Report Date : 25-Mar-1999 09:23

CompuChem Environmental Corporation

INITIAL CALIBRATION DATA

Start Cal Date : 23-MAR-1999 21:08
End Cal Date : 24-MAR-1999 00:13
Quant Method : ISTD
Target Version : 3.12
Integrator : HP RTE
Method file : /chem/f50055.i/f990323b.b/W8260-B-5ML.m
Cal Date : 25-Mar-1999 09:23 thornton
Curve Type : Average

	Compound	50 Level 1	100 Level 2	250 Level 3	500 Level 4	1000 Level 5	RRF	% RSD	
	69 trans-1,4-dichloro-2-butene	*****	*****	*****	*****	*****	*****	*****	<-
	70 Isopropyl Benzene	*****	*****	*****	*****	*****	*****	*****	<-
	71 Bromobenzene	*****	*****	*****	*****	*****	*****	*****	<-
	72 1,2,3 Trichloropropane	*****	*****	*****	*****	*****	*****	*****	<-
	73 1,1,2,2-Tetrachloroethane	1.06703	0.99033	1.07136	1.00687	0.98227	1.02357	4.163	
	74 n-Propyl Benzene	*****	*****	*****	*****	*****	*****	*****	<-
	75 2-Chlorotoluene	*****	*****	*****	*****	*****	*****	*****	<-
	76 4-Chlorotoluene	*****	*****	*****	*****	*****	*****	*****	<-
	77 1,3,5-Trimethyl Benzene	*****	*****	*****	*****	*****	*****	*****	<-
	78 tert-Butyl Benzene	*****	*****	*****	*****	*****	*****	*****	<-
	79 1,2,4-Trimethyl Benzene	*****	*****	*****	*****	*****	*****	*****	<-
	80 sec-Butyl Benzene	*****	*****	*****	*****	*****	*****	*****	<-
	81 1,3-Dichlorobenzene	*****	*****	*****	*****	*****	*****	*****	<-
	82 1,4-Dichlorobenzene	*****	*****	*****	*****	*****	*****	*****	<-
	83 p-Isopropyl Toluene	*****	*****	*****	*****	*****	*****	*****	<-
	84 1,2-Dichlorobenzene	*****	*****	*****	*****	*****	*****	*****	<-
	85 n-Butyl Benzene	*****	*****	*****	*****	*****	*****	*****	<-
	86 1,2-Dibromo-3-Chloropropane	*****	*****	*****	*****	*****	*****	*****	<-
	87 1,2,4-Trichlorobenzene	*****	*****	*****	*****	*****	*****	*****	<-
	88 Hexachlorobutadiene	*****	*****	*****	*****	*****	*****	*****	<-
	89 Naphthalene	*****	*****	*****	*****	*****	*****	*****	<-
	90 1,2,3 Trichlorobenzene	*****	*****	*****	*****	*****	*****	*****	<-
M	91 1,2-Dichloroethene (total)	0.65864	0.64140	0.60758	0.54319	0.49904	0.58997	11.411	
M	92 Xylene (total)	1.31051	1.19572	1.12374	1.03990	1.00512	1.13500	10.838	
S	4 Dibromofluoromethane	0.61112	0.57024	0.54147	0.47814	0.42253	0.52466	14.267	
S	5 1,2-Dichloroethane-d4	0.54975	0.50778	0.48899	0.47166	0.42619	0.48886	9.312	
S	6 Toluene-d8	1.61541	1.38295	1.30480	1.17662	1.14100	1.30416	11.737	
S	7 Bromofluorobenzene	1.10138	0.97412	0.93041	0.87409	0.87303	0.95082	9.546	

Dayton 99-215

ENTERED IN DATABASE BY: DVS 3/26-30/99 DISCREPANCY: MCP 3/31/99 DATE:

NONCLP CASE DELIVERABLES SUMMARY SHEET

==========

SOW _____ INTEGRATOR:

CLIENT CHRYSLER CORPORATION CASE PRINTER _____

DATE 03/19/1999 CASE AUDITOR _____

PC _____ ACCOUNT 500944 TECH REVIEWER Ray Sutton

CASE/SDG 34180 21501 SAS FRACTION: VOLATILE

Custom Format Diskette MATRIX: SO

SDG: 500944 LOG PAGE 1357 / 932 REPORT STYLE 1

==========

SCCN	TYPE	ID	S	V	P	RECDATE	DUEDATE	LABINST
931493	PR	TB-21-3-5		4		3/16/99	3/26/99	RFA215/TCL VOCS
931494	PR	TB-21-9-11		4		3/16/99	3/26/99	RFA215/TCL VOCS
931495	PR	TB-21-15-17		4		3/16/99	3/26/99	RFA215/TCL VOCS
931300	PR	MW-21S2-4		4		3/12/99	3/22/99	RFA215/TCL VOC
931303	PR	MW-21S8-10		4		3/12/99	3/22/99	RFA215/TCL VOC
931304	PR	MW-21S18-20		4		3/12/99	3/22/99	RFA215/TCL VOC
931305	PR	MW-22S5-7		4		3/12/99	3/22/99	RFA215/TCL VOC
931306	PR	MW-22S10-12		4		3/12/99	3/22/99	RFA215/USE FOR QC/TCL VOC
931307	PR	MW-22S19-21		4		3/12/99	3/22/99	RFA215/TCL VOC
931492	PR	MW-23S-20-22		4		3/16/99	3/26/99	RFA215/TCL VOCS
931496	PR	DP1-.5-4.5		4		3/16/99	3/26/99	RFA215/TCL VOCS
931497	PR	DP2-.5-4.5		4		3/16/99	3/26/99	RFA215/TCL VOCS
931498	PR	DP3-.5-4.5		4		3/16/99	3/26/99	RFA215/TCL VOCS
931499	PR	DP4-.5-4.5		4		3/16/99	3/26/99	RFA215/TCL VOCS
931500	PR	DP5-1-5		4		3/16/99	3/26/99	RFA215/TCL VOCS
931501	PR	DP6-1-6		4		3/16/99	3/26/99	RFA215/TCL VOCS
931502	PR	DP7-.5-4.5		4		3/16/99	3/26/99	RFA215/TCL VOCS
931503	PR	DP8-.5-4.5		4		3/16/99	3/26/99	RFA215/TCL VOCS
931504	PR	DP9-.5-4.5		4		3/16/99	3/26/99	RFA215/TCL VOCS
931505	PR	DP10-.5-4.5		4		3/16/99	3/26/99	RFA215/USE FOR QC/TCL VOC
931301	SS			4		3/12/99	3/22/99	
931302	SS			4		3/12/99	3/22/99	

TCC

==========

TOTAL SAMPLES = 22

TOTAL PRODUCTION SAMPLES = 20

TOTAL SPIKES SAMPLES = 2

TOTAL BLANKS SAMPLES = 0

TOTAL AMT: $5,500

BILLABLE REPEATS

_____

_____

_____

RELEASED BY: _____ DATE: _____/_____/_____

CHRYSLER CORPORATION

Building 40B Free-product Delineation

Chain-of-Custody

04023 A

CompuChem
501 Madison Avenue
Cary, NC 27513
Phone Number: 1-800-833-5097
Fax Number: (919) 379-4050

Project Name: Dayton Thermal Products
Site Location: 1600 Webster St, Dayton OH
Site Code: SC001
RFA Number: YGQP9900215
Chrysler PM: Gary Stanczuk

Consultant: LBG
Address: 1210 West County Road E, St. Paul MN 55112
Consultant PM: Ken Vogel
Phone: 651 490 1405 Fax: 651 490 1006

Turn-around Time Request:
24 calendar hrs.
48 calendar hrs.
10 days
28 days

Data Package Deliverables: (circle)
Chrysler Level 1
Chrysler Level 2
Other (specify):

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

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	40z Glass No Preservative	TCL VOC: 8260	Volatiles pH <2	Metals pH < 2	Cyanide pH > 12	Other	Remarks
MW-21S 2-4'	3/10/99	15:00	G	S	1	X						
MW-21S 8-10'		15:45			1	X						
MW-21S 18-20'		17:00			1	X						
MW-22S 5-7'	3/4/99	17:15			1	X						
MW-22S 10-12'		17:30			3	X						MS/MSD
MW-22S ~~18-20'~~ 19'-21'		18:05			1	X						
EMW031199		17:55		O	2	X						
Trip Blank T031199	3/11/99			O	2	X						3/5/99 Carboy 3

Add TCLP Ext & hold for VOCs per Dave Strand @ LBG per sample IDs
MW-21S 18-20 & MW-22S 19-21
DZ 3-12-99

Sampler(s)
David Strand
Mike Plante

Cooler ID # 497
Is RFA sampling complete? Yes No

Bottles Relinquished under Airbill No. 4287 4960 0581
Samples Relinquished under Airbill No. 810525280920
Temperature (corrected) 2.0 C

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact?
[signature]	3/11/99					Yes No
						Yes No
			Received for Laboratory by: [signature]	3/12/99	0855	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

Opened cooler at 9:15 am [signature] 3/12/99

SDG 215A per Dave Strand @ LBG DZ 3-12-99

Revision No 1
Created September 23, 1997

Page 1 of 1

CHRYSLER CORPORATION

Free Product Building 40B
Silicate Line Soil Confirmation

Chain-of-Custody

04025 A

CompuChem
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 OH
Site Code: SC001
RFA Number: YGOP99002IS
Chrysler PM: Gary Stanczuk

