional Ground-Water and Environmental Services
Northpark Corporate Center
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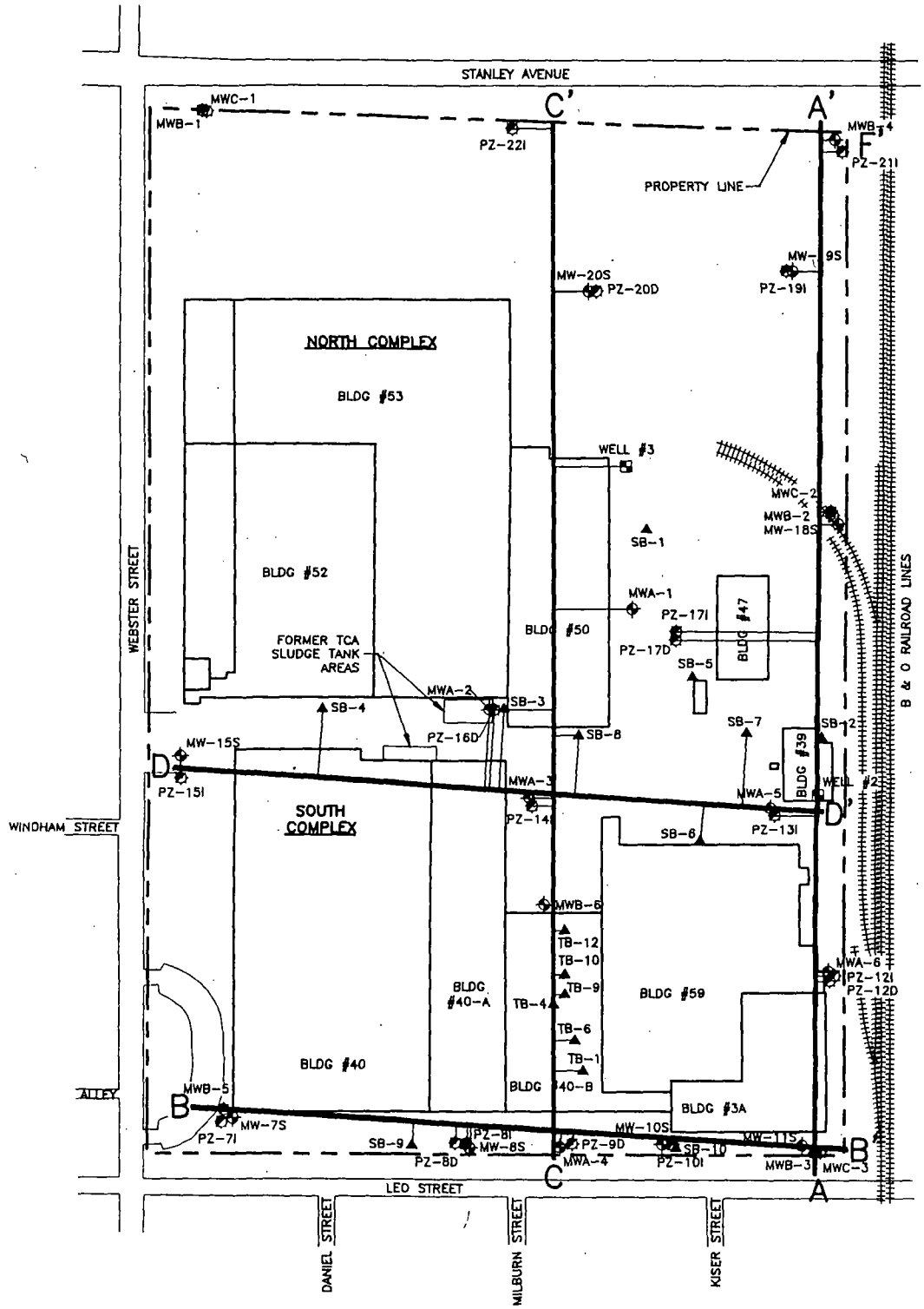
St. Paul, MN 55112
(612) 490-1405

DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

TOTAL VOC'S IN SOIL (ug/kg)
OCTOBER-NOVEMBER 1994 & NOVEMBER 1997

FILE: 3CHDA03Y.DWG | DATE: MARCH 1998 | FIGURE: 2



LEGEND

- WELL LOCATION
- PIEZOMETER LOCATION
- SOIL BORING LOCATION
- WATER SUPPLY WELL
- B——B' LINE OF SECTION

0 200

APPROX. SCALE IN FEET

DATE	REVISED

Prepared By:
LEGGETTE, BRASHEARS & GRAHAM, INC.
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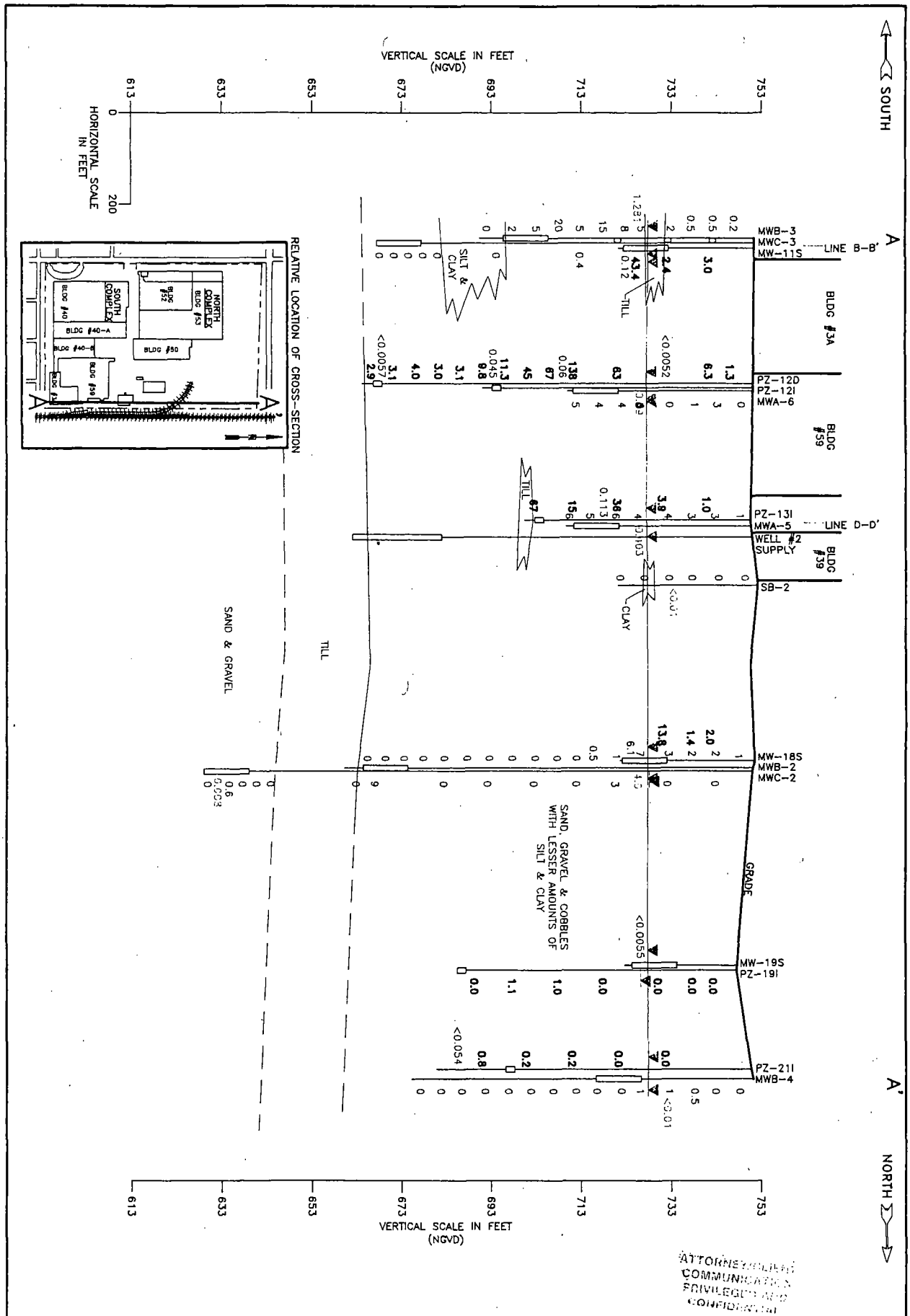
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

CROSS-SECTION LOCATION MAP

FILE: 3CHDA03V.DWG | *DATE:* MARCH 1998 | *FIGURE:* 2



ATTORNEY/CLIENT COMMUNICATION PRIVILEGED AND CONFIDENTIAL

DATE	REVISED

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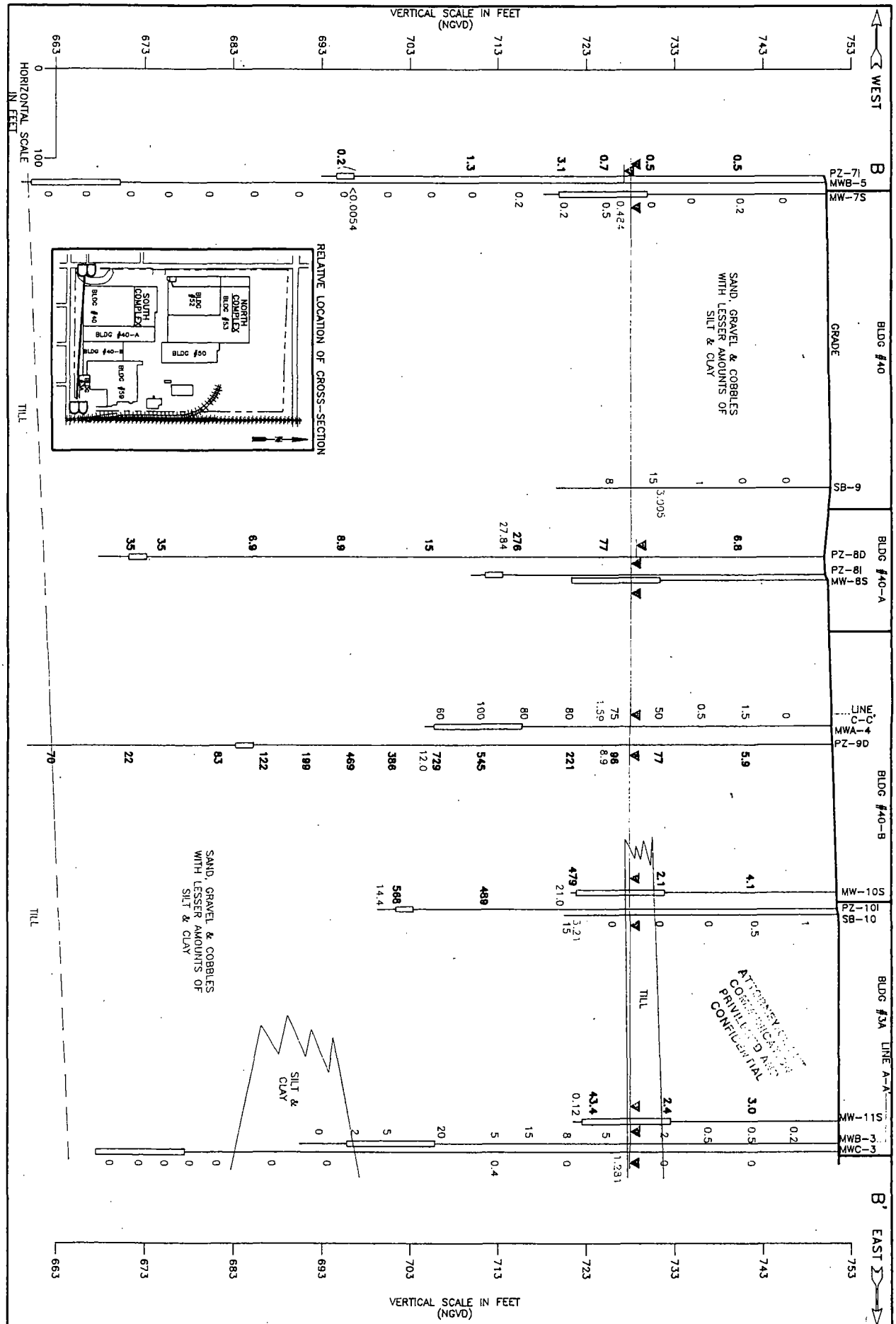
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

SOIL QUALITY (mg/kg, ppm) ALONG GEOLOGIC CROSS-SECTION A-A'

FILE: 3CHDA03W.DWG | DATE: MARCH 1998 | FIGURE: 1



DATE	REVISED

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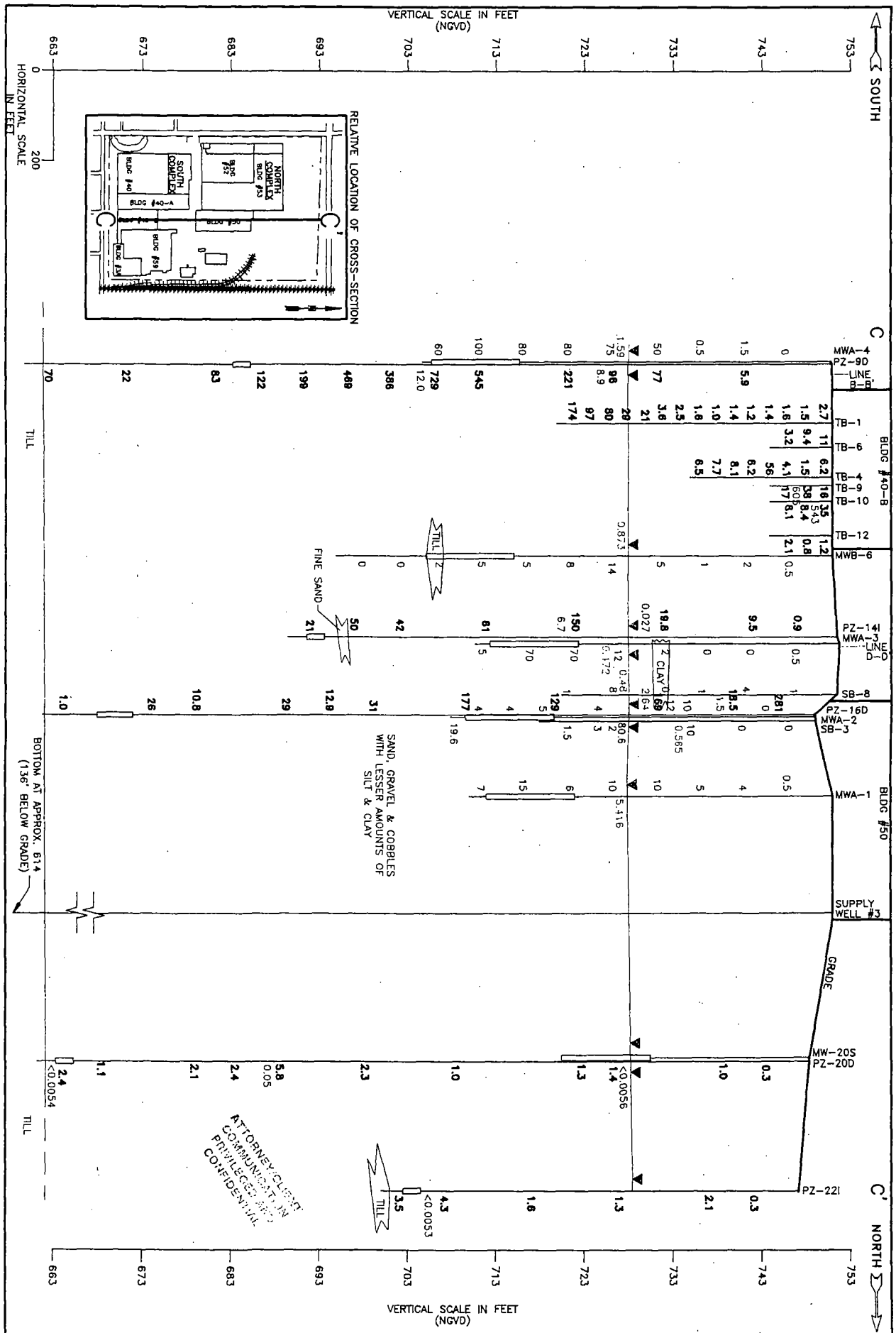
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

SOIL QUALITY (mg/kg, ppm) ALONG GEOLOGIC CROSS-SECTION B-B'

FILE: 3CHDA03W.DWG | *DATE:* MARCH 1998 | *FIGURE:* 2



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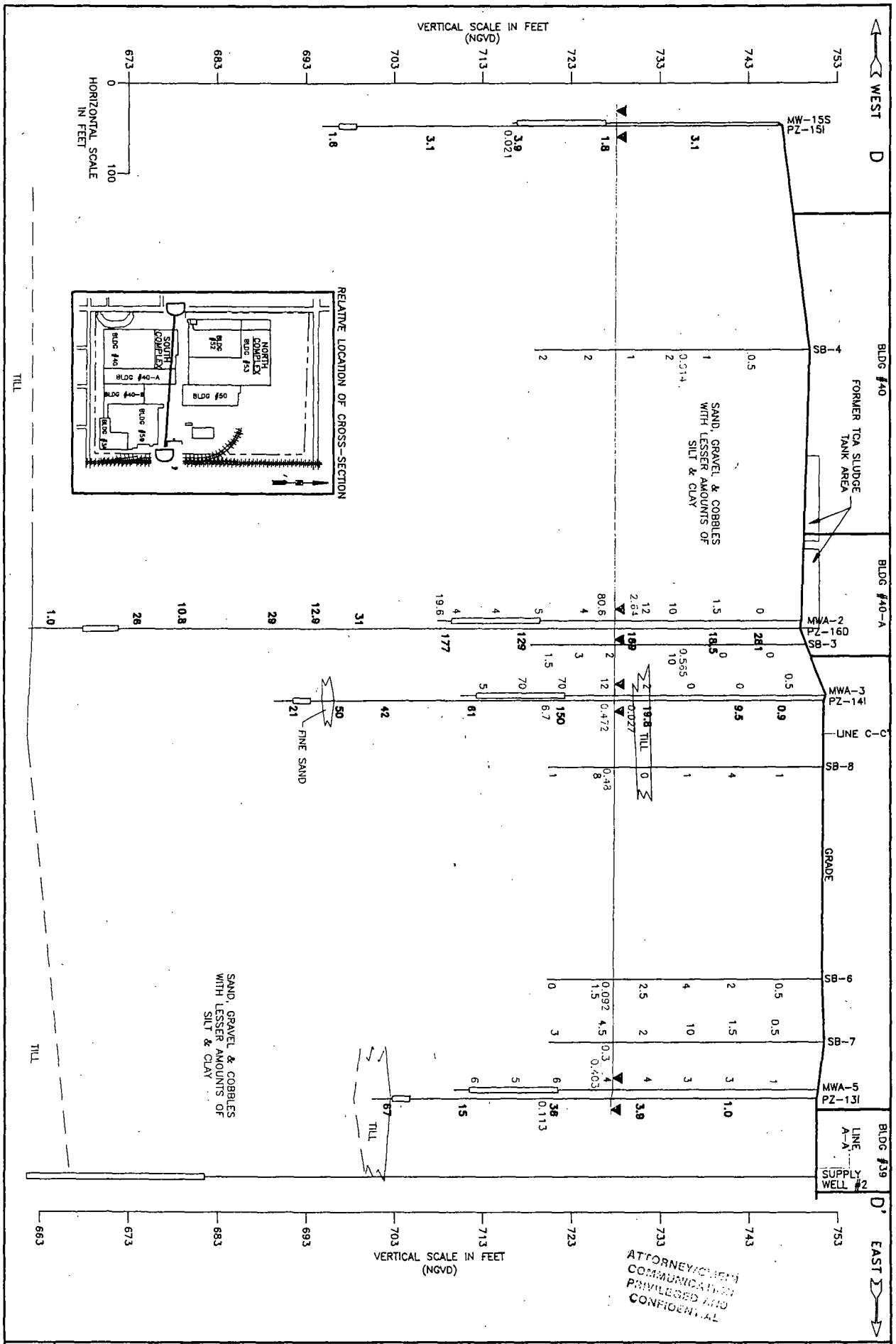
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

SOIL QUALITY (mg/kg, ppm) ALONG GEOLOGIC CROSS-SECTION C-C'

FILE: 3CHDA03W.DWG | *DATE:* MARCH 1998 | *FIGURE:* 3



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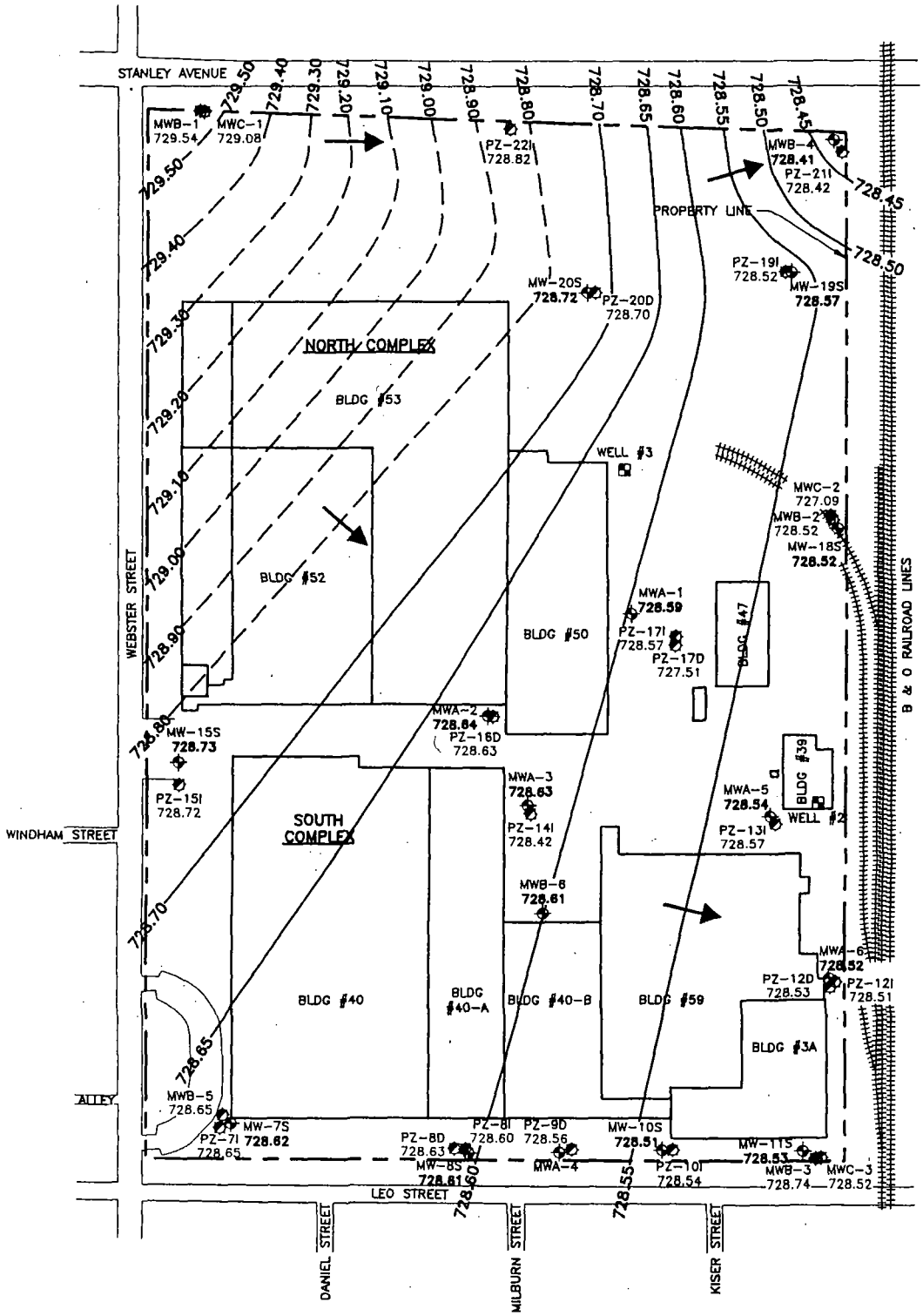
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

SOIL QUALITY (mg/kg, ppm)
ALONG GEOLOGIC CROSS-SECTION D-D'

FILE: 3CHDA03W.DWG | DATE: MARCH 1998 | FIGURE: 4



LEGEND

⊕	WELL LOCATION
⊕	PIEZOMETER LOCATION
■	WATER SUPPLY WELL
728.82	GROUND-WATER ELEVATION (FEET) NOT USED IN CONTOURING
728.41	GROUND-WATER ELEVATION (FEET) USED IN CONTOURING
— 728.50	GROUND-WATER ELEVATION CONTOUR (FEET)
→	GROUND-WATER FLOW DIRECTION

0 200

APPROX. SCALE IN FEET

ATTORNEY-CLIENT COMMUNICATION PRIVILEGED AND CONFIDENTIAL

SOURCE: CLEAN TECH, INC.

DATE	REVISED

Prepared By:
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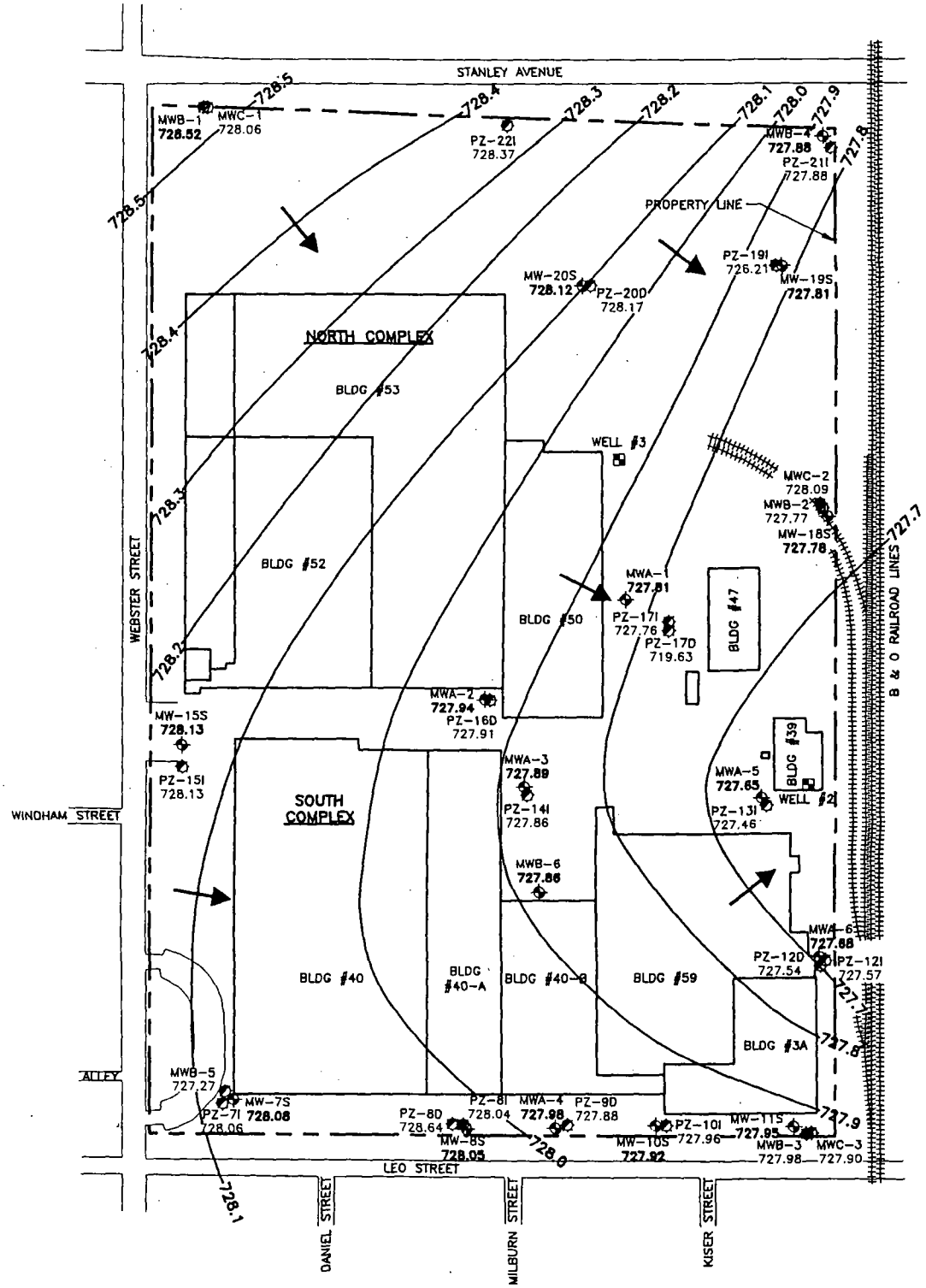
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

GROUND-WATER ELEVATION CONTOUR MAP
MARCH 12, 1998

FILE: 3CHDA04B.DWG | DATE: MARCH 1998 | FIGURE: 2



LEGEND

◆	WELL LOCATION
⊕	PIEZOMETER LOCATION
▣	WATER SUPPLY WELL
728.37	GROUND-WATER ELEVATION (FEET) NOT USED IN CONTOURING
728.05	GROUND-WATER ELEVATION (FEET) USED IN CONTOURING
—— 728.0	GROUND-WATER ELEVATION CONTOUR (FEET)
⟶	GROUND-WATER FLOW DIRECTION

0 200
APPROX. SCALE IN FEET

ATTORNEY WORK PRODUCT COMMUNICATION PRIVILEGED AND CONFIDENTIAL

SOURCE: CLEAN TECH, INC.

DATE	REVISED

Prepared By:
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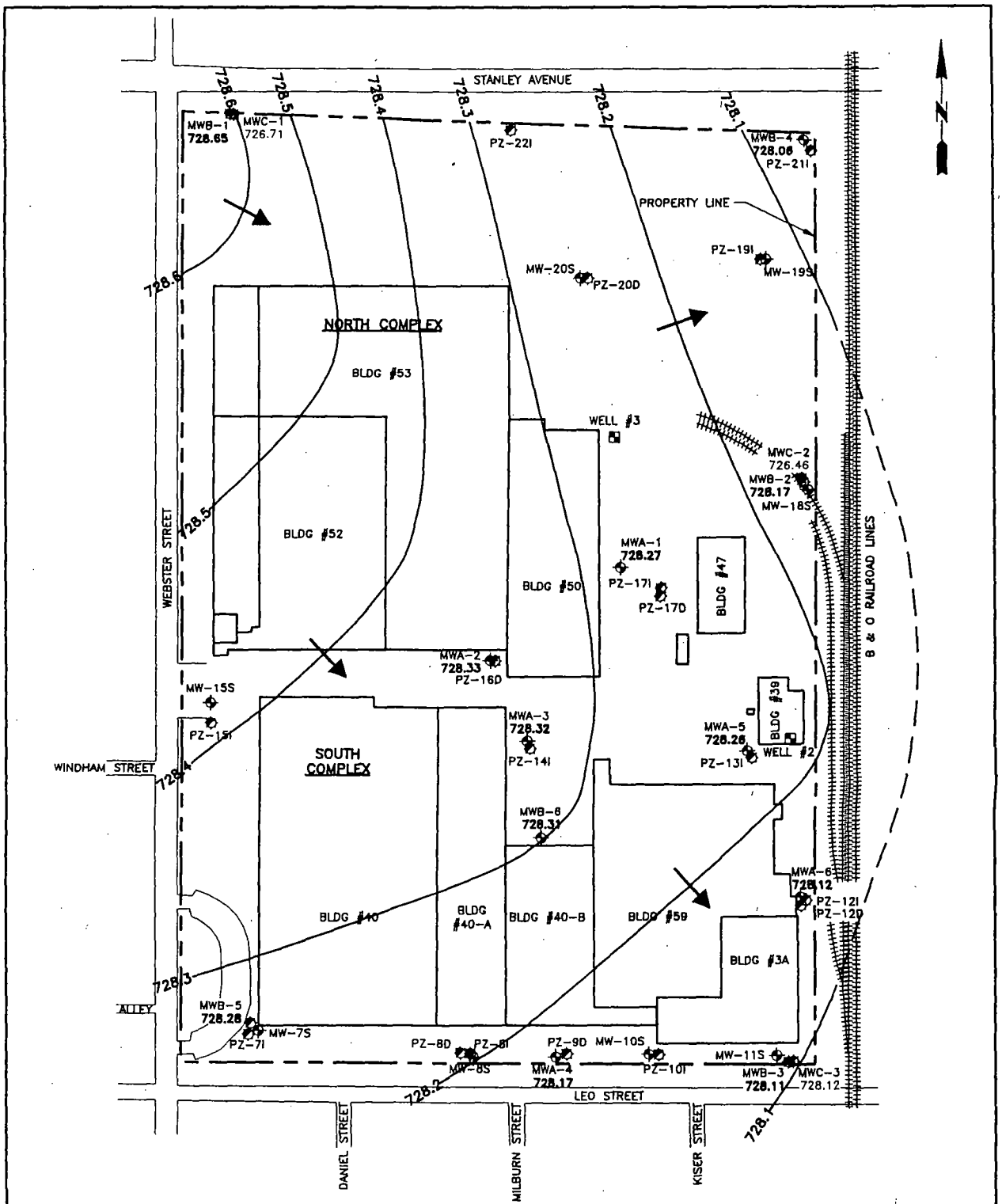
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

GROUND-WATER ELEVATION CONTOUR MAP
JANUARY 20, 1998

FILE: 3CH0A03S.DWG | DATE: MARCH 1998 | FIGURE: 6



LEGEND

◆	WELL LOCATION
⊕	PIEZOMETER LOCATION
▣	WATER SUPPLY WELL
728.12	GROUND-WATER ELEVATION (FEET) NOT USED IN CONTOURING
728.17	GROUND-WATER ELEVATION (FEET) USED IN CONTOURING
—728.2	GROUND-WATER ELEVATION CONTOUR (FEET)
→	GROUND-WATER FLOW DIRECTION

0 200
APPROX. SCALE IN FEET

ATTORNEY-CLIENT COMMUNICATION PRIVILEGED AND CONFIDENTIAL

SOURCE: CLEAN TECH, INC.

DATE	REVISED

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DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

GROUND-WATER ELEVATION CONTOUR MAP
NOVEMBER 22-24, 1997

FILE: 3CHDA03D.DWG *DATE:* MARCH 1998 *FIGURE:*

10160/875304/4166650-67

DAIMLERCHRYSLER — Chain-of-Custody

3856 B

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17601 Phone Number: (717) 656-2300 Fax Number: (717) 656-2681	Project Name: DCX-Dayton Thermal Site Location: Dayton, OH Site Code: RFA Number: ET 03076 DaimlerChrysler PM: Gary Stanczuk	Consultant: Earth Tech Address: 4135 Technology Pkwy Sheboygan, WI 43083 Consultant PM: Rob Stanson Phone: 920-451-2487 Fax: 920-458-0550

Turn-around Time Request: (circle)
24 calendar hrs.
48 calendar hrs.
7 calendar days
(14) calendar days

Data Package Deliverables: (circle)
DaimlerChrysler Level (1)
DaimlerChrysler Level 2
CLP

Compound List-Parameter/Method/Bottle Type/Preservative: VOCs

Matrix Codes
S - Soil; SW - Surface Water; GW - Groundwater; A - Air; Sed. - Sediment; O - Other (specify)

Are aqueous samples field filtered for metals? Yes No

EPA Region 5 Records Ctr. 349423

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	Remarks
PZ17D-111603	11/16/03	1320	G	GW	3	
MW20S-111603		1425				
MW A001-111603		1410				
MW19S-111603		1515				
~~PZ[illegible]D-111603~~						
MW7S-111703	11/17/03	1050				
PZ[illegible]7I-111703		1050				
MW15S-111703		0950				
PZ15I-111703		0945				
MW A03-111703		1250				

Sampler(s): DD/DH/KZ/BE

Cooler ID # C06742-C07845-C07851-C07832 Samples Relinquished under Airbill No. 842249102537 Temperature (corrected) 4.5, 5.3, 3.0

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact?
D. Decenzo	11/17/03	1830				Yes No
Relinquished by:	Date:	Time:	Received for Laboratory by:	Date:	Time:	Custody Seal Intact?
			Kathy Binkley	11-18-03	0945	Yes No

Is RFA sampling complete? Yes (No)

DaimlerChrysler 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

Revision No. 3
Created: July 9, 1999

10160/875304/4166650-67

DAIMLERCHRYSLER — Chain-of-Custody

3858 · B

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17601 Phone Number: (717) 656-2300 Fax Number: (717) 656-2681	Project Name: DCX-Dayton Thermal Site Location: Dayton OH Site Code: RFA Number: ET 03076 DaimlerChrysler PM: Gary Stanczuk	Consultant: Earth Tech Address: 4135 Technology Pkwy Sheboygan WI 43083 Consultant PM Rob Stenson Phone: 920-451-2407 Fax: 920-458-0550	

Turn-around Time Request: (circle)
24 calendar hrs.
48 calendar hrs.
7 calendar days
14 calendar days

Data Package Deliverables: (circle)
DaimlerChrysler Level 1
DaimlerChrysler Level 2
CLP

Compound List-Parameter/Method/Bottle Type/Preservative

Matrix Codes
S - Soil
SW - Surface Water
GW - Groundwater
A - Air
Sed. - Sediment
O - Other (specify)

Are aqueous samples field filtered for metals? Yes No

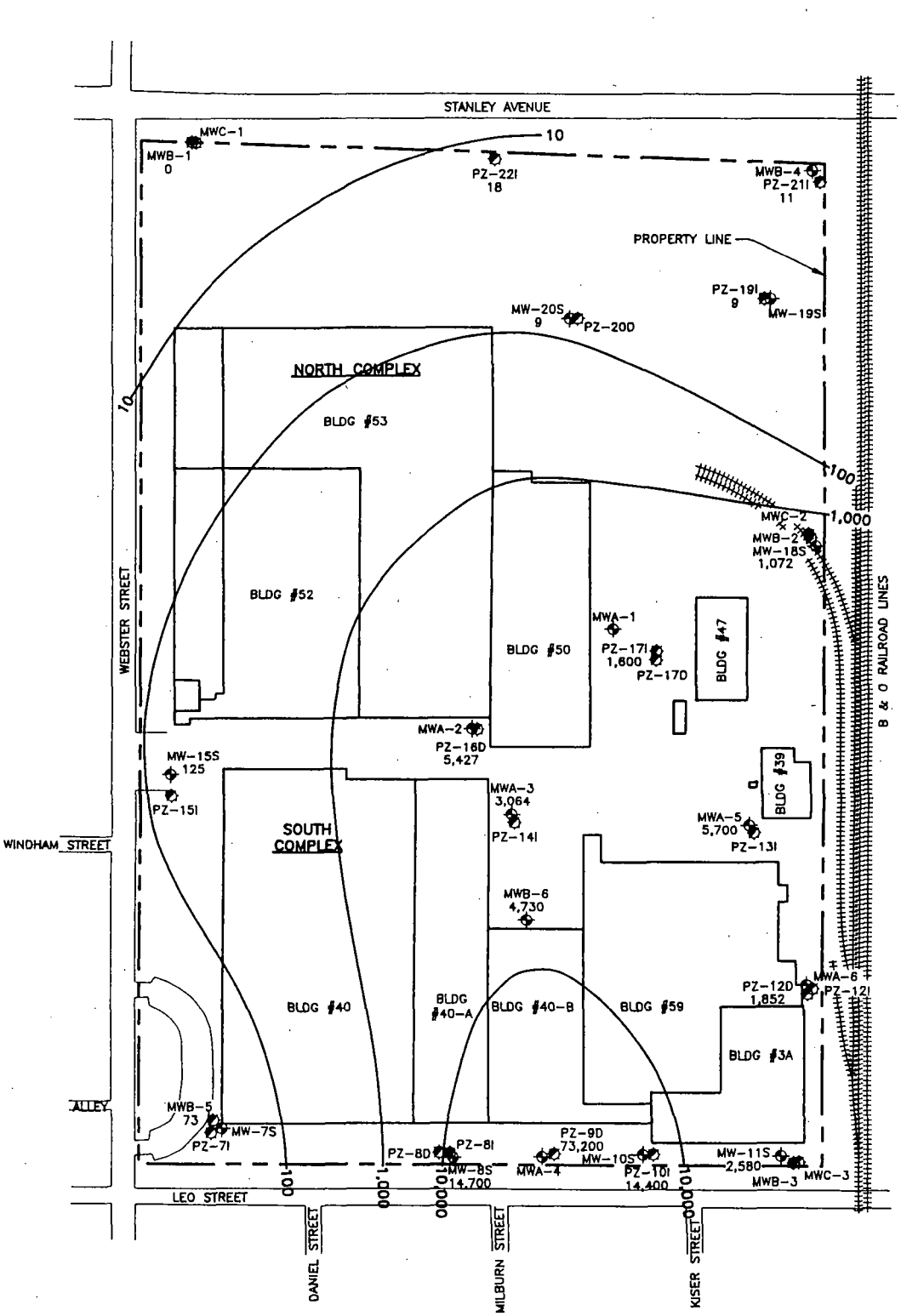
Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOCs									Remarks
MW34S-111703	11/17/03	1425	G	GW	3	X									
PZ34I-111703		1530				X									
PZ34D-111703		1425				X									
TW13-111703		1445				X									
PZ014I-111703		0850				X									
MWET6-111703		1640				X									
MWC001-111703		1640				X									
MWB001-111703		1705				X									
Trip Blank						3									

Sampler(s) DD/DH/KZ/BE	Cooler ID # C06762-C07845-C07851-C07832			Samples Relinquished under Airbill No. 842249102537			Temperature (corrected) 4.5°, 5.°, 8.°
	Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact? Yes No
Is RFA sampling complete? Yes No	Relinquished by:	Date:	Time:	Received for Laboratory by: Kelly Brinkley	Date: 11-18-03	Time: 0945	Custody Seal Intact? Yes No

DaimlerChrysler 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

Revision No. 3
Created: July 9, 1999



EPA Region 5 Records Ctr.
349424

LEGEND

⊕	WELL LOCATION
⊘	PIEZOMETER LOCATION
73	TOTAL VOC CONCENTRATION IN ug/L
(ug/L)	MICROGRAMS PER LITER

0 200
APPROX. SCALE IN FEET

ATTORNEY-CLIENT COMMUNICATION PRIVILEGED & CONFIDENTIAL

SOURCE: CLEAN TECH, INC.