Consultant: Leggette, Brashears & Graham
Address: 1240 West County Rd E
St. Paul MN 55112
Consultant PM: Ken Vogel
Phone: (651) 490-1405 Fax: (651) 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

Matrix Codes
S - Soil
SW - Surface Water
GW - Groundwater
A - Air
Sed. - Sediment
O - Other (specify) Lab Pure Water Carboy 5

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	4 oz glass, none TCL VOC's 52iC	4 oz glass, none TCLP VOC's ext + hold							Volatiles pH <2	Metals pH < 2	Cyanide pH > 12	Other ____	Remarks
DP-7 0.5-4.5	3/14/99	14:40	G	S	1	X	X		Reid 2-4oz jars									PID = 32 ppm
DP-8 0.5-4.5		15:05	G		1	X												" 18 "
DP-9 0.5-4.5		15:25			1	X												NA
DP-10 0.5-4.5		15:35			1	X			Reid 3-4oz jar									PID = 25 MS/MSD
DP-11 0.5-4.5		15:45			1	X												" 2 "
DP-12 0.5-1.5		16:05			1	X												" 2 "
EDP031499		16:00		O	2	X												
TB031499	3/14/99			O					Rec'd 2-40ml vials									Trip Blank Carboy 5

Sampler(s)
David Strand
Mike Plante

Cooler ID # ~~AA~~ 206

Is RFA sampling complete? Yes No

Bottles Reliquished under Airbill No.

Samples Relinquished under Airbill No. 3099839094C

Temperature (corrected) 2 C

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact?
[signature]	3/15/99	FedEx				Yes No
Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact? Yes No
Relinquished by:	Date:	Time:	Received for Laboratory by: Glenn Dorne	Date: 3/16/99	Time: 7:25 AM	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

SDG 215B

CHRYSLER CORPORATION

Free Product Building 4C13 + Silicate Line Soil Contamination

Chain-of-Custody

04024 A

CompuChem
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 OH
Site Code: 3CCC1
RFA Number: 4GLP99CC215
Chrysler PM: Gary Stanczuk

Consultant: Leggette, Brashears + Graham
Address: 1210 West County Rd. E
St. Paul MN 55112
Consultant PM: Ken Vogel
Phone: (651) 490 1405 Fax: (651) 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

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	4oz glass, none TCL VOC + freeC	4oz glass, none TCLP VOC + ext + hold								Volatiles pH <2	Metals pH < 2	Cyanide pH > 12	Other ____	Remarks
MW-23S 20-22'	3/12/99	16:25	G	S	1	X													PID = 1 ppm
TB-21 3-5'	3/13/99	13:05			1	X													" 0.5 "
TB-21 9-11'		13:35			1	X													" 6 "
TB-21 15-17'		14:00			1	X													" 7 "
DP-1 0.5-4.5'	3/14/99	0825			1	X													PID = 10 ppm
DP-2 0.5-4.5'		0835			1	X													PID = 56 "
DP-3 0.5-4.5'		1315 ~~0850~~			1	X													PID = 55 "
DP-4 0.5-4.5'		1330			1	X													" 4 "
DP-5 1-5'		1400			2	X	X												N/A PID
DP-6 1-6'		1415			2	X	X												" 15 "

Sampler(s)
David Stroud
Mike Pkate

Cooler ID # ~~NA~~ 20E

Is RFA sampling complete?
Yes No

Bottles Reliquished under Airbill No.

Samples Relinquished under Airbill No. 8C9983901940

Temperature (corrected) 2 C

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact?
[signature]	3/15/99	FedEx				Yes No
						Yes No
			Received for Laboratory by: [signature]	3/16/99	7:25	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

SDY 215B

CompuChem a division of Liberty Analytical Corp.

Date Batched _____
Original _____

Soil Batch Sheet

Linker _____ Assigned To _____ Date _____ Manual Counter _____ 34

TAT _____ SOW _____

	CCN	Client ID	QC Type	Case	SDG	Time	Date Run	Inst. #	Operator	H/T	Weight (g)	Comments
1)	931501R2	DP6-1-6		34180	21501	2227	3-24-99	55	2331		5.0	
2)	931505R2	DP10-.5-4.5		↓	↓	2303	↓	↓	↓		5.0	
3)	931505R3					2356						
4)												
5)												
6)												
7)												
8)												
9)												
10)												
11)												
12)												
13)												
14)												
15)												
16)												
17)												
18)												
19)												
20)												
21)												
22)	932437 R1					2051	3-24-99	55	2331			
23)	932437	YBLKH4	B1			1915	3-24-99	55	2331		5.0	
24)	932438	↓ H5	B2			2002	↓	↓	↓		5.0	
25)	932439	YCS037	B3			2137					5.0	
26)	932440	↓ 08	B4								5.0	
27)			B5									

Relinquished By J.S. Ref # 5 Date 3-24-99 Received By Ref # 5 Date 3-24-99
Relinquished By J. Date 3-24-99 Received By Ref # 5 Date 3-24-99
Relinquished By _____ Date _____ Received By _____ Date _____

Log Page Updated _____ Regent Manufacturer and lot # _____

CompuChem a division of Liberty Analytical Corp.

Date Batched 03.25.99
Original

Soil Batch Sheet

Linker 5 8260B
TAT
SOW
Assigned To
Date
Manual Counter 1356 1758 38

	CCN	Client ID	QC Type	Case	SDG	Time	Date Run	Inst. #	Operator	H/T	Weight (g)	Comments
1)	931301R2		SS	34180	21501	0128	3-26-99	52	2331		5.0	
2)	931302R2		SS	↓	↓	0211	↓	↓	↓		5.0	
3)	931307R3	MW-22S19-21				2322	3-25-99			3/25	3.0	
4)	931496R3	DP1--5-4.5				0046	3-26-99			3/28	5.0	
5)												
6)												
7)												
8)												
9)												
10)												
11)												
12)												
13)												
14)												
15)												
16)												
17)												
18)												
19)												
20)												
21)												
22)												03.26.99KP
23)	932454	VBLKH6	B1			2229	3-25-99	52	2331		5.0	
24)	932455	VBLKH7	B2								5.0	
25)	932456	VBLKH8	B3								5.0	
26)	932457	VLCS09	B4			0004	03-26-99	52	2331		5.0	
27)	932458	VLCS10	B5			—	3-26-99	↓	↓		5.0	

Relinquished By Ref # 3 Date 3-25-99 Received By Date 3-25-99
Relinquished By Date 3-25-99 Received By Ref 3 Date 3-25-99
Relinquished By Date Received By Date

Log Page Updated

Regent Manufacturer and lot #

CompuChem a division of Liberty Analytical Corp.

Soil Batch Sheet

Linker 58260B

TAT

SOW

Assigned To

Date

Date Batched

Original

Manual Counter / 36

	CCN	Client ID	QC Type	Case	SDG	Time	Date Run	Inst. #	Operator	H/T	Weight (g)	Comments
1)	931504	DP9-.5-4.5		34180	21501	1200	32499	52	2343	3/28	5.0	Backup
2)	931505	DP10-.5-4.5				1233					5.0	931505=QC
3)	931503	DP8-.5-4.5				1310					5.0	
4)	931301R1		SS			—					5.0	not run
5)	931302R1		SS			—					5.0	
6)	931307R1	MW-22314-21				1800				3/25	2.5	
7)	931501R1	DP6-1-6				1455				3/28	1.0	
8)	931502R1	DP7-.5-4.5				1533					1.3	
9)	931495R2	TB-21-15-17				1610				3/27	1.5	
10)	931496R2	DP1-.5-4.5				1644				3/28	1.0	
11)	931498R2	DP3-.5-4.5				1723					1.5	
12)	931504R1	DP12-.5-4.5		34180	21503	1344					5.0	
13)	931507R1	DP11-.5-4.5MS	SS			1843					5.0	
14)	931508R1	DP11-.5-4.5MSD	SS			1917					5.0	
15)	931506R1	DP11-.5-4.5				1417					5.0	
16)	931496R3					Rebatched 32544					5.0	
17)	931307R2					1957	3.24.99	52	2355		3.0	
18)	~~931307R3~~										3.0	
19)												
20)												
21)												
22)												
23)	932232	VBLK61	B1			1003	32499	52	2343		5.0	
24)	932233	VBLKG2	B2								5.0	
25)	932234	VBLKG3	B3								5.0	
26)	932235	VLCS98	B4			1056	32499	52	2343		5.0	
27)	932236	VLCS99	B5								5.0	

Relinquished By MB Date 32499 Received By MB Date 32499

Relinquished By Date 3.24.99 Received By Date 3.24.99

Relinquished By Date Received By Date

Log Page Updated

Regent Manufacturer and lot #

CompuChem a division of Liberty Analytical Corp.