DATE	REVISED
1/98	MW & PZ SURVEY

Prepared By:
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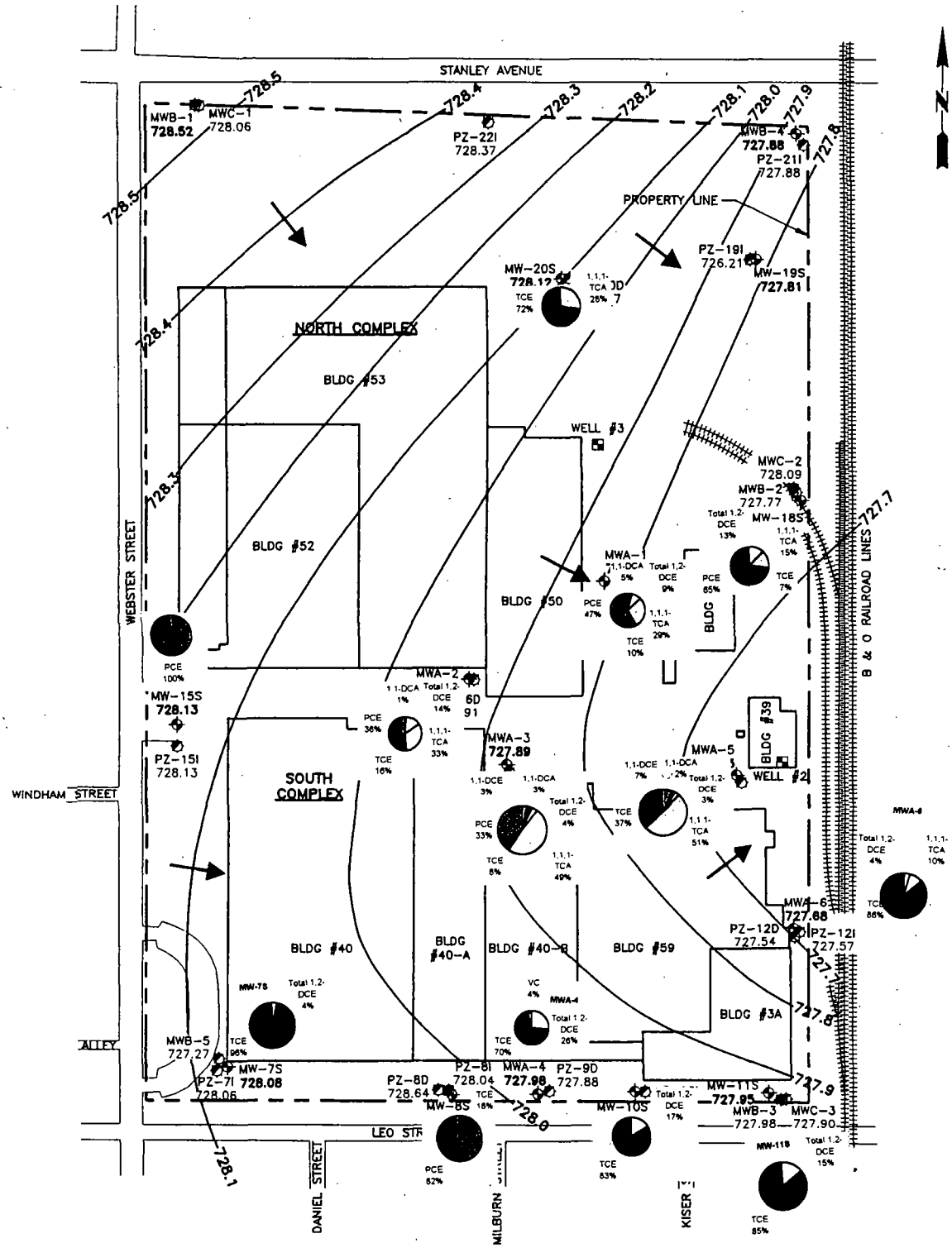
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

TOTAL VOC'S IN GROUND-WATER (ug/L)
JANUARY 1998

FILE: 3CHDA04A.DWG | DATE: JANUARY 1998 | FIGURE: 2



LEGEND

✦	WELL LOCATION
◐	PIEZOMETER LOCATION
▣	WATER SUPPLY WELL
728.37	GROUND-WATER ELEVATION (FEET) NOT USED IN CONTOURING
728.05	GROUND-WATER ELEVATION (FEET) USED IN CONTOURING
—— 728.0	GROUND-WATER ELEVATION CONTOUR (FEET)
⟶	GROUND-WATER FLOW DIRECTION

0 200
APPROX. SCALE IN FEET

ATTORNEY/CLIENT COMMUNICATION PRIVILEGED AND CONFIDENTIAL

Shallow Wells

SOURCE: CLEAN TECH, INC.

DATE	REVISED

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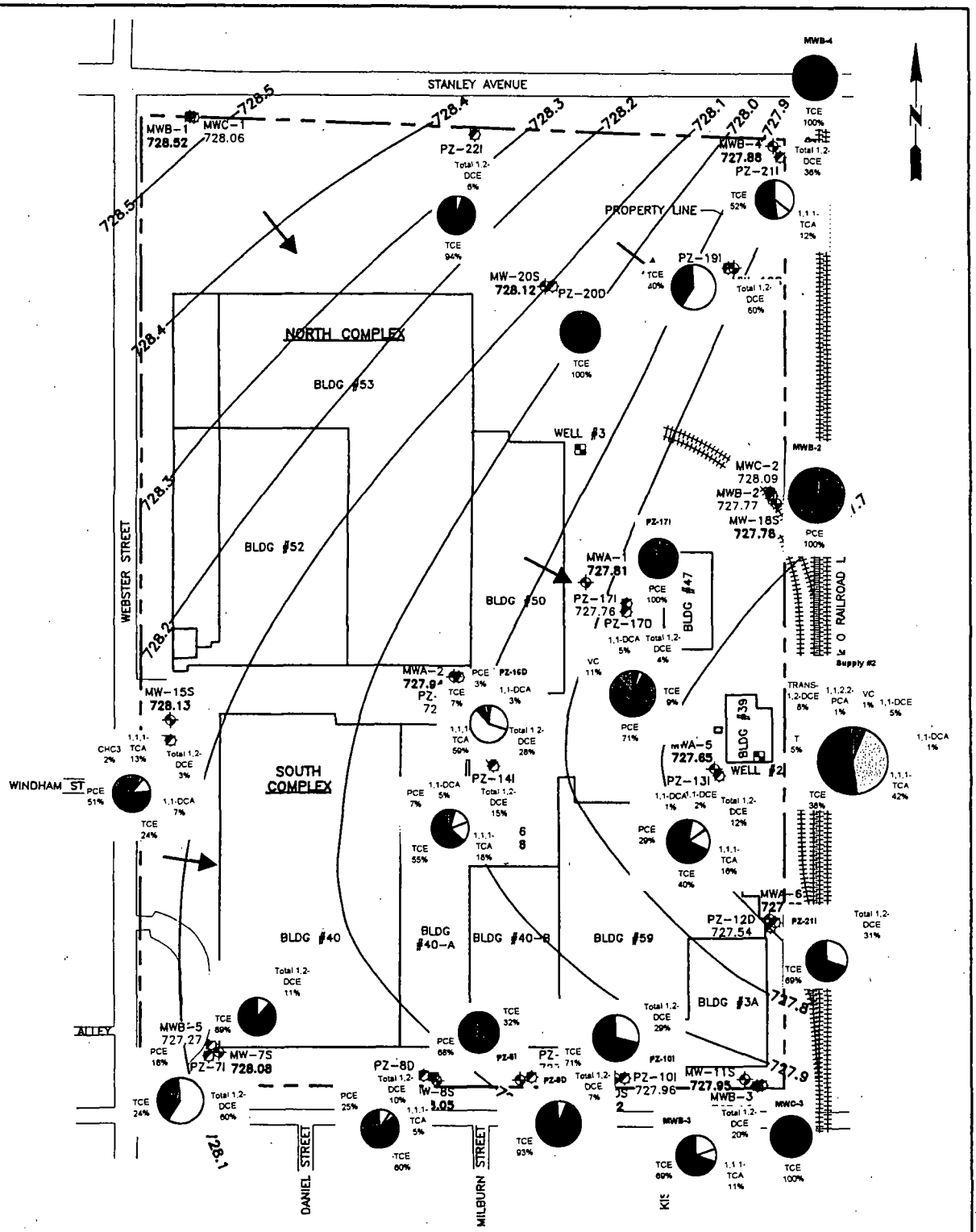
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

GROUND-WATER ELEVATION CONTOUR MAP
JANUARY 20, 1998

FILE: 3CH0A03S.DWG | DATE: MARCH 1998 | FIGURE: 6



LEGEND

⊕	WELL LOCATION
⊕	PIEZOMETER LOCATION
■	WATER SUPPLY WELL
728.37	GROUND-WATER ELEVATION (FEET) NOT USED IN CONTOURING
728.05	GROUND-WATER ELEVATION (FEET) USED IN CONTOURING
—— 728.0	GROUND-WATER ELEVATION CONTOUR (FEET)
→	GROUND-WATER FLOW DIRECTION

0 200
APPROX. SCALE IN FEET

ATTORNEY-CLIENT COMMUNICATION PRIVILEGED AND CONFIDENTIAL

Deep Wells

SOURCE: CLEAN TECH, INC.

DATE	REVISED

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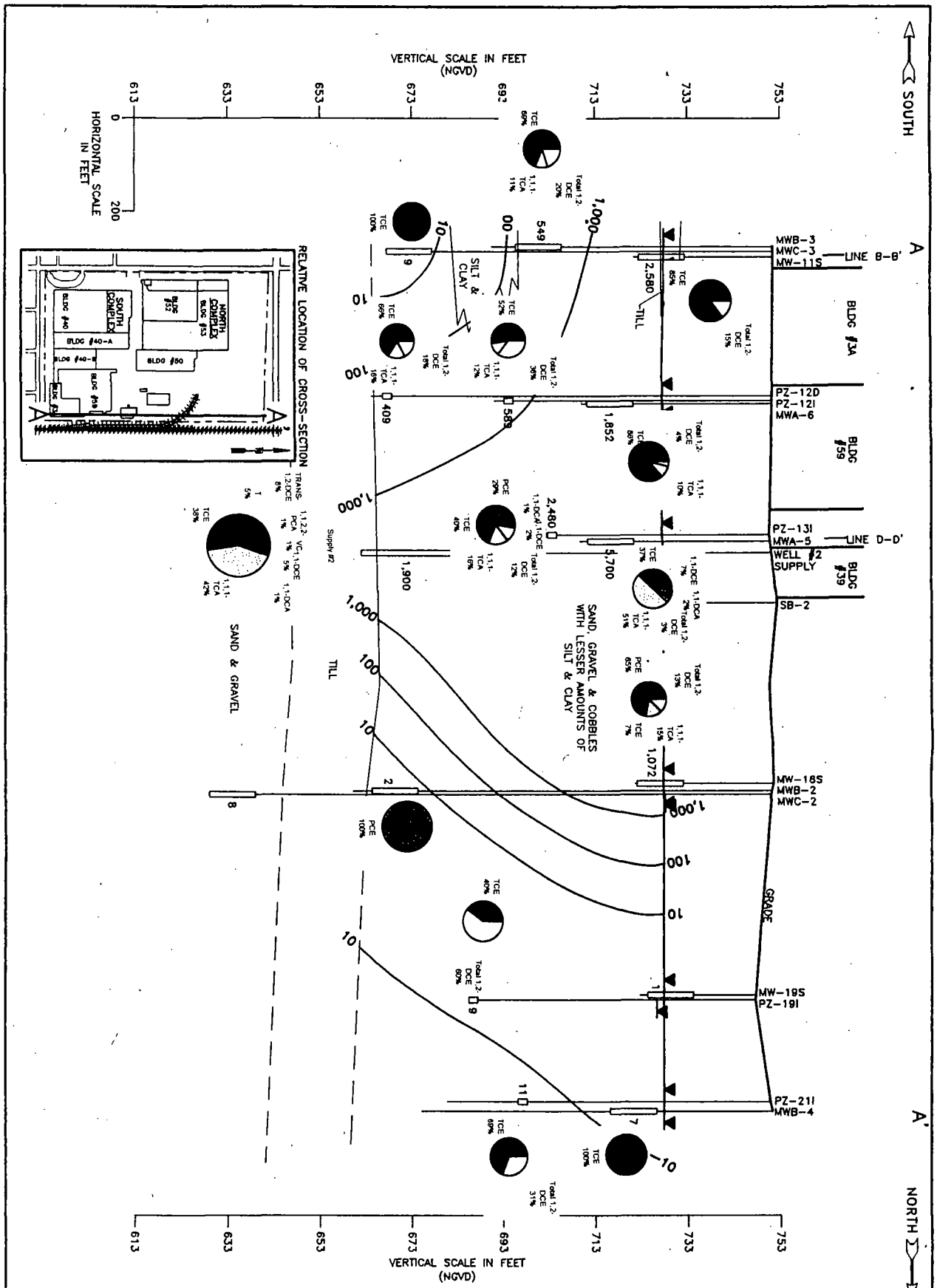
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

GROUND-WATER ELEVATION CONTOUR MAP
JANUARY 20, 1998

FILE: 3CHDA03S.DWG | DATE: MARCH 1998 | FIGURE: 6



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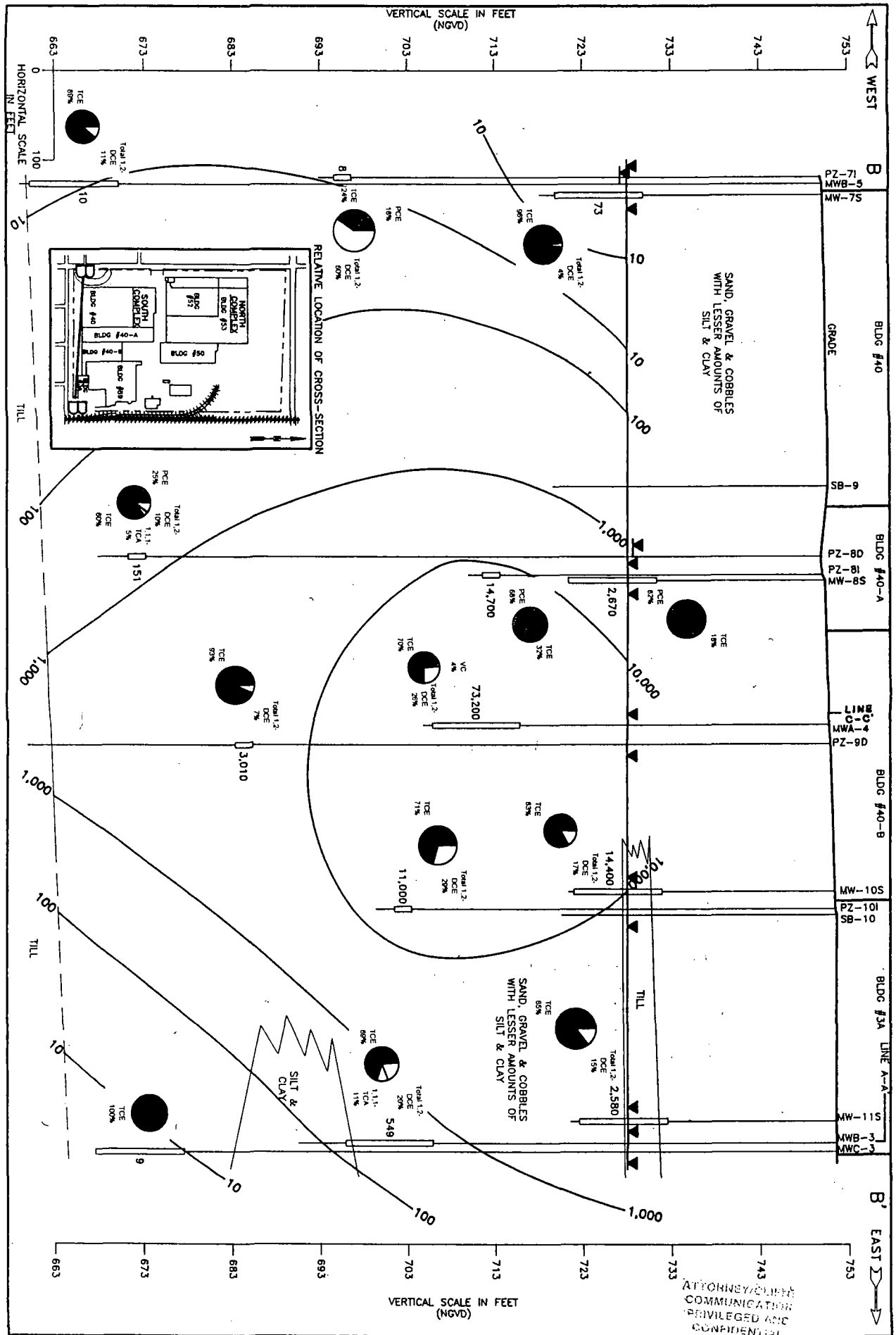
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

TOTAL VOC'S IN GROUND-WATER (ug/L) ALONG GEOLOGIC CROSS-SECTION A-A'

FILE: 3CHDA03X.DWG | DATE: MARCH 1998 | FIGURE: 1



DATE	REVISED

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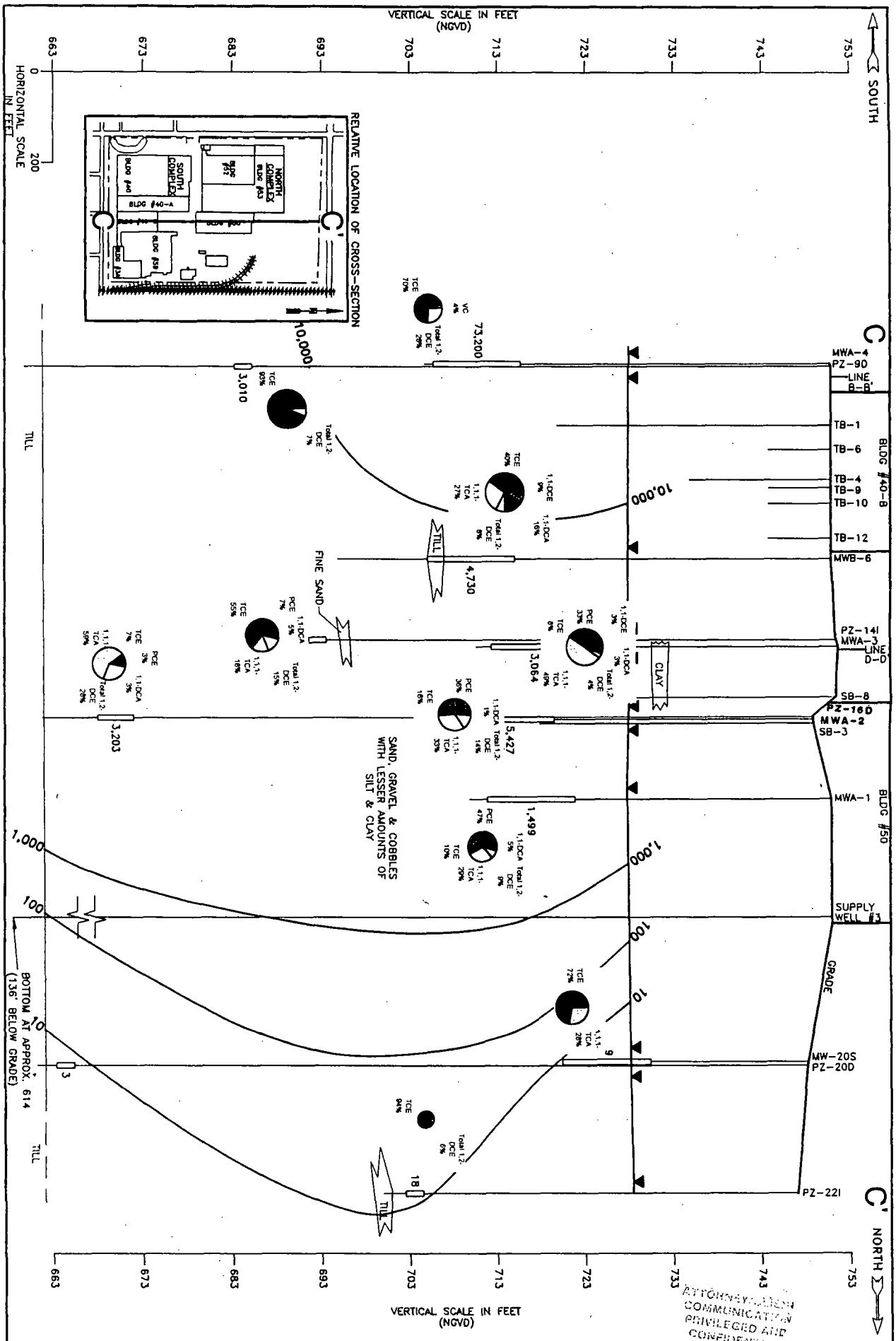
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

TOTAL VOC'S IN GROUND-WATER (ug/L) ALONG GEOLOGIC CROSS-SECTION B-B'

FILE: 3CHDA03X.DWG | DATE: MARCH 1998 | FIGURE: 2



DATE	REVISED

Prepared By:
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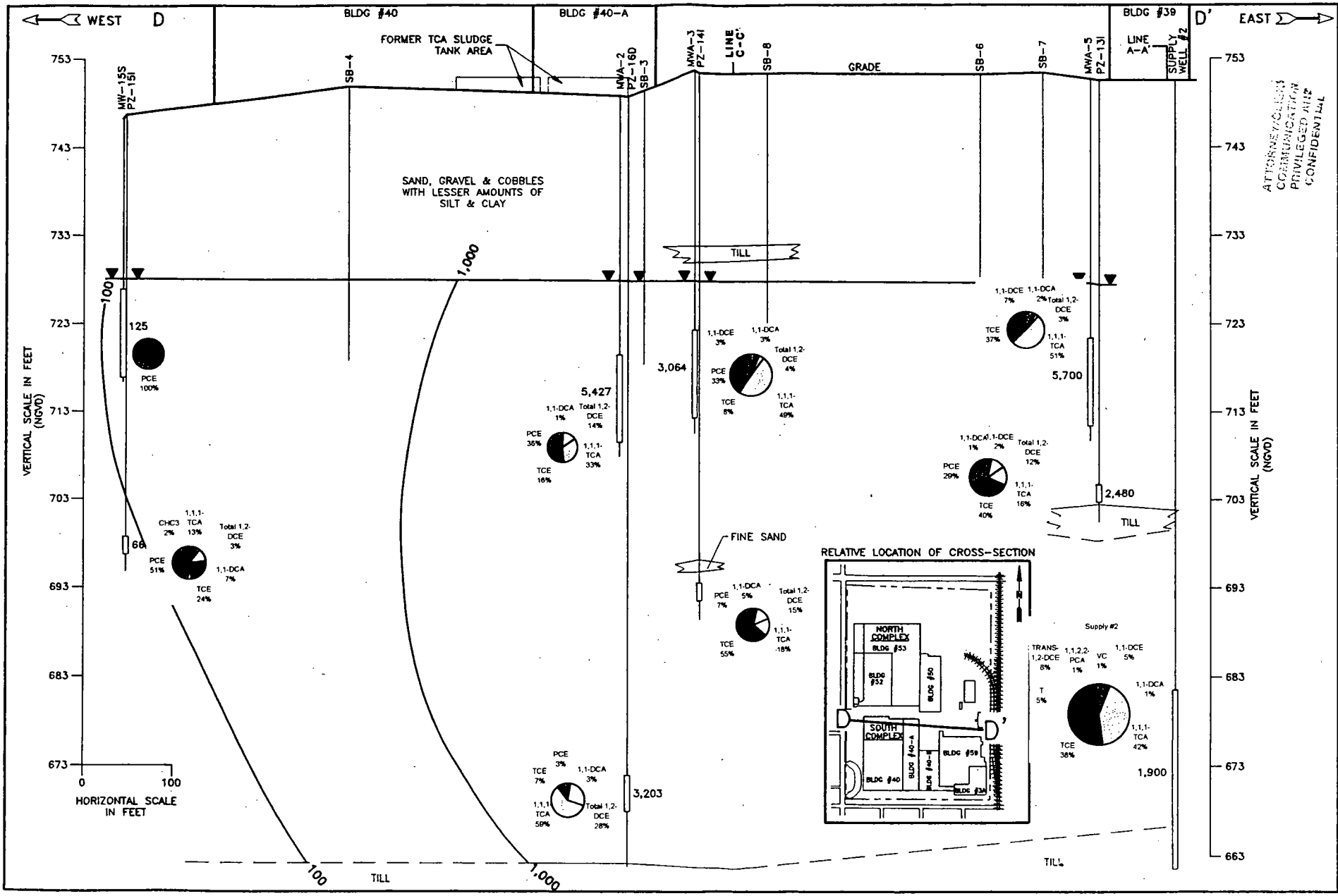
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

TOTAL VOC'S IN GROUND-WATER (ug/L) ALONG GEOLOGIC CROSS-SECTION C-C'

FILE: 3CHDA03X.DWG | *DATE:* MARCH 1998 | *FIGURE:* 3



DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

TOTAL VOC'S IN GROUND-WATER (ug/L)
ALONG GEOLOGIC CROSS-SECTION D-D'

FILE: 3CHDA03X.DWG DATE: MARCH 1998

Prepared By:
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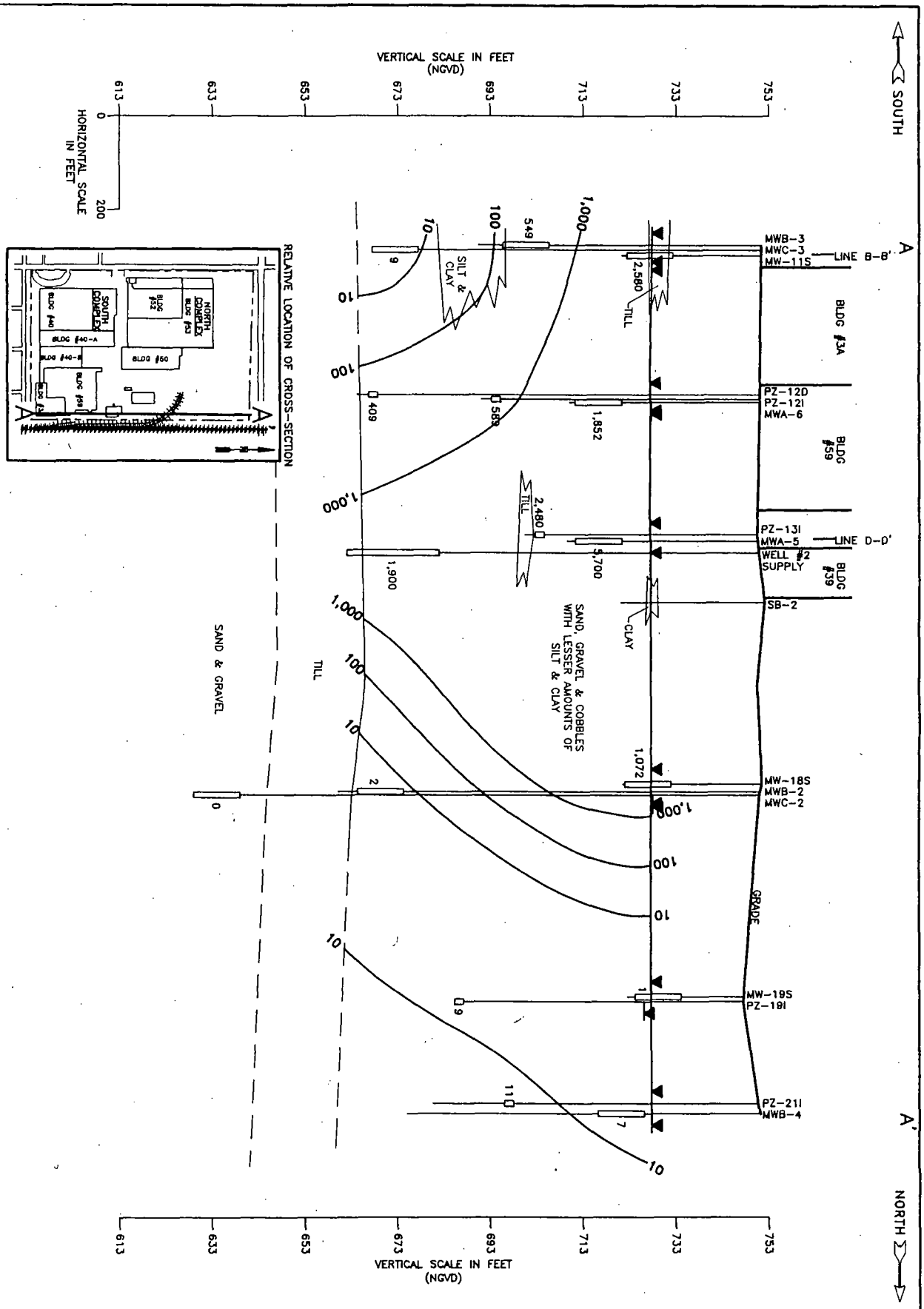
REVISED

DATE



DATE	REVISED

Prepared By:
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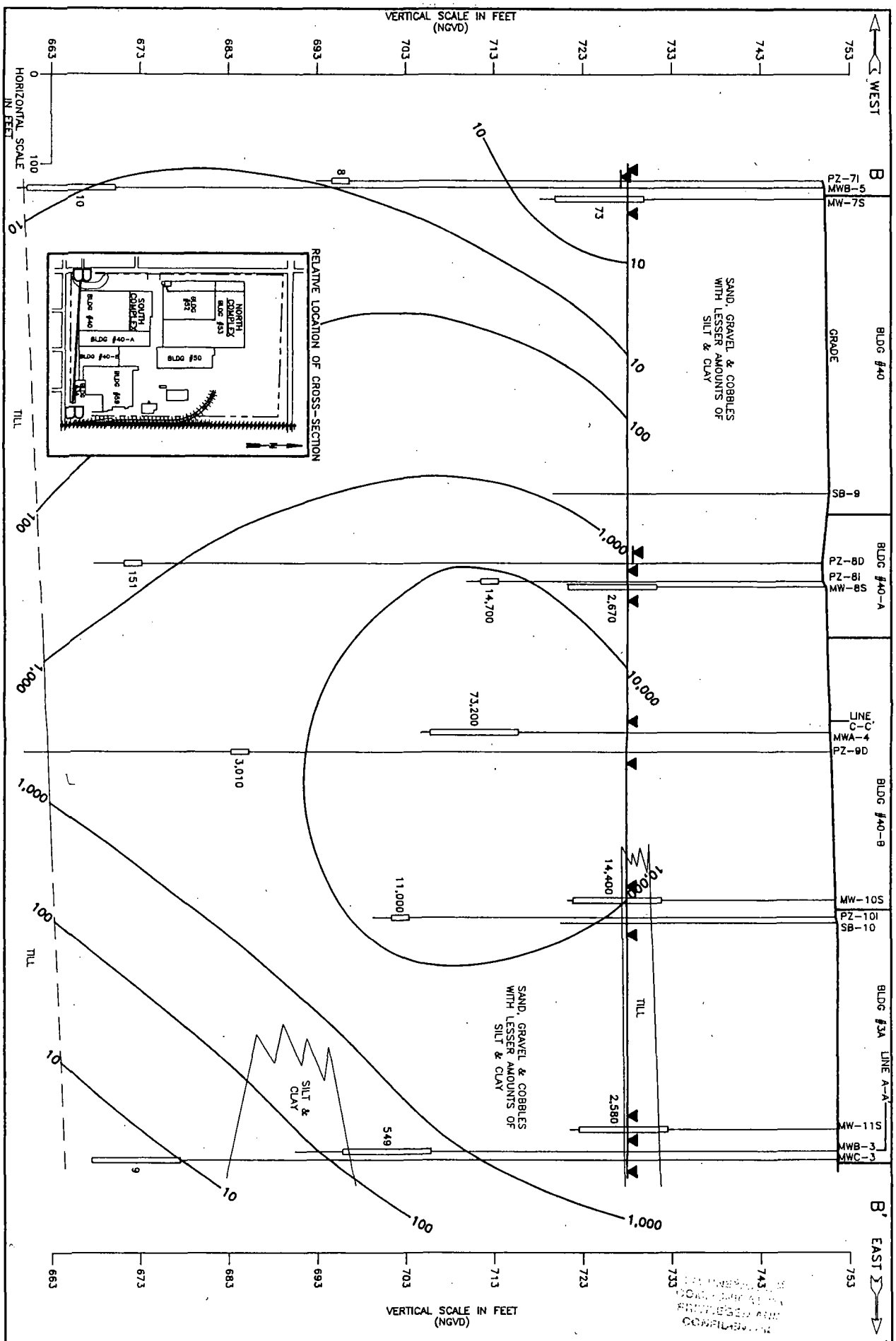
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

TOTAL VOC'S IN GROUND-WATER (ug/L)
ALONG GEOLOGIC CROSS-SECTION A-A'

FILE: 3CHDA03X.DWG | *DATE:* MARCH 1998 | *FIGURE:* 1



DATE	REVISED

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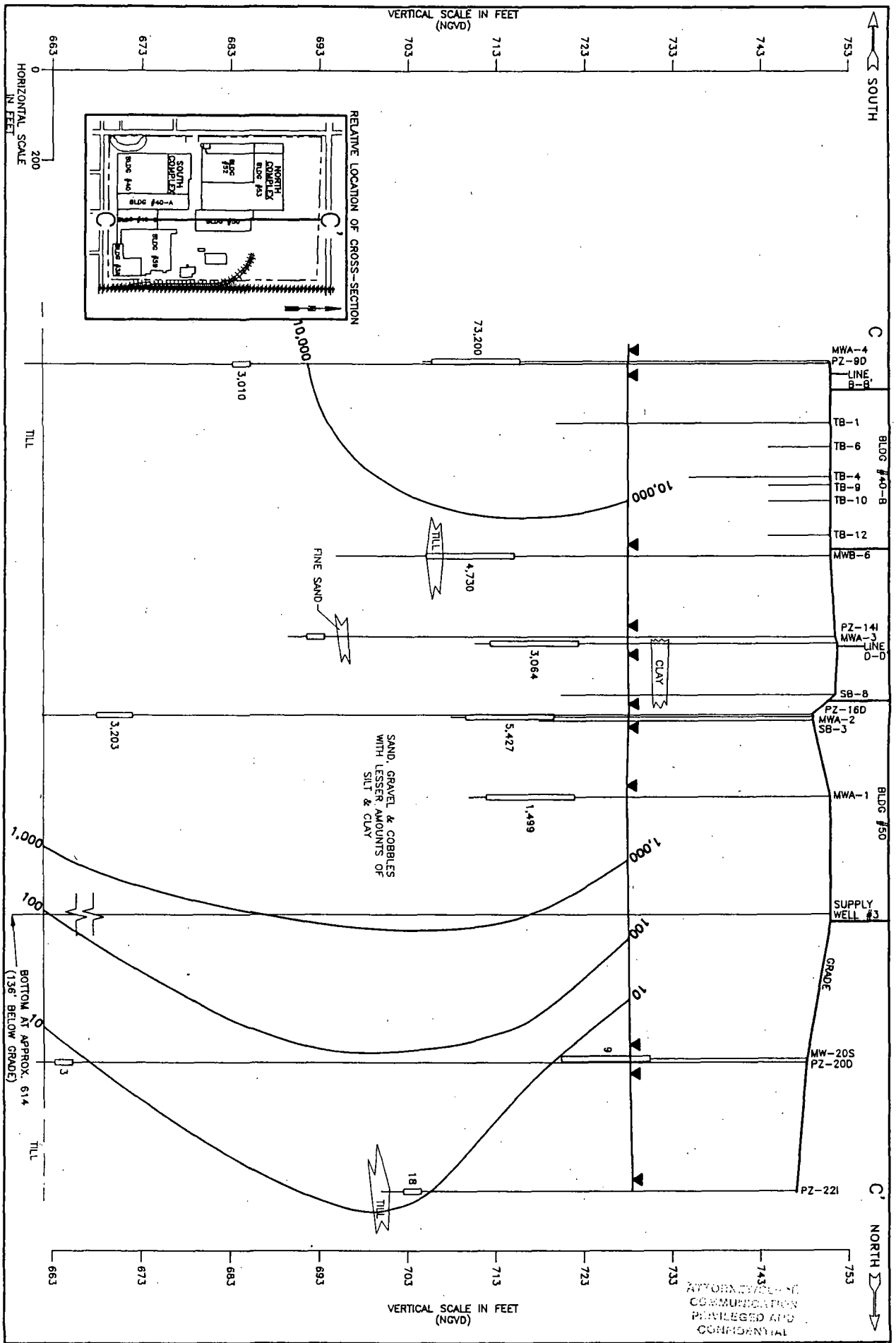
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

TOTAL VOC'S IN GROUND-WATER (ug/L) ALONG GEOLOGIC CROSS-SECTION B-B'

FILE: 3CHDA03X.DWG | *DATE:* MARCH 1998 | *FIGURE:* 2



DATE	REVISED

Prepared By:
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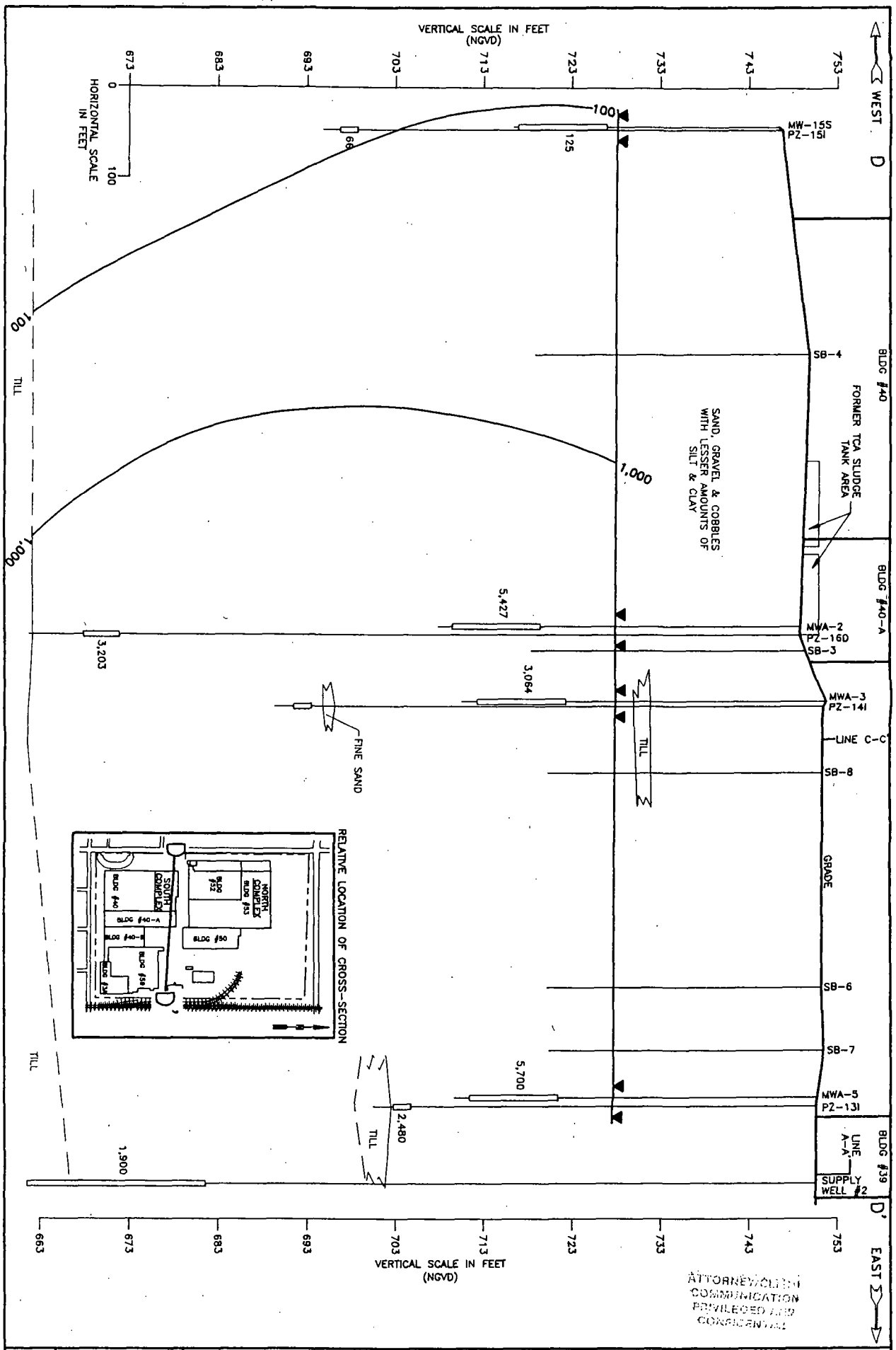
DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

TOTAL VOC'S IN GROUND-WATER (ug/L) ALONG GEOLOGIC CROSS-SECTION C-C'

FILE:	DATE:	FIGURE:
3CHDA03X.DWG	MARCH 1998	3



DATE	REVISED

Prepared By:
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DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

TOTAL VOC'S IN GROUND-WATER (ug/L) ALONG GEOLOGIC CROSS-SECTION D-D'

FILE: 3CH0A03X.DWG | DATE: MARCH 1998 | FIGURE: 4

SOIL QUALITY CROSS-SECTION LEGEND

	SCREENED INTERVAL
	TOTAL DEPTH DRILLED
	WATER-TABLE ELEVATION (JANUARY 20, 1998)
0.2	PID READING IN ppm (LBG)
0.4	PID READING IN ppm (CLEAN TECH)
<0.0053	TOTAL CONCENTRATION OF TOTAL VOC'S IN SOIL (mg/kg, ppm) (NOVEMBER 1997)
5.416	TOTAL CONCENTRATION OF TOTAL VOC'S IN SOIL (mg/kg, ppm) (NOVEMBER 1994)
PID	PHOTOIONIZATION DETECTOR
ppm	PARTS PER MILLION
mg/kg	MILLIGRAMS PER KILOGRAM
VOC'S	VOLATILE ORGANIC COMPOUNDS

GROUND-WATER QUALITY CROSS-SECTION LEGEND

	SCREENED INTERVAL
	TOTAL DEPTH DRILLED
	WATER-TABLE ELEVATION (JANUARY 20, 1998)
73	TOTAL CONCENTRATION OF TOTAL VOC'S IN GROUND-WATER (ug/L) (JANUARY 1998)
10——	ISOCONCENTRATION CONTOUR LINE (ug/L)
ug/L	MICROGRAMS PER LITER

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
(612) 490-1405

DAYTON THERMAL PRODUCTS PLANT
DAYTON, OHIO

LEGEND FOR CROSS-SECTIONS

FILE:	3CHDA03Z.DWG	DATE:	MARCH 1998	FIGURE:	1

EPA Region 5 Records Ctr.
349425

Gary M Stanczuk
05/10/2002 09:11 AM

To: John Oswald <JOswald@lbgmn.com>
cc:
Subject: Re: Dayton Secondary Containment

I had the design reviewed. The only comment from Rick Hingst who is the secondary containment person, is that the containment pad should slope to the sump. Jody Bailiff is responsible for using Non Production Materials. He indicated that your proposed sealant is not a Chrysler approved product. Below is contacts from three of our suppliers who will be able to help select an approved coating.