Date Batched 3/17/99
Original

FULL SPIKES

Soil Batch Sheet

Linker 8260B
Assigned To
Date
Manual Counter 1356 / 1756 37

TAT 10
SOW

	CCN	Client ID	QC Type	Case	SDG	Time	Date Run	Inst. #	Operator	H/T	Weight (g)	Comments
1)	931507		SS	34180	21503	0059	03.24.99	52	2331		5.0	1357/934 RFA 215
2)	931508		SS			0132					5.0	
3)	931506	DP11-.5-4.5				2353	03.23.99			3/28	5.0	
4)	931509	DP12-.5-4.5				0025	03.24.99				5.0	
5)	931482		SS	34181	21701	2056	3-23-99				5.0	1357/933 RFA 217
6)	931483		SS			2129					5.0	
7)	931481	DP-13-1-4				2223				3/28	5.0	
8)	931484	DP-13-4-8				2023					5.0	
9)	931305R'	MW-2255-7		34180	21501	2214				3/25	5.0	RFA 215
10)	931306R'	MW-22-510-12				2247					5.0	
11)	931307	MW-22519-21				2320					5.0	
12)	931301		SS									
13)	931302		SS									
14)	931495R'	TB-21-15-17		34180	21501	0206	3-24-99	52	2331	3/27	1.5	
15)	931496R'	DP1-.5-4.5				0240				3/28	1.0	
16)	931498R'	DP3-.5-4.5				0314					1.5	
17)												
18)												
19)												
20)												
21)												
22)	931625R'					1807	3-23-99	52	2331			@7.24.99 HP
23)	931625	VBLKB8	B1			1756	3-23-99	57	2355		5.0	
24)	931626	VBLKB9	B2			1835					5.0	
25)	931627	VBLKC1	B3			1915					5.0	
26)	931628	VLCS86	B4			1855	3-23-99	52	2331		5.0	
27)	931629	VLCS87	B5								5.0	

Relinquished By Ref #3 Date 3-23-99 Received By Ref. 3 Date 3-23-99
Relinquished By Date 3-23-99 Received By Ref #3 Date 3-23-99
Relinquished By Date Received By Date

Log Page Updated

Regent Manufacturer and lot #

CompuChem a division of Liberty Analytical Corp.

Date Batched 3/12/99
Original

RFA 310
48 HR TAT

Soil Batch Sheet

Linker S8260B
TAT 2
SOW

Assigned To
Date

Manual Counter 1356 / 1752 ~~00~~ 3

	CCN	Client ID	QC Type	Case	SDG	Time	Date Run	Inst. #	Operator	H/T	Weight (g)	Comments
1)	931229		SS	34177	31001	1820	3.15.99	52	2355		5.0	1357/931
2)	931230		SS			1901					5.0	
3)	931228	SB0002-A				1634				3/20	5.0	
4)	931234	TRIP BLANK				1728						
5)	931301		SS	34180	21501					Rebatched		Backup
6)	931302		SS									
7)	931300	MW-2152-4				2050	3.15.99	52	2355	3/24		
8)	931303	MW-2158-10				2134						
9)	931304	MW-2158-20				2305						
10)	931305	MW-2255-7				2346				3/25		
11)	931306	MW-22519-12				0027	3.16.99					use for QC
12)	931307	MW-22519-21									Rebatched for odor	
13)												
14)												
15)												
16)												
17)												
18)												
19)												
20)												
21)												
22)												
23)	931248	~~VHBLK~~ VBLKY3	B1			1331	3.15.99	52	2141		5.0	
24)	931249	~~VHBLK~~ VBLKY4	B2								5.0	
25)	931250	~~VHBLK~~ VBLKY5	B3								5.0	
26)	931251	VLCS67	B4			1434	3.15.99	52	2141		5.0	
27)	931252	VLCS68	B5			1537					5.0	

KP 03.15.99 Rec 3 03.15.99

Relinquished By Rec 3 Date 3.15.99 Received By NB Date 3.15.99
Relinquished By KP Date 3.15.99 Received By [illegible] Date 3.15.99
Relinquished By [illegible] Date 3.15.99 Received By Rec 3 Date 3.15.99

Log Page Updated

Regent Manufacturer and lot #

CompuChem Receiving Log

ent : LBG / CHRYSLER
der # 34180
oject : RFA 215
ote # 99-7238
count # 500944

Received on : 3/12/99 # of COC's 1
Delivered by : FED-EX
Freight # 810525280920
Subcontract Y / (N)
TAT : Verbal N/A Hardcopy 10 day

PPS / (RFA #) 215 Page 1 of 1
Lab Instructions : TCL - VOCs
*MS/MSD

39

SDG	REQ	SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE	MX	pH
21501	1	MW-21S2-4	931300	1-4oz. jar	VOC 8260	~~1356~~ 1357	3, 8	3/10/99	SO	NA
	2	MW-21S8-10	931303							
	3	MW-21S18-20	931304							
	4	MW-22S5-7	931305		3/12/99			3/11/99		
	5	* MW-22S10-12	931306	3-4oz. jars.						
	6	MW-22S19-21	931307	1-4oz. jar						
21502	7	EMW031199	931308	2-40ml V		1356	1		WA	
	8	TO31199	931311	2-40ml V						

3-12-99

ogged In By : Libby Dorey
yanide samples checked for sulfide and chlorine Y / (NA)
olding Blank(s) : Counter / Page ____ / ____ CCN's ____ / ____

Order Entered By : Melissa Stern
Received in good condition (Y) / N
Temperature(s) 2.0 °C

CompuChem Receiving Log

Client: Chrysler / LBG
Order #: 34180
Project: RFA 215
Quote #: 99-7238
Account #: 500944

Received on: 3-16-99 # of COC's: 2
Delivered by: Federal Express
Freight #: 809983901940
Subcontract Y / (N)
TAT: Verbal N/A Hardcopy 10 day

PPS / (RFA #) 215 Page 1 of 2
Lab Instructions: TCL - VOCs / TCLP Ext
hold VOCs
* MS/MSD

	SDG	REQ	SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE	MX	pH
1	21501	11	MW-23S-20-22	931492	1-4oz	VOC	1357, 286	3, 8	3/12/99	SO	NA
2		12	TB-21-3-5	931493					3/13/99		
3		13	TB-21-9-11	931494							
4		14	TB-21-15-17	931495							
5		15	DP-1-.5-4.5	496					3/14/99		
6		16	DP-2-.5-4.5	497							
7		17	DP-3-.5-4.5	498							
8		18	DP-4-.5-4.5	499							
9		19	DP-5-1-5	500							
10		20	DP-6-1-6	501							
11		21	DP-7-.5-4.5	502							
12		22	DP-8-.5-4.5	503							
13		23	DP-9-.5-4.5	504							
14		24	DP-10-.5-4.5*	505	3-4oz jars*						
15	21502	25	DP-11-.5-4.5	506	1-4oz jar						
16		26	DP-12-.5-4.5	509	1-4oz jar						
17	21502	27	EDP031499	510	2-40ml		1356	1		NA	
18		28	TO31499	511							
19	2151E	29	DP-5-1-5	512	1-4oz	TCLP Ext & Hold VOC	456, 1141	5, 6		SO	
20		30	DP-6-1-6	513							

Logged In By: Diane Ellmore & Glenn Hoxie
Order Entered By: Diane Ellmore
Cyanide samples checked for sulfide and chlorine Y / (NA)
Received in good condition (Y) / N
Holding Blank(s): Counter / Page ____ / ____ CCN's ____ / ____
Temperature(s) 2 °C

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP1-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931496

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: G3R31496B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 14

Date Analyzed: 03/26/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	12		U
75-01-4	Vinyl Chloride	12		U
75-00-3	Chloroethane	12		U
75-09-2	Methylene Chloride	12	9	JB
75-35-4	1,1-Dichloroethene	12		U
75-34-3	1,1-Dichloroethane	12		U
67-66-3	Chloroform	12	1	J
107-06-2	1,2-Dichloroethane	12		U
71-55-6	1,1,1-Trichloroethane	12		U
56-23-5	Carbon Tetrachloride	12		U
75-27-4	Bromodichloromethane	12		U
10061-01-5	cis-1,3-Dichloropropene	12		U
79-01-6	Trichloroethene	12	9	J
124-48-1	Dibromochloromethane	12		U
79-00-5	1,1,2-Trichloroethane	12		U
71-43-2	Benzene	12		U
10061-02-6	trans-1,3-Dichloropropene	12		U
75-25-2	Bromoform	12		U
127-18-4	Tetrachloroethene	12	4	J
79-34-5	1,1,2,2-Tetrachloroethane	12		U
108-88-3	Toluene	12		U
108-90-7	Chlorobenzene	12		U
100-41-4	Ethylbenzene	12		U
100-42-5	Styrene	12		U
78-87-5	1,2-Dichloropropane	12		U
74-87-3	Chloromethane	12		U
75-15-0	Carbon disulfide	12		U
67-64-1	Acetone	12		U
108-10-1	4-Methyl-2-pentanone	12		U
591-78-6	2-hexanone	12		U
78-93-3	2-butanone	12		U
156-60-5	trans-1,2-Dichloroethene	12		U
156-59-2	cis-1,2-Dichloroethene	12		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP1-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931496

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: G3R31496B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 14

Date Analyzed: 03/26/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	12		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP10-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931505

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: C3R31505A55.D

Level: (low/med) MED

Date Received: 03/16/99

% Moisture: not dec. 13

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000(uL)