Sherwin Williams	Dick Gauthier	313 599-4381 pager
PPG	Ken Hartland	248 521-6659 cell
ICI	Bob Benson	248 822-3084 office

Thanks

Jody Bailiff
Senior Specialist Non Production Materials
Stationary Environmental and Energy
T/L 776-7366 (248) 576-7366
FAX T/L 776-7369 (248-576-7369)
John Oswald <JOswald@lbgmn.com>

John Oswald <JOswald@lbgmn.com>
05/09/2002 12:57 PM

To: "Gary Stanczuk (gms9@daimlerchrysler.com)" <gms9@daimlerchrysler.com>
cc: Ken Vogel <KVogel@lbgmn.com>
Subject: Dayton Secondary Containment

Mr. Stanczuk,

I am attaching the files for the concrete pad and secondary containment design for the SVE system at Dayton Thermal-Bldg. 50. The files are the design drawing and MSDS documents for the chemical sealants recommended for coating the containment area. If there are any problems with the file transmission or if you have any questions about the design, please let me know.

Thanks,

John Oswald

John Oswald

Environmental Engineer II

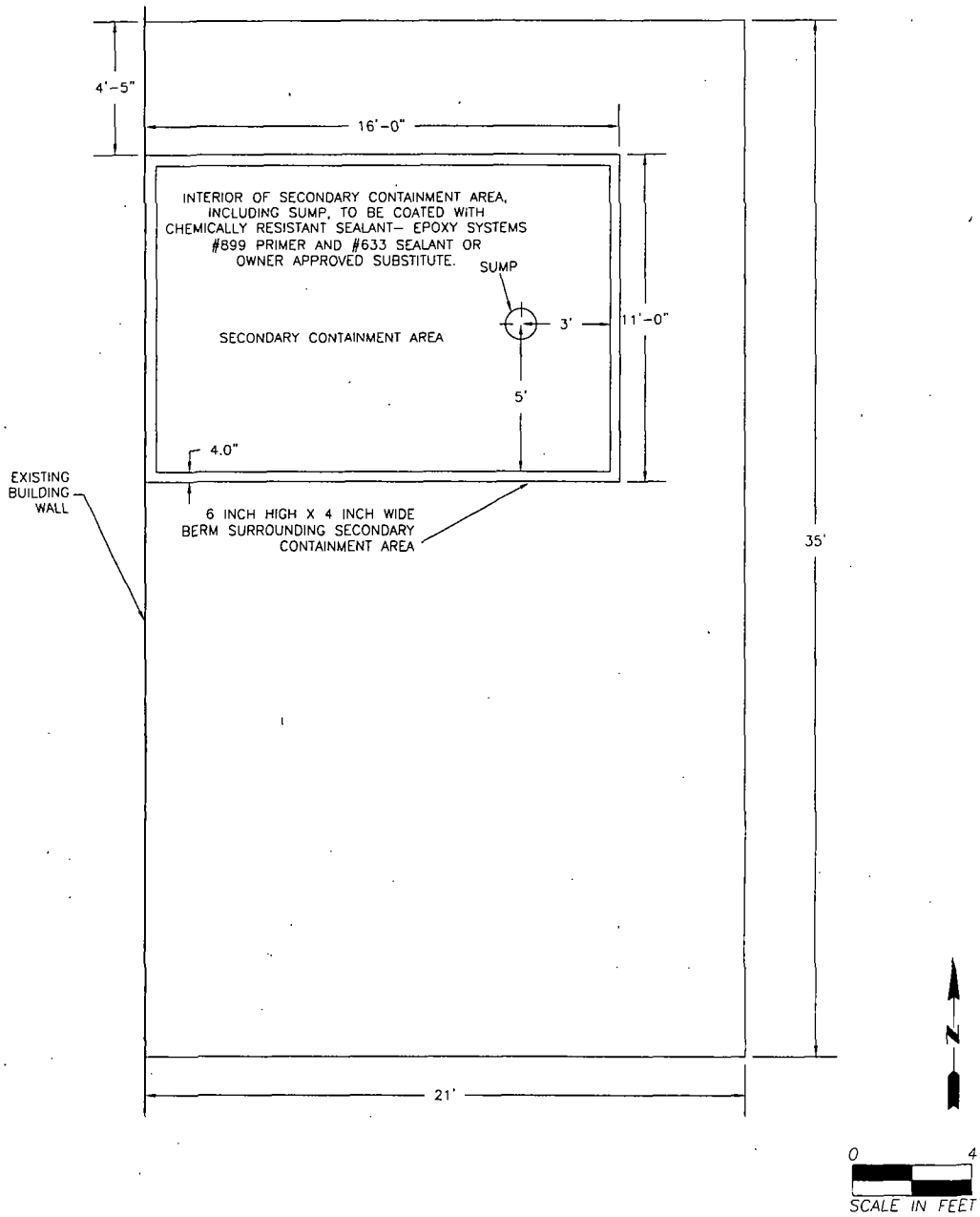
Leggette, Brashears & Graham, Inc.

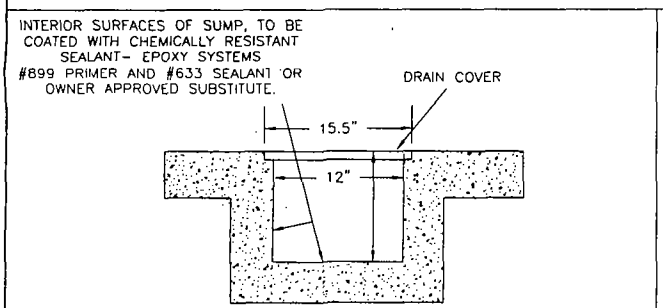
1210 W. County Rd. E

St. Paul, MN 55112

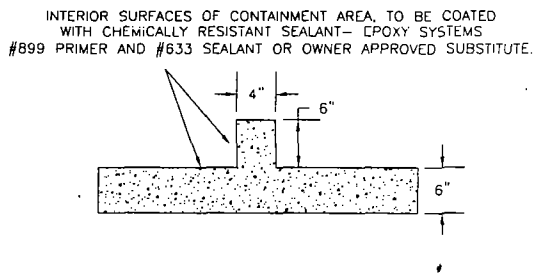
(651)490-1405 x211

Bldg50Pad.pdf #633MSDS.pdf #899MSDS.pdf





SUMP CROSS-SECTION



BERM CROSS-SECTION

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

CONCRETE PAD SPECIFICATIONS

FILE: BLDG50PAD.dwg | *DATE:* FEBRUARY 2002 | *FIGURE:* 1

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: EpoxySystems' Product #899 PRIMER/LOW MODULUS BINDER PART A

HMIS CODES: H F R P
1 1 0 B

PRODUCT CODE: #899B

SECTION 1: MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Epoxy Systems, Inc.
ADDRESS: 74 Plains Road
Jericho, Vermont 05465
EMERGENCY NUMBER: 1-802-899-2844 **DATE PRINTED:** 08/06/01
INFORMATION NUMBER: 1-802-899-2844 **PREPARER:** N. Lambert

SECTION 2: HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	WT %	CARCINOGEN
Epoxy Resin	25068-38-6	NE	NE	60-80	NO
Alkyl Glycidyl Ether	120547-52-6	NE	NE	1-10	
Alkyl Phenol	84852-15-3	NE	NE	1-10	NO
Benzyl Alcohol	100-51-6	NE	NE	1-10	NO

Substances listed are present in concentration of 1% or greater, or 0.1% if cited as a potential Carcinogen in the OSHA hazards communication standard. Where proprietary ingredient is listed, the identity is available as provided in 29 CFR 1910.1200.

NE - Not Established

SECTION 3: PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT	Above 400° F
VAPOR DENSITY	Approx. 3.5 (Air = 1)
VAPOR PRESSURE	Less than 1 mm Hg @ 100° F
VOC	0.00
SOLUBILITY IN WATER	Very slight
APPEARANCE AND ODOR	Low viscosity clear liquid with a mild, pleasant aroma
SPECIFIC GRAVITY (H20=1)	1.11

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >200° F
METHOD USED: Closed Cup
FLAMMABLE LIMITS IN AIR BY VOLUME **LOWER:** Not determined
UPPER: Not determined
EXTINGUISHING MEDIA: Foam, dry chemical CO 2
OSHA FLAMMABILITY CLASSIFICATION: Combustible liquid, Class III A
SPECIAL FIRE FIGHTING PROCEDURES: Decomposition and/or products of combustion may be toxic. Use self contained breathing equipment.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Decomposition and combustion products may be toxic.

SECTION 5: REACTIVITY DATA

STABILITY: Normally Stable
CONDITIONS TO AVOID: Elevated temperatures.
INCOMPATIBILITY (MATERIALS TO AVOID): Avoid contact with strong oxidizing agents, strong acids, strong bases. Mixing large quantities (1 gallon) with amines or epoxy hardeners can cause heat build-up and hazardous reaction.

SECTION 5: REACTIVITY DATA (CON'T)

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon Monoxide, Carbon Dioxide, Phenolic Derivatives.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 6: HEALTH HAZARD DATA

HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

INHALATION: Exposure to vapors at elevated temperatures may cause irritation to respiratory tract and difficulty breathing.

EYE: May cause irritation to the eyes.

SKIN: A single exposure to the skin is unlikely to result in harm.

SKIN ABSORPTION: Repeated exposure to the skin can cause sensitization.

INGESTION: Oral toxicity is low. No hazards expected from normal industrial exposure.

HEALTH HAZARDS (ACUTE AND CHRONIC):

CARCINOGENICITY:

NTP CARCINOGEN: NO **IARC MONOGRAPHS:** NO **OSHA REGULATED:** NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Allergy, Eczema, or skin conditions.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush at once with potable water for at least 15 minutes.

SKIN: Wash with soap and warm water. Remove contaminated clothes. Wash before reuse. Destroy contaminated shoes.

INGESTION: Not likely to occur in normal handling. Give large quantities of water and get medical attention.

INHALATION: Remove to fresh air. Administer oxygen if breathing is difficult.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Avoid contact. Soak up with clay or other absorbent material. Place in covered container for disposal.

WASTE DISPOSAL METHOD: Dispose in an approved incinerator or an approved landfill.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Avoid contact.

OTHER PRECAUTIONS: Keep containers tightly closed when not in use. If mixture of A and B are allowed to remain in the mixing vessel past the pot life deadline, heat and a strong reaction will result.

SECTION 8: CONTROL MEASURES

RESPIRATORY PROTECTION: Avoid breathing vapor mist or spray.

VENTILATION: Use with good ventilation.

PROTECTIVE GLOVES: Wear impervious gloves.

EYE PROTECTION: Wear splash-proof chemical goggles.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Provide eye fountain and safety shower.

WORK/HYGIENIC PRACTICES: Practice good industrial hygiene. Wash with soap and water before eating, smoking, or using the restroom.

SECTION 9: REGULATORY INFORMATION

SARA TITLE III SECTION 313: Unless shown below, this product does not contain chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

CAS #	Chemical Name	Percent by Weight
106-89-8	Epichlorohydrin	trace

PROP 65 (CARCINOGEN): Unless shown below, this product does not contain chemicals known to the state of California to cause cancer.

CAS #	Chemical Name	Percent by Weight
	None	

PROP 65 (TERATOGENIC): Unless shown below, this product does not contain chemicals known to the state of California to cause birth defects or other reproductive harm.

CAS #	Chemical Name	Percent by Weight
	None	

PROP 65 (CARCINOGENIC & TERATOGENIC): Unless shown below, this product does not contain chemicals known to the state of California to cause cancer or birth defects or other reproductive harm.

CAS #	Chemical Name	Percent by Weight
	None	

HAZARDOUS WASTE INFORMATION: Unless shown below, this product is not a hazardous waste according to definitions found in CFR-40.

STATE OF MICHIGAN CRITICAL MATERIALS: Unless shown below, this product does not contain ingredients appearing on the State of Michigan Critical Materials List.

CAS #	Chemical Name	Percent by Weight
	None	

D.O.T. PROPER SHIPPING NAME: Synthetic Resin Liquid
PROPER SHIPPING NAME: Synthetic Resin Liquid
HAZARD CLASS: non-hazardous
UN/NA ID NUMBER:

SECTION 10: DISCLAIMER

Data and recommendations presented herein are based upon our and other researchers and are believed to be accurate. The products discussed are distributed without warranty (expressed or implied) and the customer shall make his own determination of suitability for his particular purpose.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: EpoxySystems' Product #899 PRIMER/LOW MODULUS BINDER PART B

HMIS CODES: H F R P
3 1 0 C

PRODUCT CODE: 899B

SECTION 1: MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Epoxy Systems, Inc.
ADDRESS: 74 Plains Road
Jericho, Vermont 05465

EMERGENCY NUMBER: 802 899-2844 **DATE PRINTED:** 08/06/01
INFORMATION NUMBER: 802 899-2844 **PREPARER:** N. Lambert

SECTION 2: HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	WT %	CARCINOGEN
TOFA	68953-36-6	NE	NE	50-60	NO
Tetraethylenepentamine	112-57-2	NE	NE	10-20	NO
Diethylenetriamine	111-40-0	1 ppm	4 mg/m³	1-10	NO
Bisphenol A	80-05-7	NE	NE	1-5	NO
Tris 2,4,6 (Dimethylaminomethyl) Phenol	90-72-2	NE	NE	1-5	NO
Benzyl Alcohol	100-51-6	NE	NE	10-20	NO
Alkyl Phenol	84852-15-3	NE	NE	10-20	NO

Substances listed are present in concentration of 1% or greater, or 0.1% if cited as a potential Carcinogen in the OSHA hazards communication standard. Where proprietary ingredient is listed, the identity is available as provided in 29 CFR 1910.1200.

NE - Not Established

SECTION 3: PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT	>300° F
VAPOR DENSITY	NE
VOC	0.00
SOLUBILITY IN WATER	Slight
APPEARANCE AND ODOR	Dark amber liquid with slight ammoniacal odor
SPECIFIC GRAVITY (H20=1)	0.99
EVAPORATION RATE	N/A

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >200° F
METHOD USED: Closed Cup
FLAMMABLE LIMITS IN AIR BY VOLUME **LOWER:** Not determined
UPPER: Not determined
EXTINGUISHING MEDIA: Foam, dry chemical, CO2
OSHA FLAMMABILITY CLASSIFICATION: Combustible liquid, Class III B
SPECIAL FIRE FIGHTING PROCEDURES: Wear positive pressure self contained breathing equipment. Use water to cool containers exposed to fire. Water may be an ineffective extinguishing agent.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and may travel along the ground or be moved by ventilation to ignition sources at locations distant from material handling point. Pressure may build up in containers and create an explosion hazard.

SECTION 5: REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Not applicable

INCOMPATIBILITY (MATERIALS TO AVOID): Oxidizing agents, strong acids or bases

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon monoxide, carbon dioxide, nitrogen oxides and organic compounds

HAZARDOUS POLYMERIZATION: Will not occur

SECTION 6: HEALTH HAZARD DATA

HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

INHALATION: Headache, nausea, respiratory tract irritant.

SKIN: Severe irritation and possible skin sensitizer.

EYE: Can cause irritation, burning, tearing, redness, swelling and possible chemical burns to the eyes.

SKIN ABSORPTION: Can cause chemical burns, redness and swelling.

INGESTION: Abdominal pain, nausea, vomiting, diarrhea, throat and mouth burns.

HEALTH HAZARDS (ACUTE AND CHRONIC):

CARCINOGENICITY:

NTP CARCINOGEN: NO **IARC MONOGRAPHS:** NO **OSHA REGULATED:** NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Skin contact may aggrevate existing dermatitis (skin condition). Over exposure to vapor or mist may aggrevate existing respiratory conditions such as asthma, bronchitis, or fibrotic respiratory disease.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush immediately for 15 minutes with large amounts of potable water. DO NOT attempt to neutralize with chemical agents. Get immediate medical attention.

SKIN: Flush immediately for 15 minutes with potable water. DO NOT attempt to neutralize with chemical agents. Remove contaminated clothing. Launder before reuse. Discard contaminated shoes. Get medical attention if swelling and/or irritation occurs.

INGESTION: Give water to dilute stomach contents. DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Do not give anything by mouth to an unconscious or convulsing person.

INHALATION: Remove to fresh air. Get medical attention if effects persist.

OTHER INSTRUCTIONS: Swallowing this corrosive material may result in severe ulceration, inflamation, and possible perforation of the upper alimentary tract, with hemorrhage and fluid loss. Aspiration of this product during induced emesis can result in severe lung injury. If evacuation of stomach is necessary, use method least likely to cause aspiration, such as gastric lavage after endotracheal intubation. Contact a Poison Control Center for additional treatment information.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Avoid contact. Allow only personnel wearing goggles, neoprene or rubber gloves and protective clothing to clean up spill. In confined areas a full face respirator is recommended. Absorb spill with clay, diatomaceous earth or other absorbent material. Place in disposal containers.

WASTE DISPOSAL METHOD: Dispose of in approved incinerator or an approved landfill.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE (CON'T)

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Avoid contact. Keep containers tightly closed when not in use. Do not remove labels from empty containers. If mixtures of Part B and Part A are allowed to remain in the mixing container past the pot life deadline, heat and a strong reaction will result.

OTHER PRECAUTIONS: none

SECTION 8: CONTROL MEASURES

RESPIRATORY PROTECTION: If vapor or mist is generated and the occupational exposure limit is exceeded, use appropriate NIOSH/MSHA approved self contained breathing equipment or a full face respirator.

VENTILATION: Mechanical ventilation required if TLV is expected to be exceeded in confined areas.

PROTECTIVE GLOVES: Neoprene or natural rubber gloves

EYE PROTECTION: Chemical goggles

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Body covering clothes

WORK/HYGIENIC PRACTICES: Practice good industrial hygiene. Wash with soap and water before eating, smoking, or using the restroom.

SECTION 9: REGULATORY INFORMATION

SARA TITLE III SECTION 313: Unless shown below, this product does not contain chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

CAS #	Chemical Name	Percent by Weight
	None	

PROP 65 (CARCINOGEN): Unless shown below, this product does not contain chemicals known to the state of California to cause cancer.

CAS #	Chemical Name	Percent by Weight
	None	

PROP 65 (TERATOGENIC): Unless shown below, this product does not contain chemicals known to the state of California to cause birth defects or other reproductive harm.

CAS #	Chemical Name	Percent by Weight
	None	

PROP 65 (CARCINOGENIC & TERATOGENIC): Unless shown below, this product does not contain chemicals known to the state of California to cause cancer or birth defects or other reproductive harm.

CAS #	Chemical Name	Percent by Weight
	None	

HAZARDOUS WASTE INFORMATION: Unless shown below, this product is not a hazardous waste according to definitions found in CFR-40.

STATE OF MICHIGAN CRITICAL MATERIALS: Unless shown below, this product does not contain ingredients appearing on the State of Michigan Critical Materials List.

CAS #	Chemical Name	Percent by Weight
	None	

SECTION 9: REGULATORY INFORMATION (CON'T)

D.O.T. PROPER SHIPPING NAME: Caustic Alkali Liquid, N.O.S. (Modified Amido Amines); 8; UN1719; PG III

PROPER SHIPPING NAME: Caustic Alkali Liquid, N.O.S. (Modified Amido Amines)

HAZARD CLASS: Class 8, Corrosive

UN/NA ID NUMBER: UN 1719

PACKING GROUP III

SECTION 10: DISCLAIMER

Data and recommendations presented herein are based upon our and other researchers and are believed to be accurate. The products discussed are distributed without warranty (expressed or implied) and the customer shall make his own determination of suitability for his particular purpose.

MATERIAL SAFETY DATA SHEET
Epoxy Systems' Product #633 EPOXY NOVOLAC COATING PART A

PRODUCT NAME: Epoxy Systems' Product #633 EPOXY NOVOLAC COATING PART A **HMIS CODES:** H F R P
PRODUCT CODE: 2 1 0 C

SECTION 1: MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: **Epoxy Systems, Inc.**
ADDRESS: 74 Plains Road
Jericho, VT 05465

EMERGENCY NUMBER: 1-888-443-7699 **DATE PRINTED:** 08/14/00
INFORMATION NUMBER: 1-802-899-2844 **NAME OF PREPARER:** M. CAIN;N. Lambert

SECTION 2: HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	WT %	VAPOR PRESS.
Epoxy Novolac Resin	Mixture	NE	NE	95-98	NE
Benzyl Alcohol	101-51-6	NE	NE	2-4	<1 mm Hg @ 68 deg. F

Depending on color, may contain:

HAZARDOUS COMPONENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	WT %	CARCINOGEN
Titanoum Dioxide	13453-57-7	NE	10 mg/m³		NO
Carbon Black	1333-86-4	3.5 mg/m³	3.5 mg/m³		NO
Pigment Red	1309-37-1	6.0 mg/m³	10 mg/m³		NO
Manganite	1317-34-6	--	5 mg/m³		NO
Pigment Yellow 75	52320-66-8	NE	NE		NO
Pigment Yellow 42	51274-00-1	NE	NE		NO
Ultramarine Blue	1319-97-1	NE	NE		NO
Pigment Yellow 53	8007-18-9	NE	NE		NO
Pigment Green 17	1308-38-9	0.5 mg/m³	0.5 mg/m³		NO

Substances listed are present in concentration of 1% or greater, or 0.1% if cited as a potential Carcinogen in the OSHA hazards communication standard. Where proprietary ingredient is listed, the identity is available as provided in 29 CFR 1910.1200.