Soil Aliquot Volume: 15 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	3800		U
75-01-4	Vinyl Chloride	3800		U
75-00-3	Chloroethane	3800		U
75-09-2	Methylene Chloride	3800	1500	JB
75-35-4	1,1-Dichloroethene	3800		U
75-34-3	1,1-Dichloroethane	3800		U
67-66-3	Chloroform	3800		U
107-06-2	1,2-Dichloroethane	3800		U
71-55-6	1,1,1-Trichloroethane	3800	3300	J
56-23-5	Carbon Tetrachloride	3800		U
75-27-4	Bromodichloromethane	3800		U
10061-01-5	cis-1,3-Dichloropropene	3800		U
79-01-6	Trichloroethene	3800	66000	
124-48-1	Dibromochloromethane	3800		U
79-00-5	1,1,2-Trichloroethane	3800		U
71-43-2	Benzene	3800		U
10061-02-6	trans-1,3-Dichloropropene	3800		U
75-25-2	Bromoform	3800		U
127-18-4	Tetrachloroethene	3800	1700	J
79-34-5	1,1,2,2-Tetrachloroethane	3800		U
108-88-3	Toluene	3800		U
108-90-7	Chlorobenzene	3800		U
100-41-4	Ethylbenzene	3800		U
100-42-5	Styrene	3800		U
78-87-5	1,2-Dichloropropane	3800		U
74-87-3	Chloromethane	3800		U
75-15-0	Carbon disulfide	3800		U
67-64-1	Acetone	3800		U
108-10-1	4-Methyl-2-pentanone	3800		U
591-78-6	2-hexanone	3800		U
78-93-3	2-butanone	3800		U
156-60-5	trans-1,2-Dichloroethene	3800		U
156-59-2	cis-1,2-Dichloroethene	3800	2900	J

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP10-.5-4.5

Project: Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL Lab Sample ID: 931505

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C3R31505A55.D

Level: (low/med) MED Date Received: 03/16/99

% Moisture: not dec. 13 Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: 15 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	3800		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP10-.5-4.5M S

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931301

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: C3R31301A55.D

Level: (low/med) MED

Date Received: 03/16/99

% Moisture: not dec. 13

Date Analyzed: 03/26/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000(uL)

Soil Aliquot Volume: 15 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	3800		U
75-01-4	Vinyl Chloride	3800		U
75-00-3	Chloroethane	3800		U
75-09-2	Methylene Chloride	3800	710	JB
75-35-4	1,1-Dichloroethene	3800	3200	J
75-34-3	1,1-Dichloroethane	3800		U
67-66-3	Chloroform	3800		U
107-06-2	1,2-Dichloroethane	3800		U
71-55-6	1,1,1-Trichloroethane	3800	1100	J
56-23-5	Carbon Tetrachloride	3800		U
75-27-4	Bromodichloromethane	3800		U
10061-01-5	cis-1,3-Dichloropropene	3800		U
79-01-6	Trichloroethene	3800	29000	
124-48-1	Dibromochloromethane	3800		U
79-00-5	1,1,2-Trichloroethane	3800		U
71-43-2	Benzene	3800	3000	J
10061-02-6	trans-1,3-Dichloropropene	3800		U
75-25-2	Bromoform	3800		U
127-18-4	Tetrachloroethene	3800	440	J
79-34-5	1,1,2,2-Tetrachloroethane	3800		U
108-88-3	Toluene	3800	2800	J
108-90-7	Chlorobenzene	3800	2600	J
100-41-4	Ethylbenzene	3800		U
100-42-5	Styrene	3800		U
78-87-5	1,2-Dichloropropane	3800		U
74-87-3	Chloromethane	3800		U
75-15-0	Carbon disulfide	3800		U
67-64-1	Acetone	3800		U
108-10-1	4-Methyl-2-pentanone	3800		U
591-78-6	2-hexanone	3800		U
78-93-3	2-butanone	3800		U
156-60-5	trans-1,2-Dichloroethene	3800		U
156-59-2	cis-1,2-Dichloroethene	3800	1100	J

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP10-.5-4.5M	S

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931301

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: C3R31301A55.D

Level: (low/med) MED

Date Received: 03/16/99

% Moisture: not dec. 13

Date Analyzed: 03/26/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000(uL)

Soil Aliquot Volume: 15 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	3800		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP10-.5-4.5M SD

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931302

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: C3R31302A55.D

Level: (low/med) MED

Date Received: 03/16/99

% Moisture: not dec. 13

Date Analyzed: 03/26/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000(uL)

Soil Aliquot Volume: 15 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	3800		U
75-01-4	Vinyl Chloride	3800		U
75-00-3	Chloroethane	3800		U
75-09-2	Methylene Chloride	3800	860	JB
75-35-4	1,1-Dichloroethene	3800	930	J
75-34-3	1,1-Dichloroethane	3800		U
67-66-3	Chloroform	3800		U
107-06-2	1,2-Dichloroethane	3800		U
71-55-6	1,1,1-Trichloroethane	3800	870	J
56-23-5	Carbon Tetrachloride	3800		U
75-27-4	Bromodichloromethane	3800		U
10061-01-5	cis-1,3-Dichloropropene	3800		U
79-01-6	Trichloroethene	3800	28000	
124-48-1	Dibromochloromethane	3800		U
79-00-5	1,1,2-Trichloroethane	3800		U
71-43-2	Benzene	3800	3100	J
10061-02-6	trans-1,3-Dichloropropene	3800		U
75-25-2	Bromoform	3800		U
127-18-4	Tetrachloroethene	3800	770	J
79-34-5	1,1,2,2-Tetrachloroethane	3800		U
108-88-3	Toluene	3800	2700	J
108-90-7	Chlorobenzene	3800	2700	J
100-41-4	Ethylbenzene	3800		U
100-42-5	Styrene	3800		U
78-87-5	1,2-Dichloropropane	3800		U
74-87-3	Chloromethane	3800		U
75-15-0	Carbon disulfide	3800		U
67-64-1	Acetone	3800		U
108-10-1	4-Methyl-2-pentanone	3800		U
591-78-6	2-hexanone	3800		U
78-93-3	2-butanone	3800		U
156-60-5	trans-1,2-Dichloroethene	3800		U
156-59-2	cis-1,2-Dichloroethene	3800	1100	J

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP10-.5-4.5M SD

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931302

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: C3R31302A55.D

Level: (low/med) MED

Date Received: 03/16/99

% Moisture: not dec. 13

Date Analyzed: 03/26/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000(uL)

Soil Aliquot Volume: 15 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	3800		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP2-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931497

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031497B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 10

Date Analyzed: 03/19/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	11		U
75-01-4	Vinyl Chloride	11		U
75-00-3	Chloroethane	11		U
75-09-2	Methylene Chloride	11	6	JB
75-35-4	1,1-Dichloroethene	11		U
75-34-3	1,1-Dichloroethane	11		U
67-66-3	Chloroform	11		U
107-06-2	1,2-Dichloroethane	11		U
71-55-6	1,1,1-Trichloroethane	11		U
56-23-5	Carbon Tetrachloride	11		U
75-27-4	Bromodichloromethane	11		U
10061-01-5	cis-1,3-Dichloropropene	11		U
79-01-6	Trichloroethene	11	66	
124-48-1	Dibromochloromethane	11		U
79-00-5	1,1,2-Trichloroethane	11		U
71-43-2	Benzene	11		U
10061-02-6	trans-1,3-Dichloropropene	11		U
75-25-2	Bromoform	11		U
127-18-4	Tetrachloroethene	11	23	
79-34-5	1,1,2,2-Tetrachloroethane	11		U
108-88-3	Toluene	11		U
108-90-7	Chlorobenzene	11		U
100-41-4	Ethylbenzene	11		U
100-42-5	Styrene	11		U
78-87-5	1,2-Dichloropropane	11		U
74-87-3	Chloromethane	11		U
75-15-0	Carbon disulfide	11		U
67-64-1	Acetone	11		U
108-10-1	4-Methyl-2-pentanone	11		U
591-78-6	2-hexanone	11		U
78-93-3	2-butanone	11		U
156-60-5	trans-1,2-Dichloroethene	11		U
156-59-2	cis-1,2-Dichloroethene	11	6	J

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP2-.5-4.5

Project: Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL Lab Sample ID: 931497

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH031497B52.D

Level: (low/med) LOW Date Received: 03/16/99

% Moisture: not dec. 10 Date Analyzed: 03/19/99

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	11		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP3-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931498

Sample wt/vol: 1.5 (g/mL) G

Lab File ID: G2R31498A52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 12

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	38		U
75-01-4	Vinyl Chloride	38		U
75-00-3	Chloroethane	38		U
75-09-2	Methylene Chloride	38	20	JB
75-35-4	1,1-Dichloroethene	38		U
75-34-3	1,1-Dichloroethane	38		U
67-66-3	Chloroform	38		U
107-06-2	1,2-Dichloroethane	38		U
71-55-6	1,1,1-Trichloroethane	38		U
56-23-5	Carbon Tetrachloride	38		U
75-27-4	Bromodichloromethane	38		U
10061-01-5	cis-1,3-Dichloropropene	38		U
79-01-6	Trichloroethene	38	480	
124-48-1	Dibromochloromethane	38		U
79-00-5	1,1,2-Trichloroethane	38		U
71-43-2	Benzene	38		U
10061-02-6	trans-1,3-Dichloropropene	38		U
75-25-2	Bromoform	38		U
127-18-4	Tetrachloroethene	38	8	J
79-34-5	1,1,2,2-Tetrachloroethane	38		U
108-88-3	Toluene	38		U
108-90-7	Chlorobenzene	38		U
100-41-4	Ethylbenzene	38		U
100-42-5	Styrene	38		U
78-87-5	1,2-Dichloropropane	38		U
74-87-3	Chloromethane	38		U
75-15-0	Carbon disulfide	38		U
67-64-1	Acetone	38		U
108-10-1	4-Methyl-2-pentanone	38		U
591-78-6	2-hexanone	38		U
78-93-3	2-butanone	38		U
156-60-5	trans-1,2-Dichloroethene	38		U
156-59-2	cis-1,2-Dichloroethene	38	47	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP3-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931498