NE - Not Established **Not present as dry particulate ***Less than 2 ppm present as impurity

SECTION 3: PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE : Not applicable
VAPOR DENSITY : NE
VAPOR PRESSURE : NE
VOC : -0-
SOLUBILITY IN WATER : NIL
APPEARANCE : Moderately viscous liquid, color varies.
ODOR : Mild, no distinguishing chararcterists
SPECIFIC GRAVITY (H20=1) : Approx. 1.45
EVAPORATION RATE : Slower than ether

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >250° F
METHOD USED: PMCC
FLAMMABLE LIMITS IN AIR BY VOLUME - **LOWER:** NA
UPPER: NA

EXTINGUISHING MEDIA: Use foam, dry chemicals, CO 2 . Decomposition and/or products of combustion may be toxic. Use self-contained breathing equipment.

OSHA FLAMMABILITY CLASSIFICATION: Class III B

SPECIAL FIRE FIGHTING PROCEDURES: Wear a NIOSH/MSHA approved self contained breathing apparatus and full protective clothing. Use water to keep fire expsed containers cool. Water may be ineffective as an extinguishing agent.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Pressure may build up in containers and create an explosion hazard.

SECTION 5: REACTIVITY DATA

STABILITY: Normally stable
CONDITIONS TO AVOID: Avoid contact with strong oxidizing agents, strong acids, strong bases.
INCOMPATIBILITY (MATERIALS TO AVOID): Oxidizing agents, strong acids and bases
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon monxide, Carbon dixide, nitrogen oxides and organic compounds.
HAZARDOUS POLYMERIZATION: Mixing large quantities (1 gallon) with amines or epoxy hardeners can cause heat build up and hazardous reaction

SECTION 6: HEALTH HAZARD DATA

HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
INHALATION: Exposure to vapors at elevated temperatures may cause irritation to respiratory tract and difficult breathing.
SKIN: A single exposure is unlikely to result in harm. Repeated exposure can cause sensitization.
EYE: May cause irritation.
INGESTION: Oral toxicity is low. No hazards expected from normal industrial exposure.
HEALTH HAZARDS (ACUTE & CHRONIC):
CARCINOGENICITY: **NTP CARCINOGEN:** **IARC MONOGRAPHS:** **OSHA REGULATED:**

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
EMERGENCY AND FIRST AID PROCEDURES:
EYES: Flush at once with potable water for at least 15 minutes
SKIN: Wash with soap and warm water. Remove contaminated clothes. Wash before reuse. Destroy contaminated shoes.
INGESTION: Not likely to occur in normal handling. Give large quanities of water and get medical attention.
INHALATION: Remove to fresh air. Administer exygen if breathing is difficult.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Dike spill area. Absorb spill with inert absorbant material. Place in sealed metal containers for proper disposal.
WASTE DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Use with good ventilation. Store in cool dry area. Keep containers tightly closed when not in use. If mixture A & B are allowed to remain in the mixing vessel past the pot life deadline, heat and a strong reaction will result. Grinding or other abrasive action to cured film may develop microcrystalline silica dust. Wear a dust mask during such operations.
OTHER PRECAUTIONS: Minimize contact. Avoid breathing vapors. Practice good industrial hygiene and safe working practices.

SECTION 8: CONTROL MEASURES

RESPIRATORY PROTECTION: Avoid breathing vapors mist or spray.
VENTILATION: Use with good ventilation
PROTECTIVE GLOVES: Neoprene or rubber
EYE PROTECTION: Chemical splash goggles.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Provide eye wash fountain and safety shower.
WORK/HYGIENIC PRACTICES: Wash hands thoroughly after use, before eating or smoking.

SECTION 9: REGULATORY INFORMATION

D. O. T. PROPER SHIPPING NAME: Synthetic Resin Liquid
PROPER SHIPPING NAME: Synthetic Resin Liquid
HAZARD CLASS: non-hazardous
UN/NA ID NUMBER:

SECTION 10: DISCLAIMER

Data and recommendations presented herein are based upon our and other researchers and are believed to be accurate. The products discussed are distributed without warranty (expressed or implied) and the customer shall make his own determination of suitability for his particular purpose.

MATERIAL SAFETY DATA SHEET
Epoxy Systems' Product #633 EPOXY NOVOLAC COATING PART B

PRODUCT NAME: Epoxy Systems' Product #633 EPOXY NOVOLAC COATING PART B **HMIS CODES:** H F R P
PRODUCT CODE: 3 1 1 C

SECTION 1: MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Epoxy Systems, Inc.
ADDRESS: 74 Plains Road
Jericho, VT 05465
EMERGENCY NUMBER: 1-888-443-7699 **DATE PRINTED:** 08/14/00
INFORMATION NUMBER: 1-802-899-2844 **NAME OF PREPARER:** M. CAIN; N. Lambert

SECTION 2: HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	WT %	VAPOR PRESS.
Cycloaliphatic Polyamines	Mixture	NE	NE	100	NE

Substances listed are present in conncentration of 1% or greater, or 0.1% if cited as a potential Carcinogen in the OSHA hazards communication standard. Where proprietary ingredient is listed, the identity is provided in 29 CFR 1910.1200.

NE - Not Established

SECTION 3: PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE : NE
VAPOR DENSITY : NE
VAPOR PRESSURE : NE
VOC : -0-
SOLUBILITY IN WATER : Slight
APPEARANCE : Low Viscosity, clear liquid.
ODOR : Mild, Amine
SPECIFIC GRAVITY (H20=1) : 1.0
EVAPORATION RATE : NE

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >250° F
METHOD USED: PMCC
FLAMMABLE LIMITS IN AIR BY VOLUME - LOWER: NE
UPPER: NE
EXTINGUISHING MEDIA: Use foam, dry chemical, CO2.
OSHA FLAMMABILITY CLASSIFICATION: OSHA Class III B.
SPECIAL FIRE FIGHTING PROCEDURES: Wear positive pressure self-contained breathing equipment. Use water to cool containers exposed to fire.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Toxic fumes present when this material is in fire. Containers may rupture. Products of combustion/decomposition include oxides of carbon and nitrogen plus amines and unidentified organic compounds. When Exposed to fire, oxides of cxarbon and nitrogen will be generated.

SECTION 5: REACTIVITY DATA

STABILITY: Normally stable
CONDITIONS TO AVOID: Avoid contact with acids such as hydrochloric or sulfuric.
INCOMPATIBILITY (MATERIALS TO AVOID): Avoid strong oxidizing agents and epoxy resins under uncontrolled conditions.
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Products of combustion/decomposition include oxides of carbon and nitrogen plus amines and unidentified organic compounds.
HAZARDOUS POLYMERIZATION: If mixtures of part B and A are allowed to remain in the mixing container past the pot life deadline, heat and a strong reaction will result.

SECTION 6: HEALTH HAZARD DATA

HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

INHALATION: Vapors can cause severe irritation of respiratory tract.
SKIN: Corrosive–can cause burns.
EYE: Vapors can cause eye irritation.
SKIN ABSORPTION: Corrosive–can cause burns
INGESTION: Can cause severe damage to mouth and throat

HEALTH HAZARDS (ACUTE AND CHRONIC):

CARCINOGENICITY: **NTP CARCINOGEN:** **IARC MONOGRAPHS:** **OSHA REGULATED:**

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush immediately for 15 minutes with large amounts of potable water. Get immediate medical attention.
SKIN: Flush immediately for 15 minutes with potable water. Remove contaminated clothing. Launder before reuse. Discard contaminated shoes. Get medical attention if swelling and/or irritation occurs.
INGESTION: **DO NOT** induce vomiting. Give milk or water to dilute stomach contents. Get medical attention immediately.
INHALATION: Remove to fresh air. Get medical attention if effects persist.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Allow only personell wearing goggles, neoprene, or rubber gloves and protective clothing to clean up spill. In confined areas, a full face respirator is recommended.

WASTE DISPOSAL METHOD: Absorb spill with clay, diamaceous earth or other absorbant material. Place disposal in containers. Dispose of in approved incinerator or an approved land fill.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Mechanical ventilation required if TLV is expected to be exceeded in confined areas. Avoid contact. Keep containers tightly closed when not in use. Do not remove labels from empty containers.

OTHER PRECAUTIONS: If mixtures of B and A are allowed to remain in the mixing container past the pot life deadline, heat and a strong reaction will result.

SECTION 8: CONTROL MEASURES

RESPIRATORY PROTECTION: Wear a full face respirator if in a confined area
VENTILATION: Use in a well ventilated area
PROTECTIVE GLOVES: Wear neoprene, natural rubber gloves.
EYE PROTECTION: Wear goggles
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear body covering clothes
WORK/HYGIENIC PRACTICES: Practice good industrial hygiene. Wash with soap and water before eating or smoking.

SECTION 9: REGULATORY INFORMATION

D. O. T. PROPER SHIPPING NAME: Synthetic Resin Liquid, non-hazardous
PROPER SHIPPING NAME:
HAZARD CLASS:
UN/NA ID NUMBER:

SECTION 10: DISCLAIMER

Data and recommendations presented herein are based upon our and other researchers and are believed to be accurate. The products discussed are distributed without warranty (expressed or implied) and the customer shall make his own determination of suitability for his particular purpose.

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

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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.	

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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
ELEVATION OF TOP OF PVC CASING: 749.90	**DURATION:** ~60 minutes **VOLUME:** ~100 gallons
REMARKS: PZ-7I is located just west of the southwest corner of Building 40 next to existing well MWB-5.	

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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.	

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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.	

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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 **SETTING:** 76.7 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:** 80 to 74 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:** 74 to 73 feet below grade
OBSERVER: Mark Hemstreet	
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.	

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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
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 65.6 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:** 89 to 65 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:** 65 to 64 feet below grade
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.	

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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.

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DEPTH FEET FROM	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
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 47.9 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 52 to 41.9 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:** 41.9 to 39.9 feet below grade
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 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.

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DEPTH FROM	FEET 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.

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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 **SETTING:** 55.9 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 52.8 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:** 52.8 to 50.8 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: 751.56	**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.	

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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 **SETTING:** 82.5 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**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	

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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.	

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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
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 57.9 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 55.9 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:** 55.9 to 53.9 feet below grade
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 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.	

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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 **SETTING:** 19.5 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 15.9 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:** 15.9 to 14.4 feet below grade
OBSERVER: Dave Strand	
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.

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DEPTH FEET FROM	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 SETTING: 48.1 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 Quartz Sand SETTING: 50 to 43.9 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: 43.9 to 41.9 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: 747.03	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.

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DEPTH FEET FROM	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 SETTING: 76.9 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 70.9 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: 70.9 to 60.9 feet below grade
OBSERVER: Dave Strand	
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.

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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.	

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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 **SETTING:** 82.3 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 and #7 Quartz Sand **SETTING:** 85 to 79.2 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:** 79.2 to 77.2 feet below grade
OBSERVER: Mike Bratrud	
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.	

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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
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 19.6 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:** 30 to 17.7 feet below grade
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
OBSERVER: Dave Strand	**SETTING:** 17.7 to 0 feet below grade
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 751.92	**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.

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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
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 13.4 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 25 to 11.3 feet below grade
SAMPLING METHOD: Split Spoon (X) Not applicable	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets
OBSERVER: Mark Hemstreet	**SETTING:** 11.3 to 9.3 feet below grade
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.

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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	

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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
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 27 to 16 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:** 16 to 12 feet below grade
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.

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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.	

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DEPTH FEET FROM	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 SETTING: 52.5 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: 60 to 51 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: 51 to 50 feet below grade
OBSERVER: Mark Hemstreet	
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.	

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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
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SETTING:** 42.6 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:** 45 to 35.9 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:** 35.9 to 32.9 feet below grade
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 747.40	**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.

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DEPTH FEET FROM	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 Distribution 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: 2" Sched 40 PVC DIAMETER: Deep: 98-90 Inter: 55-57 Shallow: 18-33 SLOT NO. 10
DATE COMPLETED: 3/30/01	SETTING:
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK: #6 Silica Sand
Dave - Driller, Nick & Don helpers	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 PM 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

751 / 733 / 18 — 751 / 718 / 33

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	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; 1H 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 at 41.3 feet	58	4
			—	
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 Heidelberg Distribution 1600 WEBSTER STREET, DAYTON, OHIO	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; ~2.5' below grade
REMARKS: dayton_mw0255_d mw0265_c Digital photos MVC-0295 + MVC-0305	YIELD:

Estimated

DEPTH IN FEET		GEOLOGIC DESCRIPTION (751.5 − 733 = 18.5; 751.5 − 718 = 33.5)	OVM DVM5808 PID READING (ppm)	
FROM	TO	0-3 feet Fill, no recovery. 0-0.3 Asphalt	feet	PPM
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; grey, 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	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: West25 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, gray, 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 Heidelberg Distribution 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: 2" Sched 40 PVC DIAMETER: Deep: 83-81 Inter: 53-51 Shallow: 34-32 SLOT NO. 10 (estimated)
DATE COMPLETED: 3/23/01, 3/26/01	SETTING:
DRILLING COMPANY: MOODY'S/BOWSER MORNER Don = Driller	SAND PACK: #6 Silica sand 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.

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION (751 / 733 / 18; 751 / 718 / 33; 41 / 757 / 722 / 39)	OVM 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; Hl 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		Bat	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		

81 – 83

Proposed well screen settings

Deep: 81-83

Inter: 51-53 (above intermediate clay)

Shallow: 32-34 (2' screen below shallow fill)

Measured Total Depths

Shallow 34.10

Int 53.70

Deep 84.75

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 Dave = driller, Nick & Don = helpers	SAND PACK: #6 Silica 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 SETTING: 89-83.5, 79-50.5, 46-33.5, 26-5
REFERENCE POINT: grade	DEVELOPMENT: pumped 3-5 gpm until sediment free
REFERENCE POINT ELEVATION: ~750.0 @ DP049	DURATION: ~1.5 hrs / nest
STICK-UP: NA	WATER LEVEL: ~25' based on FC's (725.0 elev.)
SURFACE COMPLETION: FLUSH GRADE	YIELD:
REMARKS: Heidelberg Winery due S. of DP049 Picture MVC 036 Digital Camera, No pictures of geology	

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	11	0
		to moist; somewhat pliable; no odor	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 +	18	2
		blowing out casing	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 spoon.	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 s & g disseminated throughout; locally silty;	78	3
		mois f; pliable;	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 Paper 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: 2" Sched 40 PVC DIAMETER: Deep: 80.5-78.5 Inter: 57-55 SLOT NO. 10 SETTING: Shallow: 39-37
DATE COMPLETED: 3/28/01, 3/30/01	SAND PACK: #6 Silica
DRILLING COMPANY: MOODY'S/BOWSER MORNER 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: about 6 inches above DP036 elevation @ DP036 = 750.5, ~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

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION (751 / 733 / 18; 751 / 698 / 53)	580B 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 1-2 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 based till.		
		Intermediate: 55-57'		
		Shallow: 37-39', below shallow till		
		Bentonite backplug 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 Machin + Too 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 Dave: driller, Nick/Ron helpers.	SAND PACK: 79-75: Deep #6 Silica SETTING: 50.5-46.5: Inter. Shallow: 30.5-13
DRILLING METHOD: ROTO SONIC	CASING 77-grade 2" PVC 48-grade
SAMPLING METHOD: roto sonic, continuous 10' sleeves	SETTING: 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'

pictures MVC-0185 + MVC-0195. PID not working after 49 feet. Reading Ø "Lamp Out" and "Over range"

Soil Quality: No soil collected from DP-39; DP-15 16-20' cis = 48 ug/kg, PCE = 33 ug/kg, TCE = 1800 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	12.5	Silt; brown, wet, tr. vcrs snd;	15'	101
12.5	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/multi colored/dark grey; 1" oxidation sat. lense @ 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

ESTIMATED

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 f-v,crs; 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 form	
		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 TDs	
		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: 525-48; 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:

Estimated

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

photos MRC-0225 + MRC-0235

No soil gradients from DP35; DP-16 = non-detect; DP-22 = non-detect; DP-16 + DP-22 PID = Ø ppm

DEPTH IN FEET FROM	DEPTH IN FEET TO	GEOLOGIC DESCRIPTION (746 / 733 / 13; 746 / 718 / 28)	OVM PID READING (ppm) feet	PID
0.0	0.5	Topsoil; moist; grass; organics + roots; black	1	0
0.5	6.0	SILT, little f-m gvl; lt/ 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
13 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
28 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
0 49.0	50.0	Sand + gvl, m-f; tr. m gvl; grey sat	45	0
2 50.0	51.0	GRAVEL; f-m; tr. crs gvl; tr crs snd; grey; sat	48	0

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		

84 ≡ 86

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

from grade { 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 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 1600 WEBSTER STREET, DAYTON, OHIO Paper	SCREEN: PVC 2" PVC Sch 40 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 ~35' North of DP038 and 40' east of Kiser (~35 east of DP038)	YIELD:
Digital Camera Picture MVC-0385	Filter broke off in OVM wand. Used HNU #2

Estimated

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 ss g disseminated thruout; 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 competent Till. Couldn't 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 in 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
DATE COMPLETED: 3/14-15/01	SETTING: Shallow 28-13 (-28.5-13.5 per driller)
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK: 75.5-70.5 #6 Silica (Global) 56.5-52
Dave = driller, Nick = Helper, Ron = helper, 2/15 Jarrod = helper	SETTING: 28.5-11
DRILLING METHOD: ROTO SONIC	CASING 72.5 to grade 2" PVC 54 to grade
SAMPLING METHOD: Continuous 10' sleeves 2-4" diameter	SETTING: 13 to grade
OBSERVER: DVS	SEAL TYPE: Medium Bentonite Chips (Pure Gold) Plug back 79-75.5
REFERENCE POINT: Grade	SETTING: Deep 70.5-56.5, Int 52-28.5, Shallow 11-5
REFERENCE POINT ELEVATION: ~746.3 (DP028)	DEVELOPMENT: pumped 5-5 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 725.04 East should be ≈ 21' based on DP elevations & gw elev @ 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

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

DEPTH IN FEET FROM	TO	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 "WATERLEVEL" 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-vc 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: 3/14-15/07

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING feet / PID
55.5	56.5	Sand and gravel; vf-vc; brown; saturated	57 14
	Note:	(From 49-56.5 the entire length gradually coarsens w/ depth)	53 35
56.5	59	TILL; strg vf-vc disseminated throut; % 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	

Bags is burning 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 39 = [748] − 85 = 663

" " " 33 = [748.5 DP14] − 84 90 = 665 = Silty clay transition, 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 Clovidge 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	
DRILLING COMPANY: MOODY'S/BOWSER MORNER Dave / Dave driller; Nick & Pete helpers	SAND PACK: #6 Silica (Global) SETTING: Deep 83-78, Int 60-55.5, Shallow 35-17.5
DRILLING METHOD: ROTO SONIC	CASING Deep 80-grade 2" PVC Int 57.5-grade SETTING: Shallow 19.5-grade
SAMPLING METHOD: Continuous 4" x 10' plastic sleeve	
OBSERVER: DVS	SEAL TYPE: Pure Gold Medium Bentonite Chips
REFERENCE POINT: grade	SETTING: Plugback 94-83, Deep 78-60, Int 55.5-35, Shallow 17.5-5.0
REFERENCE POINT ELEVATION: 748.5 e DPOM	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'
REMARKS: Clovidge Park Corner of Daniel & Lamar GW elevations MW-8S = 725.25, MW-10S = 725.17, MW-11S = 725.10 Pictures on disk MVC-0035 = Rig, MVC-0045 = drill core to 79'	YIELD:

Estimated

DTW 19' 13:35 Not stable

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 14
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 (av = 6" diameter) disseminated 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 stg	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 stg throughout; damp; very hard; stiff; gray	
93	94	Silt.	