Sample wt/vol: 1.5 (g/mL) G

Lab File ID: G2R31498A52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 12

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	38		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP4-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931499

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031499B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 7

Date Analyzed: 03/19/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	11		U
75-01-4	Vinyl Chloride	11		U
75-00-3	Chloroethane	11		U
75-09-2	Methylene Chloride	11	7	JB
75-35-4	1,1-Dichloroethene	11		U
75-34-3	1,1-Dichloroethane	11		U
67-66-3	Chloroform	11		U
107-06-2	1,2-Dichloroethane	11		U
71-55-6	1,1,1-Trichloroethane	11		U
56-23-5	Carbon Tetrachloride	11		U
75-27-4	Bromodichloromethane	11		U
10061-01-5	cis-1,3-Dichloropropene	11		U
79-01-6	Trichloroethene	11	89	
124-48-1	Dibromochloromethane	11		U
79-00-5	1,1,2-Trichloroethane	11		U
71-43-2	Benzene	11		U
10061-02-6	trans-1,3-Dichloropropene	11		U
75-25-2	Bromoform	11		U
127-18-4	Tetrachloroethene	11	36	
79-34-5	1,1,2,2-Tetrachloroethane	11		U
108-88-3	Toluene	11		U
108-90-7	Chlorobenzene	11		U
100-41-4	Ethylbenzene	11		U
100-42-5	Styrene	11		U
78-87-5	1,2-Dichloropropane	11		U
74-87-3	Chloromethane	11		U
75-15-0	Carbon disulfide	11		U
67-64-1	Acetone	11		U
108-10-1	4-Methyl-2-pentanone	11		U
591-78-6	2-hexanone	11		U
78-93-3	2-butanone	11		U
156-60-5	trans-1,2-Dichloroethene	11		U
156-59-2	cis-1,2-Dichloroethene	11	8	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP4-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931499

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031499B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 7

Date Analyzed: 03/19/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	11		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP5-1-5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931500

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031500B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 11

Date Analyzed: 03/19/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	11		U
75-01-4	Vinyl Chloride	11		U
75-00-3	Chloroethane	11		U
75-09-2	Methylene Chloride	11	6	JB
75-35-4	1,1-Dichloroethene	11		U
75-34-3	1,1-Dichloroethane	11		U
67-66-3	Chloroform	11		U
107-06-2	1,2-Dichloroethane	11		U
71-55-6	1,1,1-Trichloroethane	11	2	J
56-23-5	Carbon Tetrachloride	11		U
75-27-4	Bromodichloromethane	11		U
10061-01-5	cis-1,3-Dichloropropene	11		U
79-01-6	Trichloroethene	11	210	
124-48-1	Dibromochloromethane	11		U
79-00-5	1,1,2-Trichloroethane	11		U
71-43-2	Benzene	11		U
10061-02-6	trans-1,3-Dichloropropene	11		U
75-25-2	Bromoform	11		U
127-18-4	Tetrachloroethene	11	56	
79-34-5	1,1,2,2-Tetrachloroethane	11		U
108-88-3	Toluene	11		U
108-90-7	Chlorobenzene	11		U
100-41-4	Ethylbenzene	11		U
100-42-5	Styrene	11		U
78-87-5	1,2-Dichloropropane	11		U
74-87-3	Chloromethane	11		U
75-15-0	Carbon disulfide	11		U
67-64-1	Acetone	11		U
108-10-1	4-Methyl-2-pentanone	11		U
591-78-6	2-hexanone	11		U
78-93-3	2-butanone	11		U
156-60-5	trans-1,2-Dichloroethene	11		U
156-59-2	cis-1,2-Dichloroethene	11	15	

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP5-1-5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931500

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031500B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 11

Date Analyzed: 03/19/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	11		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP6-1-6

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931501

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: C2R31501A55.D

Level: (low/med) MED

Date Received: 03/16/99

% Moisture: not dec. 5

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000(uL)

Soil Aliquot Volume: 100 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	530		U
75-01-4	Vinyl Chloride	530		U
75-00-3	Chloroethane	530		U
75-09-2	Methylene Chloride	530	340	JB
75-35-4	1,1-Dichloroethene	530		U
75-34-3	1,1-Dichloroethane	530		U
67-66-3	Chloroform	530		U
107-06-2	1,2-Dichloroethane	530		U
71-55-6	1,1,1-Trichloroethane	530	690	
56-23-5	Carbon Tetrachloride	530		U
75-27-4	Bromodichloromethane	530		U
10061-01-5	cis-1,3-Dichloropropene	530		U
79-01-6	Trichloroethene	530	5300	
124-48-1	Dibromochloromethane	530		U
79-00-5	1,1,2-Trichloroethane	530		U
71-43-2	Benzene	530		U
10061-02-6	trans-1,3-Dichloropropene	530		U
75-25-2	Bromoform	530		U
127-18-4	Tetrachloroethene	530	7800	
79-34-5	1,1,2,2-Tetrachloroethane	530		U
108-88-3	Toluene	530		U
108-90-7	Chlorobenzene	530		U
100-41-4	Ethylbenzene	530		U
100-42-5	Styrene	530		U
78-87-5	1,2-Dichloropropane	530		U
74-87-3	Chloromethane	530		U
75-15-0	Carbon disulfide	530		U
67-64-1	Acetone	530		U
108-10-1	4-Methyl-2-pentanone	530		U
591-78-6	2-hexanone	530		U
78-93-3	2-butanone	530		U
156-60-5	trans-1,2-Dichloroethene	530		U
156-59-2	cis-1,2-Dichloroethene	530	360	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP6-1-6

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No : 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931501

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: C2R31501A55.D

Level: (low/med) MED

Date Received: 03/16/99

% Moisture: not dec. 5

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000(uL)

Soil Aliquot Volume: 100 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	530		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP7-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931502

Sample wt/vol: 1.3 (g/mL) G

Lab File ID: GR031502A52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 11

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	43		U
75-01-4	Vinyl Chloride	43		U
75-00-3	Chloroethane	43		U
75-09-2	Methylene Chloride	43	22	JB
75-35-4	1,1-Dichloroethene	43		U
75-34-3	1,1-Dichloroethane	43		U
67-66-3	Chloroform	43		U
107-06-2	1,2-Dichloroethane	43		U
71-55-6	1,1,1-Trichloroethane	43	21	J
56-23-5	Carbon Tetrachloride	43		U
75-27-4	Bromodichloromethane	43		U
10061-01-5	cis-1,3-Dichloropropene	43		U
79-01-6	Trichloroethene	43	660	
124-48-1	Dibromochloromethane	43		U
79-00-5	1,1,2-Trichloroethane	43		U
71-43-2	Benzene	43		U
10061-02-6	trans-1,3-Dichloropropene	43		U
75-25-2	Bromoform	43		U
127-18-4	Tetrachloroethene	43	690	
79-34-5	1,1,2,2-Tetrachloroethane	43		U
108-88-3	Toluene	43		U
108-90-7	Chlorobenzene	43		U
100-41-4	Ethylbenzene	43		U
100-42-5	Styrene	43		U
78-87-5	1,2-Dichloropropane	43		U
74-87-3	Chloromethane	43		U
75-15-0	Carbon disulfide	43		U
67-64-1	Acetone	43		U
108-10-1	4-Methyl-2-pentanone	43		U
591-78-6	2-hexanone	43		U
78-93-3	2-butanone	43		U
156-60-5	trans-1,2-Dichloroethene	43		U
156-59-2	cis-1,2-Dichloroethene	43	170	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP7-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931502

Sample wt/vol: 1.3 (g/mL) G

Lab File ID: GR031502A52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 11

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	43	4	J

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP8-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931503

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031503A52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 12

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	11		U
75-01-4	Vinyl Chloride	11		U
75-00-3	Chloroethane	11		U
75-09-2	Methylene Chloride	11	6	JB
75-35-4	1,1-Dichloroethene	11		U
75-34-3	1,1-Dichloroethane	11		U
67-66-3	Chloroform	11		U
107-06-2	1,2-Dichloroethane	11		U
71-55-6	1,1,1-Trichloroethane	11		U
56-23-5	Carbon Tetrachloride	11		U
75-27-4	Bromodichloromethane	11		U
10061-01-5	cis-1,3-Dichloropropene	11		U
79-01-6	Trichloroethene	11	4	J
124-48-1	Dibromochloromethane	11		U
79-00-5	1,1,2-Trichloroethane	11		U
71-43-2	Benzene	11		U
10061-02-6	trans-1,3-Dichloropropene	11		U
75-25-2	Bromoform	11		U
127-18-4	Tetrachloroethene	11		U
79-34-5	1,1,2,2-Tetrachloroethane	11		U
108-88-3	Toluene	11		U
108-90-7	Chlorobenzene	11		U
100-41-4	Ethylbenzene	11		U
100-42-5	Styrene	11		U
78-87-5	1,2-Dichloropropane	11		U
74-87-3	Chloromethane	11		U
75-15-0	Carbon disulfide	11		U
67-64-1	Acetone	11	14	
108-10-1	4-Methyl-2-pentanone	11		U
591-78-6	2-hexanone	11		U
78-93-3	2-butanone	11		U
156-60-5	trans-1,2-Dichloroethene	11		U
156-59-2	cis-1,2-Dichloroethene	11	5	J