82 Sand

83 Sand

Chip

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~~ Clardge 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 shallow 31.5-14 SETTING:
DRILLING METHOD: ROTO SONIC	CASING Deep 79' to grade Intermediate 56 to grade 2" PVC
SAMPLING METHOD: Continuous 50' x 3-4" plastic sleeve	SETTING: Shallow 16 to grade
OBSERVER: DVS	SEAL TYPE: Pure Gold Medium Bentonite chips Deep 77-58.5, Int = 54-31.5, shallow 14-5'
REFERENCE POINT: Grade	SETTING: 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: Clardge 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-001S = DVS trig by KJV, Disk file MVC-002S = drill core
day-bor-MW0345_C day-bor-MW0345_d

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; poorly sorted; no odor	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	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 fine 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; musky & 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: Back plug: 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

749 - 79
73 - 63.5
16 - 31

DEPTH IN FEET FROM	DEPTH IN FEET TO	GEOLOGIC DESCRIPTION	OVM PID READING (ppm) feet	OVM PID READING (ppm) 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 mul bicolored; 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 FROM	DEPTH IN FEET TO	GEOLOGIC DESCRIPTION	PID READING feet	PID READING 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		

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

76'
78'

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 Park 1600 WEBSTER STREET, DAYTON, OHIO	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" PVC
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 Millham Ave	YIELD: DTW 3/12 in Nest 34 = 24' but just got done developing wells DP-32 Soil 13-16' = ND both mobile and fixed lab DTW 3/14/01 = 22.7' Elev ~726.2

Estimated

DC's OVM 5608

Digital Camera
PVC-0085 = Drill core 49-39'
95 = " " 79-89'
105 = drill location

Calibrated to 100.7 ppm

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	TILL; top 6" brown, rest is gray; 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; sandy; gray	30	9
35.5	37	s & g; v f-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 SETTING: shallow 28-13
DATE COMPLETED: 3/15, 16 and 19/01	SAND PACK: Deep 99-95 #6 Silica (Global) Int 50-45
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SETTING: shallow 28.5-11
Dave: driller, Nick: helper Jarrod - helper 15th, Don: Helper 16th	CASING Deep 97 to grade 2" PVC Int 47 to grade
DRILLING METHOD: ROTO SONIC	SETTING: shallow 13 to grade
SAMPLING METHOD: 10' continuous core ~3-4"	SEAL TYPE: Deep 95-50 Medium Bentonite Chips Int 45-28.5 Global brand
OBSERVER: DVS	SETTING: shallow 11-5
REFERENCE POINT: grade	DEVELOPMENT: Pumped 3-5 gpm until sediment free
REFERENCE POINT ELEVATION: 746.12 = DP025	DURATION: ~1.5 hrs/nest
STICK-UP: NA	WATER LEVEL: ~20' based on surrounding data
SURFACE COMPLETION: FLUSH GRADE Concrete 5' on up	YIELD: ▼ ~726 3/16
REMARKS: SW Corner Claridge Park	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 too)	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 soil sample	46	121
40	41	Gravel; f-vc; trace sand vf-vc; brown; saturated	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 saturated	51 23
52.5	53	Till; oxidized brown; trace sig disseminated thorout; damp; v hard/stiff	53 18
53	56	Clayey; silty; sandy; sand and gravel; vf-vc; trace cobbles	55 3
		up to 4" diameter; gray; saturated	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; saturated	78 1
68.0	69.0	Sand; f-m; gray saturated 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; saturated	98 1
78.0	78.5	Silt; gray; saturated	
78.5	79.0	silty sand; f-vc; trace f gravel; gray; saturated	
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 rig to shop. Will hook 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 15-30 SLOT NO. 10 SETTING:
DATE COMPLETED: 3/9/01 and 3/12/01	
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 Intermediate 56 to grade shallow 15 to grade 2" PVC
SAMPLING METHOD: Continuous 4" x 10' Core	SETTING:
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-7S
REMARKS: South side of Claridge Park between baseball diamond and Claridge Community Center, Digital Camera NVC-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: 7/14/01 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 upward 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 sucked into the formation (Lab Sample #)	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

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 from shallowest DTW @ 19.5'
REMARKS: Clean City Janitor parking lot entrance	YIELD: 19' bg = high WT
Digital Camera pictures MVC-039S, 40S, 45S thru 49S	

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 H2O)	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 3 1/2" 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; appeared 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 1600 WEBSTER STREET, DAYTON, OHIO Dayton	SCREEN: 2" Sch40 PVC DIAMETER: SLOT NO. 10
DATE COMPLETED: 4/5/01	SETTING: 15-30, 55-57, 83-85
DRILLING COMPANY: MOODYS/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. Incl Vault portions only	YIELD:

Estimated

DEPTH IN FEET FROM	DEPTH IN FEET 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 3"; 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
	10:15	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 sand; vf-vc; gray sat	88 3
87.0	89.0	Till; trace sand disseminated throughout; 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	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	1 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
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.

LEAN TECH

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= 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	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

chrysal2.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	MWA2
cation	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	1 of 2
ter 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
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.

AN 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, Split Spoon Sample Respectively.

GEOLOGIC LOG

oject	Chrysler Dayton Thermal Products	Boring Number	MWA2
cation	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
ter 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

.N 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
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	1 of 2
ter Level & Date	26.8 ft BGS 11/18/94	Logged By	Thompson

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
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.
5	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.
)	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.
	34-36	S7	1.9	35-30 28-35 (58)	Same as S6; Orange Staining	BG, BG, 70 ppm Dye Test - Neg.

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chrysa31.log

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

GEOLOGIC LOG

›ject	Chrysler Dayton Thermal Products	Boring Number	MWA3
:ation	Dayton, Ohio	Date Started	11/11/94
.ent	Chrysler Corporation	Date Completed	11/11/94
.ller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
›vation	752.19 MSL	Page Number	2 of 2
:er Level & Date	26.8 ft bgs 11/18/94	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	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

N 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

:oject	Chrysler Dayton Thermal Products	Boring Number	MWA4
ɔcation	Dayton, Ohio	Date Started	10/24/94
lient	Chrysler Corporation	Date Completed	10/24/94
:iller	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.

EAN TECH

chrya41.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

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

(= 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
t	Chrysler Corporation	Date Completed	11/15/94
er	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
tion	751.25 ft MSL	Page Number	2 of 2
Level & Date	26 ft BGS 11/18/94	Logged By	Thompson

h)	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
	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

N 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
cation	Dayton, Ohio	Date Started	10/25/94
ient	Chrysler Corporation	Date Completed	10/25/94
iller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
evation	751.75 ft MSL	Page Number	2 of 2
ter 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

AN 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

Project	Chrysler Dayton Thermal Products	Boring Number	MWB1
Location	Dayton, Ohio	Date Started	10/27/94
Client	Chrysler Corporation	Date Completed	10/28/94
Driller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
Elevation	744.93 ft MSL	Page Number	1 of 3
Water 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.

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	2 of 3
er Level & Date	19.8 ft BGS 11/19/94	Logged By	Thompson

pth (S 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	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.
	59-61	S12	2.0	36-28 34-38 (62)	Same as S11; Very Dense	BG, BG, BG Dye Test - Neg.
	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.
	69-71	S14	2.0	31-42 45-46 (87)	Same as S13	BG, BG, BG Dye Test - Pos. Oil from Clay Suspected Source

umber Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
onitoring Data Shown as PID Readings in Breathing Zone, Borehole,
plit 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
ation	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	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	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

N 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 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
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.

EAN TECH chryb21.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

oject	Chrysler Dayton Thermal Products	Boring Number	MWB2
cation	Dayton, Ohio	Date Started	11/16/94
ient	Chrysler Corporation	Date Completed	11/17/94
iller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
evation	751.62 ft MSL	Page Number	2 of 3
ter 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.

EAN TECH

chryb22.log

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

GEOLOGIC LOG

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

th (S t)	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	74-76	S15	2.0	47-38 50-66 (88)	Same as S14	BG, BG, BG Dye Test - Pos.
0	79-81	S16	2.0	40-42 53-100 (95)	Same as S15	BG, BG, BG Dye Test - Pos.
5	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.
0	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

N TECH

chryb23.log

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

GEOLOGIC LOG

Project	Chrysler Dayton Thermal Products	Boring Number	MWB3
Location	Dayton, Ohio	Date Started	11/3/94
Client	Chrysler Corporation	Date Completed	11/4/94
Driller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
Elevation	752.13 ft MSL	Page Number	1 of 2
Water 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
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
ition	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
ration	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

AN TECH

chryb32.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	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	1 of 3
er Level & Date	26.9 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
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.

AN 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, 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
ation	751.64 ft MSL	Page Number	2 of 3
r Level & Date	26.9 ft BGS 11/19/94	Logged By	Thompson

ith s t)	Sample Interval	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	26-31 43-44 (74)	Same as S7; Very Dense	BG, BG, BG Dye Test - Neg.
	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.

ECH chryb42.log

ber Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
itoring Data Shown as PID Readings in Breathing Zone, Borehole,
.t 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	3 of 3
:er Level & Date	26.9 ft BGS 11/19/94	Logged By	Thompson

›pth 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
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

\N 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 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
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.

EAN TECH

chryb51.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	2 of 3
er Level & Date	26.8 ft BGS 11/15/94	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	1.2	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.

EAN TECH

chryb52.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	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	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	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

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

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

th s t)	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
	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.
)	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.
	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.
	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.
	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

mber Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
onitoring Data Shown as PID Readings in Breathing Zone, Borehole,
plit 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

= 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

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 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
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
		NA	NA	NA	Same as above	BG, BG, BG
					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

N TECH

chrycl1.log

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

GEOLOGIC LOG

›ject	Chrysler Dayton Thermal Products	Boring Number	MWC1
: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	745 ft MSL	Page Number	2 of 2
:er Level & Date	24.5 ft BGS 11/19/94	Logged By	Newsom

:pth IGS 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
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 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
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

EAN TECH

chryc21.log

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

GEOLOGIC LOG

ɔject	Chrysler Dayton Thermal Products	Boring Number	MWC2
cation	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.

: Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
d 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 GS ft)	Sample Interval	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		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

EAN TECH

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Monitoring Data Shown as PID Readings in Breathing Zone, Borehole, 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 GS ft)	Sample Interval	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

N TECH

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

EPA Region 5 Records Ctr.
349427

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	1 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
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.

= 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	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

chrysal2.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

roject	Chrysler Dayton Thermal Products	Boring Number	MWA2
ocation	Dayton, Ohio	Date Started	10/28/94
lient	Chrysler Corporation	Date Completed	10/28/94
rriller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
levation	749.45 MSL	Page Number	1 of 2
ater Level & Date	24.2 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	1.1	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, Split Spoon Sample Respectively.

GEOLOGIC LOG

Project	Chrysler Dayton Thermal Products	Boring Number	MWA2
Location	Dayton, Ohio	Date Started	10/28/94
Client	Chrysler Corporation	Date Completed	10/28/94
Driller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
Elevation	749.45 MSL	Page Number	2 of 2
Water Level & Date	24.2 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	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

'roject	Chrysler Dayton Thermal Products	Boring Number	MWA3
ocation	Dayton, Ohio	Date Started	11/11/94
lient	Chrysler Corporation	Date Completed	11/11/94
rriller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
levation	752.19 MSL	Page Number	1 of 2
ater Level & Date	26.8 ft BGS 11/18/94	Logged By	Thompson

Depth 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.
35	34-36	S7	1.9	35-30 28-35 (58)	Same as S6; Orange Staining	BG, BG, 70 ppm Dye Test - Neg.

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	MWA3
ocation	Dayton, Ohio	Date Started	11/11/94
lient	Chrysler Corporation	Date Completed	11/11/94
rriller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
levation	752.19 MSL	Page Number	2 of 2
ater Level & Date	26.8 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	1.8	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

N 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.

EAN TECH

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

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

Depth (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
	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

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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	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	2 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
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

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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	MWB1
Location	Dayton, Ohio	Date Started	10/27/94
Client	Chrysler Corporation	Date Completed	10/28/94
Driller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
Elevation	744.93 ft MSL	Page Number	1 of 3
Water 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.

= 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	19.9 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	2.0	22-23 20-23 (43)	Well Graded Gravel (GW); Moderate Brown (5YR4/4); Medium Dense; Wet	BG, BG, BG Dye Test - Neg.
45	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.
50	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.
55	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.
60	59-61	S12	2.0	36-28 34-38 (62)	Same as S11; Very Dense	BG, BG, BG Dye Test - Neg.
65	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.
	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

chryb12.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

ojec	Chrysler Dayton Thermal Products	Boring Number	MWB1
cation	Dayton, Ohio	Date Started	10/27/94
ient	Chrysler Corporation	Date Completed	10/28/94
iller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
evation	744.93 ft MSL	Page Number	3 of 3
tar Level & Date	19.8 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	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 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
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.

EAN TECH chryb21.log

= Number Blows to Drive 2 " Spoon 24 " with 140 lb. Weight Falling 30 "
= Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
d 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 "
= Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
d 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	26.3 ft BGS 11/19/94	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	2.0	47-38 50-66 (88)	Same as S14	BG, BG, BG Dye Test - Pos.
80	79-81	S16	2.0	40-42 53-100 (95)	Same as S15	BG, BG, BG Dye Test - Pos.
85	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	Boring Number	MWB3
Location	Dayton, Ohio	Date Started	11/3/94
Client	Chrysler Corporation	Date Completed	11/4/94
Driller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
Elevation	752.13 ft MSL	Page Number	1 of 2
Water 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
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

ɔject	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 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
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

ojec	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	1 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
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.

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	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
vation	751.64 ft MSL	Page Number	2 of 3
ter Level & Date	26.9 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
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.

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

GEOLOGIC LOG

Project	Chrysler Dayton Thermal Products	Boring Number	MWB4
Location	Dayton, Ohio	Date Started	10/31/94
Client	Chrysler Corporation	Date Completed	11/2/94
Driller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
Elevation	751.64 ft MSL	Page Number	3 of 3
Water Level & Date	26.9 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
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

EAN 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

ɔject	Chrysler Dayton Thermal Products	Boring Number	MWB5
cation	Dayton, Ohio	Date Started	11/7/94
ient	Chrysler Corporation	Date Completed	11/8/94
iller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
evation	750.73 ft MSL	Page Number	1 of 3
ter Level & Date	26.8 ft BGS 11/15/94	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	1.5	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.

EAN TECH

chryb51.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	MWB5
:cation	Dayton, Ohio	Date Started	11/7/94
.ient	Chrysler Corporation	Date Completed	11/8/94
:iller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
.evation	750.73 ft MSL	Page Number	2 of 3
ıter Level & Date	26.8 ft BGS 11/15/94	Logged By	Thompson

)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
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.

-EAN TECH

chryb52.log

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

GEOLOGIC LOG

oject	Chrysler Dayton Thermal Products	Boring Number	MWB5
cation	Dayton, Ohio	Date Started	11/7/94
ient	Chrysler Corporation	Date Completed	11/8/94
iller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
evation	750.73 ft MSL	Page Number	3 of 3
ter Level & Date	26.8 ft BGS 11/15/94	Logged By	Thompson

epth 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
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
vation	751.37 ft MSL	Page Number	1 of 2
er Level & Date	25.9 ft BGS 11/18/94	Logged By	Thompson

pth GS ft)	Sample Interval	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
;	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

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

ject	Chrysler Dayton Thermal Products	Boring Number	MWC1
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 3E22-W
vation	745.00 ft MSL	Page Number	1 of 2
er Level & Date	24.5 ft BGS 11/19/94	Logged By	Newsom

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		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, BG
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
76					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

·oject	Chrysler Dayton Thermal Products	Boring Number	MWC1
cation	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	745 ft MSL	Page Number	2 of 2
ter Level & Date	24.5 ft BGS 11/19/94	Logged By	Newsom

epth 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
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

AN TECH

chryc12.log

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

GEOLOGIC LOG

oject	Chrysler Dayton Thermal Products	Boring Number	MWC2
cation	Dayton, Ohio	Date Started	10/18/94
ient	Chrysler Corporation	Date Completed	10/25/94
iller	Moody's of Dayton	Drilling Method	Cable Tool 3E22-W
evation	751.60 ft MSL	Page Number	1 of 3
ter Level & Date	30.2 ft BGS 11/19/24	Logged By	Newsom

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
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

EAN TECH

chryc21.log

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

GEOLOGIC LOG

:oject	Chrysler Dayton Thermal Products	Boring Number	MWC2
:cation	Dayton, Ohio	Date Started	10/18/94
.ient	Chrysler Corporation	Date Completed	10/25/94
:iller	Moody's of Dayton	Drilling Method	Cable Tool 3E22-W
.evation	751.60 ft MSL	Page Number	2 of 3
ıter Level & Date	24.5 ft BGS 11/19/94	Logged By	Newsom

)epth BGS (ft)	Sample Interval	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

:oject	Chrysler Dayton Thermal Products	Boring Number	MWC3
;cation	Dayton, Ohio	Date Started	11/9/94
.ient	Chrysler Corporation	Date Completed	11/17/94
:iller	Moody's of Dayton	Drilling Method	Cable Tool BE22-W
.evation	752.15 ft MSL	Page Number	1 of 2
ıter Level & Date	26.8 ft BGS 11/19/24	Logged By	Newsom

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
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

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

GEOLOGIC LOG

Project	Chrysler Dayton Thermal Products	Boring Number	MWC3
Location	Dayton, Ohio	Date Started	11/9/94
Client	Chrysler Corporation	Date Completed	11/17/94
Driller	Moody's of Dayton	Drilling Method	Cable Tool BE22-W
Elevation	752.15 ft MSL	Page Number	2 of 2
Water Level & Date	26.8 ft BGS 11/19/94	Logged By	Newsom

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
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.

GEOLOGIC LOG

Project	Chrysler Dayton Thermal Products	Boring Number	SB-1
Location	Dayton, Ohio	Date Started	10/17/94
Client	Chrysler Corporation	Date Completed	10/17/94
Driller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
Elevation	751.55 MSL	Page Number	1 of 1
Water Level & Date	-26 ft BGS 10/17/94	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, Wtr Depth
5	4-6	S1	1.4	25-35 40-40 (75)	Poorly Graded Gravel with Clay and Sand (GP-GC); Moderate Red (5R5/4) to Light Brown (5YR6/4); Dry; Very Dense	BG, BG, 1.0 ppm Dye Test - Neg.
10	9-11	S2	1.7	18-27 32-37 (59)	Poorly Graded Gravel with Sand and Some Silt (GP); Very Light Gray (N8) to Light Gray (N7); Dry; Very Dense	BG, BG, 0.5 ppm Dye Test - Neg.
15	14-16	S3	1.4	19-34 50-28 (84)	Same as S2; Gravel is Well Rounded	BG, 3.2, 0.4 ppm Dye Test - Neg.
20	19-21	S4	1.5	12-18 20-20 (38)	Same as S2; Slightly Moist	BG, 7.0 ppm, BG Dye Test - Neg.
25	24-26	S5	1.3	10-12 12-18 (24)	Poorly Graded Sand with Gravel (SP); Moderate Brown (5YR3/4); Wet; Medium Dense	BG, BG, BG Dye Test - Neg. Water Table ~26 ft BGS
30	29-31	S6	1.5	14-18 18-20 (36)	Poorly Graded Sand and Gravel (SP); Pale Brown (5YR5/2); Wet; Dense	BG, BG, BG Dye Test - Neg.
						Backfilled with Grout 0-31 ft

CLEAN TECH

chrysb1.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	SB-2
Location	Dayton, Ohio	Date Started	10/18/94
Client	Chrysler Corporation	Date Completed	10/18/94
Driller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
Elevation	752.20 MSL	Page Number	1 of 1
Water Level & Date	~28 ft BGS 10/18/94	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, Wtr Depth
5	4-6	S1	1.7	15-25 27-30 (52)	Poorly Graded Gravel with Sand (GP); Light Brownish Gray (5YR6/1); Dry; Very Dense	BG, BG, BG Dye Test - Neg.
10	9-11	S2	1.3	15-14 13-16 (27)	Poorly Graded Sand with Gravel (SP); Light Brownish Gray (5YR6/1); Slightly Moist; Medium Dense	BG, BG, BG Dye Test - Neg.
15	14-16	S3	1.3	20-20 20-18 (40)	Poorly Graded Sand and Gravel (SP) with a 2" Clay Pan Layer at 14.5' (5YR6/1), Clay was (10YR6/6); Dense; Moist	BG, 1.0 ppm, BG Dye Test - Neg.
20	19-21	S4	1.4	18-17 13-12 (30)	Poorly Graded Gravel with Sand and Clay (GP-GM); Pale Brown (5YR5/2); Medium Dense; Wet	BG, 2.5 ppm, BG Dye Test - Neg.
25	24-26	S5	1.9	15-20 32-33 (52)	Sandy, Silty, Clay with Gravel (CL-ML); Pale Yellowish Brown to Pale Brown (10YR6/2) to (5YR5/2); Wet; Very Dense	BG, BG, BG Dye Test - Neg.
30	29-31	S6	2.0	20-30 27-38 (57)	Poorly Graded Sand with Silt (SW-SM) Pale Brown (5YR6/2); Wet; Very Dense	Water Table ~28 ft BGS BG, BG, BG Dye Test - Neg.
						Backfilled with Grout 0-31 ft

LEAN TECH

chrysb2.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,
id Split Spoon Sample Respectively.

GEOLOGIC LOG

ject	Chrysler Dayton Thermal Products	Boring Number	SB-3
ation	Dayton, Ohio	Date Started	10/19/94
ent	Chrysler Corporation	Date Completed	10/19/94
ller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
vation	750.14 ft MSL	Page Number	1 of 1
er Level & Date	-25 ft BGS 10/19/94	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, Wtr Depth
5	4-6	S1	0.9	12-6 8-10 (14)	Silty Sand with Gravel (SM); Light Gray (N7); Dry; Medium Dense	BG, BG, BG Dye Test - Neg.
10	9-11	S2	1.6	20-14 9-11 (23)	Top .5 ft same as S1; Bottom 1.1 ft Silty Gravel (GM); Light Gray (N6); Dry; Medium Dense	BG, BG, BG Dye Test - Neg.
15	14-16	S3	1.5	22-25 20-15 (45)	Poorly Graded Sand with Silt (SP-SM) Very Light Gray (N8); Dry; Very Dense	BG, BG, 10.0 ppm Dye Test - Neg.
20	19-21	S4	1.6	19-25 20-23 (45)	Same as S3	BG, 0.5, 2.0 ppm Dye Test - Neg.
25	24-26	S5	1.8	20-25 23-27 (48)	Poorly Graded Sand with Silt and Gravel (SP-SM); Medium Dark Gray (N4); Wet; Dense	BG, BG, 3.0 ppm Dye Test - Neg. Water Table -25 BGS
30	29-31	S6	2.0	25-27 35-34 (62)	Top 1 ft Poorly Graded Sand (SP); Bottom 1 ft Poorly Graded Sand with Silt (SP-SM); Medium Dark Gray (N4); Wet; Very Dense	BG, BG, 1.5 ppm Dye Test - Neg.
						Backfilled with Grout 0-31 ft

.EAN TECH

chrysb3.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

Project	Chrysler Dayton Thermal Products	Boring Number	SB-4
Location	Dayton, Ohio	Date Started	10/29/94
Client	Chrysler Corporation	Date Completed	10/31/94
Driller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
Elevation	749.87 MSL	Page Number	1 of 1
Water Level & Date	~25 ft BGS 10/31/94	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, Wtr Depth
5	4-6	S1	1.2	12-13 17-20 (30)	Well Graded Gravel with Sand and Silt (GW-GM); Light Brownish Gray (5YR6/1); Dry; Dense	BG, BG, 0.5 ppm Dye Test - Neg.
10	9-11	S2	1.5	14-22 21-18 (43)	Same as S1	BG, BG, 1.0 ppm Dye Test - Neg.
15	14-16	S3	1.0	5-5 5-9 (10)	Well Graded Gravel with Clay (GW-GC) Brownish Gray (5YR4/1); Wet; Loose	BG, BG, 2.0 ppm Dye Test - Neg.
20	19-21	S4	1.2	7-7 8-11 (15)	Same as S3 with a small band of orange staining ~6" from the bottom of the spoon	BG, BG, 1.0 ppm Dye Test - Neg.
25	24-26	S5	1.6	16-25 35-43 (60)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, BG, 2.0 ppm Dye Test - Neg. Water Table ~25 ft BGS
30	29-31	S6		22-18 15-16 (33)	Well Graded Gravel with Sand and Clay (GW-GC); Brownish Gray (5YR 4/1); Wet; Dense	BG, BG, 2.0 ppm Dye Test - Neg.
						Backfilled with Grout 0-31 ft

= 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	SB-5
Location	Dayton, Ohio	Date Started	10/19/94
Client	Chrysler Corporation	Date Completed	10/19/94
Driller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
Elevation	751.20 MSL	Page Number	1 of 1
Water Level & Date	-26 ft BGS 10/19/94	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, Wtr Depth
5	4-6	S1	1.5	20-25 30-38 (55)	Well Graded Sand with Silt and Gravel (SW-SM); Light Brownish Gray (5YR6/1); Dry; Very Dense	BG, 0.4 ppm, BG Dye Test - Neg.
10	9-11	S2	1.6	10-10 12-15 (22)	Poorly Graded Sand with Gravel (SP); Moderate Brown (5YR4/4); Moist; Medium Dense	BG, BG, 2.0 ppm Dye Test - Neg.
15	14-16	S3	1.7	15-15 20-20 (35)	Well Graded Sand with Silt and Gravel (SW-SM); Light Brownish Gray (5YR6/1); Moist; Dense	BG, BG, 9.0 ppm Dye Test - Neg.
20	19-21	S4	1.8	45-70 33-33 (103)	Same as S3; Very Dense	BG, BG, 10.0 ppm Dye Test - Neg.
25	24-26	S5	1.9	50-50 55-27 (105)	Well Graded Gravel with Sand (GW); Moderate Brown (5YR4/4); Wet; Very Dense	BG, 1.5, 8.0 ppm Dye Test - Neg.
30	29-31	S6	1.2	35-50 45-35 (95)	Same as S5	BG, 5.0,10.0 ppm Dye Test - Pos. Water Table -25 ft BGS
						Backfilled with Grout 0-31 ft

CLEAN TECH chrysb5.log

(= 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	SB-6
Location	Dayton, Ohio	Date Started	10/20/94
Client	Chrysler Corporation	Date Completed	10/20/94
Driller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
Elevation	752.01 MSL	Page Number	1 of 1
Water Level & Date	~25 ft BGS 10/20/94	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, Wtr Depth
5	4-6	S1	1.2	15-26 32-30 (58)	Well Graded Sand with Silt, Clay and Gravel (SW-SC); Light Brownish Gray (5YR6/1); Dry; Very Dense	BG, BG, 0.5 ppm Dye Test - Neg.
10	9-11	S2	1.4	18-18 20-28 (38)	Same as S1; Dense	BG, BG, 2.0 ppm Dye Test - Neg.
15	14-16	S3	0.8	13-8 7-9 (15)	Well Graded Gravel with Sand and Silt (GW-GM); Grayish Brown (5YR 5/2); Dry; Medium Dense	BG, BG, 4.0 ppm Dye Test - Neg.
20	19-21	S4	1.8	18-22 18-17 (40)	Same as S3; Dense	BG, 0.5, 2.5 ppm Dye Test - Neg.
25	24-26	S5	1.7	20-18 18-20 (36)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Wet; Dense; Orange Staining	BG, 3.0, 1.5 ppm Dye Test - Neg. Water Table ~25 ft BGS
30	29-31	S6	1.8	26-24 24-28 (48)	Well Graded Gravel with Sand, Silt, and Some Clay (GW-GM); Brownish Gray (5YR4/1); Wet; Dense	BG, BG, BG Dye Test - Neg.
						Backfilled with Grout 0-31 ft

.EAN TECH

chrysb6.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

Project	Chrysler Dayton Thermal Products	Boring Number	SB-7
Location	Dayton, Ohio	Date Started	10/20/94
Client	Chrysler Corporation	Date Completed	10/20/94
Driller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
Elevation	751.41 MSL	Page Number	1 of 1
Water Level & Date	-25 ft BGS 10/20/94	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, Wtr Depth
5	4-6	S1	1.4	23-43 50-45 (93)	Well Graded Sand with Silt and Gravel (SW-SM); Light Gray (N7) to Light Brownish Gray (5YR6/1); Dry; Very Dense	BG, BG, 0.5 ppm Dye Test - Neg.
10	9-11	S2	1.5	9-12 14-14 (26)	Poorly Graded Sand with Gravel (SP); Brownish Gray (5YR4/1); Moist; Medium Dense	BG, BG, 1.5 ppm Dye Test - Neg.
15	14-16	S3	1.9	10-15 17-25 (32)	Well Graded Sand with Silt and Gravel (SW-SM); Light Brownish Gray (N7); Moist; Dense	BG, 3.0,10.0 ppm Dye Test - Neg.
20	19-21	S4	1.5	30-33 27-25 (60)	Well Graded Gravel with Sand and Silt (GW-GM); Light Brownish Gray (5YR6/1); Moist; Very Dense	BG, 4.0, 2.0 ppm Dye Test - Neg.
25	24-26	S5	1.8	25-22 20-25 (42)	Poorly Graded Sand with Gravel (SP); Brownish Gray (5YR4/1); Wet; Dense	BG, BG, 4.5 ppm Dye Test - Neg. Water Table -25 ft BGS
30	29-31	S6	1.8	30-27 25-25 (52)	Poorly Graded Sand with Silt and Gravel (SP-SM); Brownish Gray (5YR 4/1); Wet; Very Dense	BG, 3.0, 3.0 ppm Dye Test - Neg.
						Backfilled with Grout 0-31 ft

.EAN TECH

chrysb7.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

Project	Chrysler Dayton Thermal Products	Boring Number	SB-8
Location	Dayton, Ohio	Date Started	10/19/94
Client	Chrysler Corporation	Date Completed	10/19/94
Driller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
Elevation	751.34 MSL	Page Number	1 of 1
Water Level & Date	-25 ft BGS 10/19/94	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, Wtr Depth
5	4-6	S1	1.0	12-32 34-33 (66)	Well Graded Sand with Silt (SW-SM); Light Brownish Gray (5YR6/1); Dry; Very Dense	BG, BG, 1.0 ppm Dye Test - Neg.
10	9-11	S2	1.3	12-17 18-20 (35)	Well Graded Sand with Gravel (SM); Brownish Gray (5YR4/1); Moist; Dense	BG, BG, 4.0 ppm Dye Test - Neg.
15	14-16	S3	1.3	20-25 25-23 (50)	Same as S2; Very Dense	BG, 0.5,1.0 ppm Dye Test - Neg.
20	19-21	S4	2.0	20-22 25-40 (47)	Clay with Gravel (CH); Brownish Gray (5YR4/1) to Light Brown (5YR5/6) Moist; Dense	BG, BG, BG Dye Test - Neg.
25	24-26	S5	1.5	12-18 19-25 (37)	Poorly Graded Sand with Gravel (SP); Moderate Brown (5YR4/4); Wet; Dense	BG, 0.5,8.0 ppm Dye Test - Neg. Water Table -25 ft BGS
30	29-31	S6	2.0	16-19 19-20 (38)	Top foot Poorly Graded Sand (SP); Bottom foot Well Graded Sand (SW); Brownish Gray (5YR3/2); Wet; Dense	BG, 9.0,1.0 ppm Dye Test - Neg.
						Backfilled with Grout 0-31 ft

EAN TECH

chrysb8.log

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

GEOLOGIC LOG

roject	Chrysler Dayton Thermal Products	Boring Number	SB-9
ocation	Dayton, Ohio	Date Started	10/21/94
lient	Chrysler Corporation	Date Completed	10/21/94
riller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
levation	750.59 MSL	Page Number	1 of 1
ater Level & Date	-26 ft BGS 10/21/94	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, Wtr Depth
5	4-6	S1	1.0	2-4 6-7 (10)	Clay with Gravel (CH); Brownish Gray (5YR4/1); Moist; Loose	BG, BG, BG Dye Test - Neg.
10	9-11	S2	0.7	6-5 5-5 (10)	Well Graded Gravel with Sand (GP); Brownish Gray (5YR4/1); Dry; Medium Dense	BG, BG, BG Dye Test - Neg.
15	14-16	S3	1.3	7-9 11-16 (20)	Same as S2; Wet	BG, BG, 1.0 ppm Dye Test - Neg.
20	19-21	S4	2.0	20-35 28-30 (63)	Poorly Graded Sand with Gravel (SP); Light Brownish Gray (5YR6/1); Dry; Very Dense	BG, 1.0,15.0 ppm Dye Test - Pos.
25	24-26	S5	1.6	23-30 30-35 (60)	Poorly Graded Sand with Gravel (SP); Medium Dark Gray (N4); Wet; Very Dense	BG, BG, 8.0 ppm Dye Test - Neg. Water Table -26 ft BGS
30	29-31	S6			No Sample Collected	
						Backfilled with Grout 0-31 ft

EAN TECH

chrysb9.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	SB-10
;cation	Dayton, Ohio	Date Started	10/21/94
.ient	Chrysler Corporation	Date Completed	10/21/94
:iller	Moody's of Dayton	Drilling Method	4.25" HSA, CME 75
levation	752.33 MSL	Page Number	1 of 1
ater Level & Date	-27 ft BGS 10/21/94	Logged By	Thompson

Depth 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, Wtr Depth
5	4-6	S1	1.3	13-16 17-20 (33)	Well Graded Gravel with Sand and Silt (GW-GM); Light Brownish Gray (5YR6/1); Dry; Dense	BG, BG, 1.0 ppm Dye Test - Neg.
10	9-11	S2	2.0	35-40 22-20 (62)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Dry; Very Dense	BG, BG, 0.5 ppm Dye Test - Neg.
15	14-16	S3	1.8	33-21 17-21 (38)	Same as S2; Larger Gravel	BG, BG, BG Dye Test - Neg.
20	19-21	S4	1.8	13-18 20-28 (38)	Clay with Gravel and Sand (CH); Brownish Gray (5YR4/1); Moist; Dense	BG, BG, BG Dye Test - Neg.
25	24-26	S5	1.9	15-22 24-45 (46)	Same as S4; Wet	BG, BG, BG Dye Test - Neg. Water Table -27 ft BGS
30	29-31	S6	2.0	15-15 18-20 (33)	Well Graded Gravel with Clay and Sand (GW-GC); Moderate Brown (5YR 4/4); Wet; Dense	BG, 1.0,15 ppm Dye Test - Neg.
						Backfilled with Grout 0-31 ft

.EAN TECH

chrysb10.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,
id Split Spoon Sample Respectively.

Lancaster Laboratories

ANALYTICAL RESULTS

Prepared for:

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

248-576-5741

EPA Region 5 Records Ctr.
349428

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 875304. Samples arrived at the laboratory on Tuesday, November 18, 2003. The PO# for this group is N99C403749-B.

Client Description	Lancaster Labs Number
PZ17D-111603 Grab Groundwater Sample	4166650
MW20S-111603 Grab Groundwater Sample	4166651
MWA001-111603 Grab Groundwater Sample	4166652
MW19S-111603 Grab Groundwater Sample	4166653
MW7S-111703 Grab Groundwater Sample	4166654
PZ7I-111703 Grab Groundwater Sample	4166655
MW15S-111703 Grab Groundwater Sample	4166656
PZ15I-111703 Grab Groundwater Sample	4166657
MWA03-111703 Grab Groundwater Sample	4166658
MW34S-111703 Grab Groundwater Sample	4166659
PZ34I-111703 Grab Groundwater Sample	4166660
PZ34D-111703 Grab Groundwater Sample	4166661
TW13-111703 Grab Groundwater Sample	4166662
PZ019I-111703 Grab Groundwater Sample	4166663
MWET6-111703 Grab Groundwater Sample	4166664
MWC001-111703 Grab Groundwater Sample	4166665
MWB001-111703 Grab Groundwater Sample	4166666
Trip_Blank Water Sample	4166667

1 COPY TO	Earth Tech	Attn: Ms. Lisa Smith
1 COPY TO	Earth Tech	Attn: Mr. Rob Stenson

Lancaster Laboratories

Questions? Contact your Client Services Representative
Katherine A Klinefelter at (717) 656-2300.

Respectfully Submitted,

Lawrence M. Taylor
Sr. Chemist

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Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166650

PZ17D-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 13:20 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-17D- SDG#: DCN86-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	14.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	2. J	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166650

PZ17D-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 13:20 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-17D- SDG#: DCN86-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 14:14	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/23/2003 14:14	Trent S Sprenkle	n.a.

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166651

MW20S-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 14:25 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-20S- SDG#: DCN86-02

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.		1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.		1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.		1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.		1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.		0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.		2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.		1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.		0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.		0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	1.	J	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.		1.	ug/l	1
05401	Benzene	71-43-2	N.D.		0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	4.	J	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.		1.	ug/l	1
05407	Toluene	108-88-3	N.D.		0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.		0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.		1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.		0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.		0.8	ug/l	1
05418	Styrene	100-42-5	N.D.		1.	ug/l	1
05419	Bromoform	75-25-2	N.D.		1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.	ug/l	1
06302	Acetone	67-64-1	N.D.		6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.		1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.		3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.		3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.		3.	ug/l	1

MEMBER ACIL
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Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166651

MW20S-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 14:25 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-20S- SDG#: DCN86-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 15:00	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/23/2003 15:00	Trent S Sprenkle	n.a.

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166652

MWA001-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 14:10 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

A001- SDG#: DCN86-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	23.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	28.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	170.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	2,300.	20.	ug/l	25
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	590.	20.	ug/l	25
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	1. J	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	120.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	440.	20.	ug/l	25
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

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717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166652

MWA001-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 14:10 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

A001- SDG#: DCN86-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 15:23	Trent S Sprenkle	1
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 22:00	Trent S Sprenkle	25
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/23/2003 15:23	Trent S Sprenkle	n.a.

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166653

MW19S-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 15:15 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-19S- SDG#: DCN86-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	1. J	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166653

MW19S-111603 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/16/2003 15:15 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-19S- SDG#: DCN86-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/24/2003 09:35	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/24/2003 09:35	Trent S Sprenkle	n.a.

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Lancaster, PA 17605-2425
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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166654

MW7S-111703 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 10:50 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

--7S- SDG#: DCN86-05

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.		1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.		1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.		1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.		1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.		0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.		2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.		1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	3.	J	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.		0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	2.	J	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.		1.	ug/l	1
05401	Benzene	71-43-2	N.D.		0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	75.		1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.		1.	ug/l	1
05407	Toluene	108-88-3	N.D.		0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.		0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.		1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.		0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.		0.8	ug/l	1
05418	Styrene	100-42-5	N.D.		1.	ug/l	1
05419	Bromoform	75-25-2	N.D.		1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.	ug/l	1
06302	Acetone	67-64-1	N.D.		6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.		1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.		3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.		3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.		3.	ug/l	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166654

MW7S-111703 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 10:50 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
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--7S- SDG#: DCN86-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 16:09	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/23/2003 16:09	Trent S Sprenkle	n.a.

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166655

PZ7I-111703 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 10:50 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
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-7I-- SDG#: DCN86-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	7.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166655

PZ7I-111703 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 10:50 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-7I-- SDG#: DCN86-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 16:32	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/23/2003 16:32	Trent S Sprenkle	n.a.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166656

MW15S-111703 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 09:50 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-15S- SDG#: DCN86-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	1. J	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	1.	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	98.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	ug/l	1
05418	Styrene	100-42-5	N.D.	1.	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
06302	Acetone	67-64-1	N.D.	6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.	1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.	3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.	3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.	3.	ug/l	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166656

MW15S-111703 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 09:50 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:37
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-15S- SDG#: DCN86-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 16:55	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/23/2003 16:55	Trent S Sprenkle	n.a.

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Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166657

PZ15I-111703 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 09:45 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:38
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-15I- SDG#: DCN86-08

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.		1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.		1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.		1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.		1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	1.	J	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.		2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	3.	J	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	7.		1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	27.		0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.		0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	16.		0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.		1.	ug/l	1
05401	Benzene	71-43-2	N.D.		0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	4.	J	1.	ug/l	1
05403	Trichloroethene	79-01-6	2.	J	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.		1.	ug/l	1
05407	Toluene	108-88-3	N.D.		0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	49.		0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.		1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.		0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.		0.8	ug/l	1
05418	Styrene	100-42-5	N.D.		1.	ug/l	1
05419	Bromoform	75-25-2	N.D.		1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.	ug/l	1
06302	Acetone	67-64-1	N.D.		6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.		1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.		3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.		3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.		3.	ug/l	1

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2425 New Holland Pike
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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166657

PZ15I-111703 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 09:45 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:38
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-15I- SDG#: DCN86-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 17:18	Trent S Sprenkle	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/23/2003 17:18	Trent S Sprenkle	n.a.

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Lancaster, PA 17605-2425
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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166658

MWA03-111703 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 12:50 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:38
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-A03- SDG#: DCN86-09

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	ug/l	1
05385	Chloromethane	74-87-3	1.	J	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	9.		1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.		1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.		1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	81.		0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.		2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	11.		0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	81.		1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	290.		0.8	ug/l	1
05396	Chloroform	67-66-3	1.	J	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	990.		8.	ug/l	10
05399	Carbon Tetrachloride	56-23-5	N.D.		1.	ug/l	1
05401	Benzene	71-43-2	N.D.		0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	370.		10.	ug/l	10
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.		1.	ug/l	1
05407	Toluene	108-88-3	N.D.		0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	680.		8.	ug/l	10
05411	Dibromochloromethane	124-48-1	N.D.		1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.		0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.		0.8	ug/l	1
05418	Styrene	100-42-5	N.D.		1.	ug/l	1
05419	Bromoform	75-25-2	N.D.		1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.	ug/l	1
06302	Acetone	67-64-1	N.D.		6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.		1.	ug/l	1
06305	2-Butanone	78-93-3	11.		3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.		3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.		3.	ug/l	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166658

MWA03-111703 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 12:50 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:38
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

-A03- SDG#: DCN86-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06310	Xylene (Total)	1330-20-7	N.D.	0.8	ug/l	1

A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	11/23/2003 17:41	Trent S Sprenkle	1
06291	TCL by 8260 (water)	SW-846 8260B	1	11/24/2003 09:58	Trent S Sprenkle	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/23/2003 17:41	Trent S Sprenkle	n.a.
01163	GC/MS VOA Water Prep	SW-846 5030B	2	11/24/2003 09:58	Trent S Sprenkle	n.a.

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4166659

MW34S-111703 Grab Groundwater Sample
Site Code: SC001 RFA# ET03076
Dayton Thermal/Dayton, OH
Collected:11/17/2003 14:25 by DD

Account Number: 10160

Submitted: 11/18/2003 09:45
Reported: 12/01/2003 at 10:38
Discard: 01/31/2004

DaimlerChrysler Corporation
PO Box 537933
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-34S- SDG#: DCN86-10

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	ug/l	1
05385	Chloromethane	74-87-3	N.D.		1.	ug/l	1
05386	Vinyl Chloride	75-01-4	10.		1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.		1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.		1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.		0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.		2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	0.9	J	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.		1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	16.		0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.		0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.		0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.		1.	ug/l	1
05401	Benzene	71-43-2	N.D.		0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	220.		1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.		1.	ug/l	1
05407	Toluene	108-88-3	N.D.		0.7	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	1.	J	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.		1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.		0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.		0.8	ug/l	1
05418	Styrene	100-42-5	N.D.		1.	ug/l	1
05419	Bromoform	75-25-2	N.D.		1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.	ug/l	1
06302	Acetone	67-64-1	N.D.		6.	ug/l	1
06303	Carbon Disulfide	75-15-0	N.D.		1.	ug/l	1
06305	2-Butanone	78-93-3	N.D.		3.	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	N.D.		3.	ug/l	1
06309	2-Hexanone	591-78-6	N.D.		3.	ug/l	1

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