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP8-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931503

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031503A52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 12

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	11		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP9-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931504

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031504A52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 11

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	11		U
75-01-4	Vinyl Chloride	11		U
75-00-3	Chloroethane	11		U
75-09-2	Methylene Chloride	11	7	JB
75-35-4	1,1-Dichloroethene	11		U
75-34-3	1,1-Dichloroethane	11		U
67-66-3	Chloroform	11		U
107-06-2	1,2-Dichloroethane	11		U
71-55-6	1,1,1-Trichloroethane	11		U
56-23-5	Carbon Tetrachloride	11		U
75-27-4	Bromodichloromethane	11		U
10061-01-5	cis-1,3-Dichloropropene	11		U
79-01-6	Trichloroethene	11	2	J
124-48-1	Dibromochloromethane	11		U
79-00-5	1,1,2-Trichloroethane	11		U
71-43-2	Benzene	11		U
10061-02-6	trans-1,3-Dichloropropene	11		U
75-25-2	Bromoform	11		U
127-18-4	Tetrachloroethene	11	2	J
79-34-5	1,1,2,2-Tetrachloroethane	11		U
108-88-3	Toluene	11		U
108-90-7	Chlorobenzene	11		U
100-41-4	Ethylbenzene	11		U
100-42-5	Styrene	11		U
78-87-5	1,2-Dichloropropane	11		U
74-87-3	Chloromethane	11		U
75-15-0	Carbon disulfide	11		U
67-64-1	Acetone	11		U
108-10-1	4-Methyl-2-pentanone	11		U
591-78-6	2-hexanone	11		U
78-93-3	2-butanone	11		U
156-60-5	trans-1,2-Dichloroethene	11		U
156-59-2	cis-1,2-Dichloroethene	11	2	J

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DP9-.5-4.5

Project:

Date Sampled: 03/14/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931504

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031504A52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 11

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	11		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-21S18-20

Project:

Date Sampled: 03/10/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931304

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031304B52.D

Level: (low/med) LOW

Date Received: 03/12/99

% Moisture: not dec. 3

Date Analyzed: 03/15/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	10		U
75-01-4	Vinyl Chloride	10		U
75-00-3	Chloroethane	10		U
75-09-2	Methylene Chloride	10	7	JB
75-35-4	1,1-Dichloroethene	10		U
75-34-3	1,1-Dichloroethane	10		U
67-66-3	Chloroform	10		U
107-06-2	1,2-Dichloroethane	10		U
71-55-6	1,1,1-Trichloroethane	10		U
56-23-5	Carbon Tetrachloride	10		U
75-27-4	Bromodichloromethane	10		U
10061-01-5	cis-1,3-Dichloropropene	10		U
79-01-6	Trichloroethene	10	10	
124-48-1	Dibromochloromethane	10		U
79-00-5	1,1,2-Trichloroethane	10		U
71-43-2	Benzene	10		U
10061-02-6	trans-1,3-Dichloropropene	10		U
75-25-2	Bromoform	10		U
127-18-4	Tetrachloroethene	10	3	J
79-34-5	1,1,2,2-Tetrachloroethane	10		U
108-88-3	Toluene	10		U
108-90-7	Chlorobenzene	10		U
100-41-4	Ethylbenzene	10		U
100-42-5	Styrene	10		U
78-87-5	1,2-Dichloropropane	10		U
74-87-3	Chloromethane	10		U
75-15-0	Carbon disulfide	10		U
67-64-1	Acetone	10		U
108-10-1	4-Methyl-2-pentanone	10		U
591-78-6	2-hexanone	10		U
78-93-3	2-butanone	10		U
156-60-5	trans-1,2-Dichloroethene	10		U
156-59-2	cis-1,2-Dichloroethene	10		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-21S18-20

Project:

Date Sampled: 03/10/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931304

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031304B52.D

Level: (low/med) LOW

Date Received: 03/12/99

% Moisture: not dec. 3

Date Analyzed: 03/15/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	10		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-21S2-4

Project:

Date Sampled: 03/10/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931300

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031300B52.D

Level: (low/med) LOW

Date Received: 03/12/99

% Moisture: not dec. 12

Date Analyzed: 03/15/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	11		U
75-01-4	Vinyl Chloride	11		U
75-00-3	Chloroethane	11		U
75-09-2	Methylene Chloride	11	6	JB
75-35-4	1,1-Dichloroethene	11		U
75-34-3	1,1-Dichloroethane	11		U
67-66-3	Chloroform	11		U
107-06-2	1,2-Dichloroethane	11		U
71-55-6	1,1,1-Trichloroethane	11		U
56-23-5	Carbon Tetrachloride	11		U
75-27-4	Bromodichloromethane	11		U
10061-01-5	cis-1,3-Dichloropropene	11		U
79-01-6	Trichloroethene	11		U
124-48-1	Dibromochloromethane	11		U
79-00-5	1,1,2-Trichloroethane	11		U
71-43-2	Benzene	11		U
10061-02-6	trans-1,3-Dichloropropene	11		U
75-25-2	Bromoform	11		U
127-18-4	Tetrachloroethene	11		U
79-34-5	1,1,2,2-Tetrachloroethane	11		U
108-88-3	Toluene	11		U
108-90-7	Chlorobenzene	11		U
100-41-4	Ethylbenzene	11		U
100-42-5	Styrene	11		U
78-87-5	1,2-Dichloropropane	11		U
74-87-3	Chloromethane	11		U
75-15-0	Carbon disulfide	11		U
67-64-1	Acetone	11		U
108-10-1	4-Methyl-2-pentanone	11		U
591-78-6	2-hexanone	11		U
78-93-3	2-butanone	11		U
156-60-5	trans-1,2-Dichloroethene	11		U
156-59-2	cis-1,2-Dichloroethene	11		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-21S2-4

Project:

Date Sampled: 03/10/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931300

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031300B52.D

Level: (low/med) LOW

Date Received: 03/12/99

% Moisture: not dec. 12

Date Analyzed: 03/15/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	11		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-21S8-10

Project:

Date Sampled: 03/10/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 930303

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031303B52.D

Level: (low/med) LOW

Date Received: 03/12/99

% Moisture: not dec. 5

Date Analyzed: 03/15/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	11		U
75-01-4	Vinyl Chloride	11		U
75-00-3	Chloroethane	11		U
75-09-2	Methylene Chloride	11	6	JB
75-35-4	1,1-Dichloroethene	11		U
75-34-3	1,1-Dichloroethane	11		U
67-66-3	Chloroform	11		U
107-06-2	1,2-Dichloroethane	11		U
71-55-6	1,1,1-Trichloroethane	11		U
56-23-5	Carbon Tetrachloride	11		U
75-27-4	Bromodichloromethane	11		U
10061-01-5	cis-1,3-Dichloropropene	11		U
79-01-6	Trichloroethene	11	8	J
124-48-1	Dibromochloromethane	11		U
79-00-5	1,1,2-Trichloroethane	11		U
71-43-2	Benzene	11		U
10061-02-6	trans-1,3-Dichloropropene	11		U
75-25-2	Bromoform	11		U
127-18-4	Tetrachloroethene	11		U
79-34-5	1,1,2,2-Tetrachloroethane	11		U
108-88-3	Toluene	11		U
108-90-7	Chlorobenzene	11		U
100-41-4	Ethylbenzene	11		U
100-42-5	Styrene	11		U
78-87-5	1,2-Dichloropropane	11		U
74-87-3	Chloromethane	11		U
75-15-0	Carbon disulfide	11		U
67-64-1	Acetone	11		U
108-10-1	4-Methyl-2-pentanone	11		U
591-78-6	2-hexanone	11		U
78-93-3	2-butanone	11		U
156-60-5	trans-1,2-Dichloroethene	11		U
156-59-2	cis-1,2-Dichloroethene	11		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-21S8-10

Project:

Date Sampled: 03/10/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 930303

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031303B52.D

Level: (low/med) LOW

Date Received: 03/12/99

% Moisture: not dec. 5

Date Analyzed: 03/15/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	11		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-22S10-12

Project:

Date Sampled: 03/11/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931306

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GR031306A52.D

Level: (low/med) LOW

Date Received: 03/12/99

% Moisture: not dec. 4

Date Analyzed: 03/23/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	10		U
75-01-4	Vinyl Chloride	10		U
75-00-3	Chloroethane	10		U
75-09-2	Methylene Chloride	10	5	JB
75-35-4	1,1-Dichloroethene	10		U
75-34-3	1,1-Dichloroethane	10		U
67-66-3	Chloroform	10		U
107-06-2	1,2-Dichloroethane	10		U
71-55-6	1,1,1-Trichloroethane	10		U
56-23-5	Carbon Tetrachloride	10		U
75-27-4	Bromodichloromethane	10		U
10061-01-5	cis-1,3-Dichloropropene	10		U
79-01-6	Trichloroethene	10		U
124-48-1	Dibromochloromethane	10		U
79-00-5	1,1,2-Trichloroethane	10		U
71-43-2	Benzene	10		U
10061-02-6	trans-1,3-Dichloropropene	10		U
75-25-2	Bromoform	10		U
127-18-4	Tetrachloroethene	10		U
79-34-5	1,1,2,2-Tetrachloroethane	10		U
108-88-3	Toluene	10		U
108-90-7	Chlorobenzene	10		U
100-41-4	Ethylbenzene	10		U
100-42-5	Styrene	10		U
78-87-5	1,2-Dichloropropane	10		U
74-87-3	Chloromethane	10		U
75-15-0	Carbon disulfide	10		U
67-64-1	Acetone	10	22	
108-10-1	4-Methyl-2-pentanone	10		U
591-78-6	2-hexanone	10		U
78-93-3	2-butanone	10		U
156-60-5	trans-1,2-Dichloroethene	10		U
156-59-2	cis-1,2-Dichloroethene	10		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-22S10-12

Project:

Date Sampled: 03/11/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931306

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GR031306A52.D

Level: (low/med) LOW

Date Received: 03/12/99

% Moisture: not dec. 4

Date Analyzed: 03/23/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	10		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-22S19-21

Project:

Date Sampled: 03/11/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931307

Sample wt/vol: 3.0 (g/mL) G

Lab File ID: G3R31307B52.D

Level: (low/med) LOW

Date Received: 03/12/99

% Moisture: not dec. 19

Date Analyzed: 03/25/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	21		U
75-01-4	Vinyl Chloride	21		U
75-00-3	Chloroethane	21		U
75-09-2	Methylene Chloride	21	20	JB
75-35-4	1,1-Dichloroethene	21		U
75-34-3	1,1-Dichloroethane	21		U
67-66-3	Chloroform	21		U
107-06-2	1,2-Dichloroethane	21		U
71-55-6	1,1,1-Trichloroethane	21		U
56-23-5	Carbon Tetrachloride	21		U
75-27-4	Bromodichloromethane	21		U
10061-01-5	cis-1,3-Dichloropropene	21		U
79-01-6	Trichloroethene	21	2	J
124-48-1	Dibromochloromethane	21		U
79-00-5	1,1,2-Trichloroethane	21		U
71-43-2	Benzene	21		U
10061-02-6	trans-1,3-Dichloropropene	21		U
75-25-2	Bromoform	21		U
127-18-4	Tetrachloroethene	21		U
79-34-5	1,1,2,2-Tetrachloroethane	21		U
108-88-3	Toluene	21	7	J
108-90-7	Chlorobenzene	21		U
100-41-4	Ethylbenzene	21	3	J
100-42-5	Styrene	21		U
78-87-5	1,2-Dichloropropane	21		U
74-87-3	Chloromethane	21		U
75-15-0	Carbon disulfide	21		U
67-64-1	Acetone	21	12	J
108-10-1	4-Methyl-2-pentanone	21		U
591-78-6	2-hexanone	21		U
78-93-3	2-butanone	21		U
156-60-5	trans-1,2-Dichloroethene	21		U
156-59-2	cis-1,2-Dichloroethene	21		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-22S19-21

Project:

Date Sampled: 03/11/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931307

Sample wt/vol: 3.0 (g/mL) G

Lab File ID: G3R31307B52.D

Level: (low/med) LOW

Date Received: 03/12/99

% Moisture: not dec. 19

Date Analyzed: 03/25/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	21	22	

FORM I VOA

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

MW-22S19-21

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL Lab Sample ID: 931307

Sample wt/vol: 3.0 (g/mL) G Lab File ID: G3R31307B52.D

Level: (low/med) LOW Date Received: 03/12/99

% Moisture: not dec. 19 Date Analyzed: 03/25/99

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 10

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 111-84-2	NONANE	19.01	170	NJ
2.	SUBSTITUTED ALKANE	19.94	170	J
3.	UNKNOWN ALKANE	20.39	730	J
4.	SUBSTITUTED ALKANE	20.67	610	J
5.	SUBSTITUTED ALKANE	20.97	600	J
6.	SUBSTITUTED ALKANE	21.12	370	J
7.	SUBSTITUTED ALKANE	21.23	780	J
8.	UNKNOWN HYDROCARBON	21.52	230	J
9.	UNKNOWN ALKANE	21.57	840	J
10.	UNKNOWN HYDROCARBON	21.79	250	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-22S5-7

Project:

Date Sampled: 03/11/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931305

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GR031305A52.D

Level: (low/med) LOW

Date Received: 03/12/99

% Moisture: not dec. 9

Date Analyzed: 03/23/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	11		U
75-01-4	Vinyl Chloride	11		U
75-00-3	Chloroethane	11		U
75-09-2	Methylene Chloride	11	5	JB
75-35-4	1,1-Dichloroethene	11		U
75-34-3	1,1-Dichloroethane	11		U
67-66-3	Chloroform	11		U
107-06-2	1,2-Dichloroethane	11		U
71-55-6	1,1,1-Trichloroethane	11		U
56-23-5	Carbon Tetrachloride	11		U
75-27-4	Bromodichloromethane	11		U
10061-01-5	cis-1,3-Dichloropropene	11		U
79-01-6	Trichloroethene	11	19	
124-48-1	Dibromochloromethane	11		U
79-00-5	1,1,2-Trichloroethane	11		U
71-43-2	Benzene	11		U
10061-02-6	trans-1,3-Dichloropropene	11		U
75-25-2	Bromoform	11		U
127-18-4	Tetrachloroethene	11		U
79-34-5	1,1,2,2-Tetrachloroethane	11		U
108-88-3	Toluene	11		U
108-90-7	Chlorobenzene	11		U
100-41-4	Ethylbenzene	11		U
100-42-5	Styrene	11		U
78-87-5	1,2-Dichloropropane	11		U
74-87-3	Chloromethane	11		U
75-15-0	Carbon disulfide	11		U
67-64-1	Acetone	11		U
108-10-1	4-Methyl-2-pentanone	11		U
591-78-6	2-hexanone	11		U
78-93-3	2-butanone	11		U
156-60-5	trans-1,2-Dichloroethene	11		U
156-59-2	cis-1,2-Dichloroethene	11		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-22S5-7

Project:

Date Sampled: 03/11/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931305

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GR031305A52.D

Level: (low/med) LOW

Date Received: 03/12/99

% Moisture: not dec. 9

Date Analyzed: 03/23/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	11		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-23S-20-22

Project:

Date Sampled: 03/12/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931492

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031492B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 9

Date Analyzed: 03/18/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	11		U
75-01-4	Vinyl Chloride	11		U
75-00-3	Chloroethane	11		U
75-09-2	Methylene Chloride	11	5	JB
75-35-4	1,1-Dichloroethene	11		U
75-34-3	1,1-Dichloroethane	11		U
67-66-3	Chloroform	11		U
107-06-2	1,2-Dichloroethane	11		U
71-55-6	1,1,1-Trichloroethane	11		U
56-23-5	Carbon Tetrachloride	11		U
75-27-4	Bromodichloromethane	11		U
10061-01-5	cis-1,3-Dichloropropene	11		U
79-01-6	Trichloroethene	11	12	
124-48-1	Dibromochloromethane	11		U
79-00-5	1,1,2-Trichloroethane	11		U
71-43-2	Benzene	11		U
10061-02-6	trans-1,3-Dichloropropene	11		U
75-25-2	Bromoform	11		U
127-18-4	Tetrachloroethene	11		U
79-34-5	1,1,2,2-Tetrachloroethane	11		U
108-88-3	Toluene	11		U
108-90-7	Chlorobenzene	11		U
100-41-4	Ethylbenzene	11		U
100-42-5	Styrene	11		U
78-87-5	1,2-Dichloropropane	11		U
74-87-3	Chloromethane	11		U
75-15-0	Carbon disulfide	11		U
67-64-1	Acetone	11		U
108-10-1	4-Methyl-2-pentanone	11		U
591-78-6	2-hexanone	11		U
78-93-3	2-butanone	11		U
156-60-5	trans-1,2-Dichloroethene	11		U
156-59-2	cis-1,2-Dichloroethene	11	13	

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-23S-20-22

Project:

Date Sampled: 03/12/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931492

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031492B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 9

Date Analyzed: 03/18/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	11		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TB-21-15-17

Project:

Date Sampled: 03/13/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931495

Sample wt/vol: 1.5 (g/mL) G

Lab File ID: G2R31495A52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 4

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	35		U
75-01-4	Vinyl Chloride	35		U
75-00-3	Chloroethane	35		U
75-09-2	Methylene Chloride	35	17	JB
75-35-4	1,1-Dichloroethene	35		U
75-34-3	1,1-Dichloroethane	35		U
67-66-3	Chloroform	35		U
107-06-2	1,2-Dichloroethane	35		U
71-55-6	1,1,1-Trichloroethane	35		U
56-23-5	Carbon Tetrachloride	35		U
75-27-4	Bromodichloromethane	35		U
10061-01-5	cis-1,3-Dichloropropene	35		U
79-01-6	Trichloroethene	35	30	J
124-48-1	Dibromochloromethane	35		U
79-00-5	1,1,2-Trichloroethane	35		U
71-43-2	Benzene	35		U
10061-02-6	trans-1,3-Dichloropropene	35		U
75-25-2	Bromoform	35		U
127-18-4	Tetrachloroethene	35	650	
79-34-5	1,1,2,2-Tetrachloroethane	35		U
108-88-3	Toluene	35		U
108-90-7	Chlorobenzene	35		U
100-41-4	Ethylbenzene	35		U
100-42-5	Styrene	35		U
78-87-5	1,2-Dichloropropane	35		U
74-87-3	Chloromethane	35		U
75-15-0	Carbon disulfide	35		U
67-64-1	Acetone	35		U
108-10-1	4-Methyl-2-pentanone	35		U
591-78-6	2-hexanone	35		U
78-93-3	2-butanone	35		U
156-60-5	trans-1,2-Dichloroethene	35		U
156-59-2	cis-1,2-Dichloroethene	35		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TB-21-15-17

Project: Date Sampled: 03/13/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL Lab Sample ID: 931495

Sample wt/vol: 1.5 (g/mL) G Lab File ID: G2R31495A52.D

Level: (low/med) LOW Date Received: 03/16/99

% Moisture: not dec. 4 Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	35		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TB-21-3-5

Project:

Date Sampled: 03/13/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931493

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031493B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 15

Date Analyzed: 03/19/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	12		U
75-01-4	Vinyl Chloride	12		U
75-00-3	Chloroethane	12		U
75-09-2	Methylene Chloride	12	6	JB
75-35-4	1,1-Dichloroethene	12		U
75-34-3	1,1-Dichloroethane	12		U
67-66-3	Chloroform	12		U
107-06-2	1,2-Dichloroethane	12		U
71-55-6	1,1,1-Trichloroethane	12		U
56-23-5	Carbon Tetrachloride	12		U
75-27-4	Bromodichloromethane	12		U
10061-01-5	cis-1,3-Dichloropropene	12		U
79-01-6	Trichloroethene	12	1	J
124-48-1	Dibromochloromethane	12		U
79-00-5	1,1,2-Trichloroethane	12		U
71-43-2	Benzene	12		U
10061-02-6	trans-1,3-Dichloropropene	12		U
75-25-2	Bromoform	12		U
127-18-4	Tetrachloroethene	12	9	J
79-34-5	1,1,2,2-Tetrachloroethane	12		U
108-88-3	Toluene	12		U
108-90-7	Chlorobenzene	12		U
100-41-4	Ethylbenzene	12		U
100-42-5	Styrene	12		U
78-87-5	1,2-Dichloropropane	12		U
74-87-3	Chloromethane	12		U
75-15-0	Carbon disulfide	12		U
67-64-1	Acetone	12		U
108-10-1	4-Methyl-2-pentanone	12		U
591-78-6	2-hexanone	12		U
78-93-3	2-butanone	12		U
156-60-5	trans-1,2-Dichloroethene	12		U
156-59-2	cis-1,2-Dichloroethene	12		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TB-21-3-5

Project:

Date Sampled: 03/13/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931493

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031493B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 15

Date Analyzed: 03/19/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	12		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TB-21-9-11

Project:

Date Sampled: 03/13/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931494

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031494B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 4

Date Analyzed: 03/19/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	10		U
75-01-4	Vinyl Chloride	10		U
75-00-3	Chloroethane	10		U
75-09-2	Methylene Chloride	10	5	JB
75-35-4	1,1-Dichloroethene	10		U
75-34-3	1,1-Dichloroethane	10		U
67-66-3	Chloroform	10		U
107-06-2	1,2-Dichloroethane	10		U
71-55-6	1,1,1-Trichloroethane	10		U
56-23-5	Carbon Tetrachloride	10		U
75-27-4	Bromodichloromethane	10		U
10061-01-5	cis-1,3-Dichloropropene	10		U
79-01-6	Trichloroethene	10	4	J
124-48-1	Dibromochloromethane	10		U
79-00-5	1,1,2-Trichloroethane	10		U
71-43-2	Benzene	10		U
10061-02-6	trans-1,3-Dichloropropene	10		U
75-25-2	Bromoform	10		U
127-18-4	Tetrachloroethene	10	63	
79-34-5	1,1,2,2-Tetrachloroethane	10		U
108-88-3	Toluene	10		U
108-90-7	Chlorobenzene	10		U
100-41-4	Ethylbenzene	10		U
100-42-5	Styrene	10		U
78-87-5	1,2-Dichloropropane	10		U
74-87-3	Chloromethane	10		U
75-15-0	Carbon disulfide	10		U
67-64-1	Acetone	10		U
108-10-1	4-Methyl-2-pentanone	10		U
591-78-6	2-hexanone	10		U
78-93-3	2-butanone	10		U
156-60-5	trans-1,2-Dichloroethene	10		U
156-59-2	cis-1,2-Dichloroethene	10		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TB-21-9-11

Project:

Date Sampled: 03/13/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931494

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031494B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 4

Date Analyzed: 03/19/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	10		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TB-21-9-11MS

Project:

Date Sampled: 03/13/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931301

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: G2R31301B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 4

Date Analyzed: 03/26/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	10	57	
75-01-4	Vinyl Chloride	10	53	
75-00-3	Chloroethane	10	50	
75-09-2	Methylene Chloride	10	53	B
75-35-4	1,1-Dichloroethene	10	49	
75-34-3	1,1-Dichloroethane	10	53	
67-66-3	Chloroform	10	51	
107-06-2	1,2-Dichloroethane	10	51	
71-55-6	1,1,1-Trichloroethane	10	49	
56-23-5	Carbon Tetrachloride	10	46	
75-27-4	Bromodichloromethane	10	52	
10061-01-5	cis-1,3-Dichloropropene	10	53	
79-01-6	Trichloroethene	10	56	
124-48-1	Dibromochloromethane	10	49	
79-00-5	1,1,2-Trichloroethane	10	48	
71-43-2	Benzene	10	50	
10061-02-6	trans-1,3-Dichloropropene	10	52	
75-25-2	Bromoform	10	47	
127-18-4	Tetrachloroethene	10	150	
79-34-5	1,1,2,2-Tetrachloroethane	10	45	
108-88-3	Toluene	10	48	
108-90-7	Chlorobenzene	10	44	
100-41-4	Ethylbenzene	10	45	
100-42-5	Styrene	10	45	
78-87-5	1,2-Dichloropropane	10	52	
74-87-3	Chloromethane	10	53	
75-15-0	Carbon disulfide	10	49	
67-64-1	Acetone	10	50	
108-10-1	4-Methyl-2-pentanone	10	55	
591-78-6	2-hexanone	10	55	
78-93-3	2-butanone	10	58	
156-60-5	trans-1,2-Dichloroethene	10	53	
156-59-2	cis-1,2-Dichloroethene	10	52	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TB-21-9-11MS

Project:

Date Sampled: 03/13/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931301

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: G2R31301B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 4

Date Analyzed: 03/26/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	10	130	

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TB-21-9-11MS D

Project:

Date Sampled: 03/13/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931302

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: G2R31302B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 4

Date Analyzed: 03/26/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	10	58	
75-01-4	Vinyl Chloride	10	54	
75-00-3	Chloroethane	10	50	
75-09-2	Methylene Chloride	10	54	B
75-35-4	1,1-Dichloroethene	10	50	
75-34-3	1,1-Dichloroethane	10	52	
67-66-3	Chloroform	10	50	
107-06-2	1,2-Dichloroethane	10	49	
71-55-6	1,1,1-Trichloroethane	10	47	
56-23-5	Carbon Tetrachloride	10	45	
75-27-4	Bromodichloromethane	10	49	
10061-01-5	cis-1,3-Dichloropropene	10	50	
79-01-6	Trichloroethene	10	54	
124-48-1	Dibromochloromethane	10	48	
79-00-5	1,1,2-Trichloroethane	10	48	
71-43-2	Benzene	10	49	
10061-02-6	trans-1,3-Dichloropropene	10	49	
75-25-2	Bromoform	10	46	
127-18-4	Tetrachloroethene	10	150	
79-34-5	1,1,2,2-Tetrachloroethane	10	42	
108-88-3	Toluene	10	47	
108-90-7	Chlorobenzene	10	42	
100-41-4	Ethylbenzene	10	45	
100-42-5	Styrene	10	42	
78-87-5	1,2-Dichloropropane	10	51	
74-87-3	Chloromethane	10	51	
75-15-0	Carbon disulfide	10	49	
67-64-1	Acetone	10	48	
108-10-1	4-Methyl-2-pentanone	10	55	
591-78-6	2-hexanone	10	52	
78-93-3	2-butanone	10	60	
156-60-5	trans-1,2-Dichloroethene	10	52	
156-59-2	cis-1,2-Dichloroethene	10	51	

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TB-21-9-11MS D

Project:

Date Sampled: 03/13/99

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931302

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: G2R31302B52.D

Level: (low/med) LOW

Date Received: 03/16/99

% Moisture: not dec. 4

Date Analyzed: 03/26/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	10	130	

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBLKB5

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab File ID: GH031620B52.D Lab Sample ID: 931620

Date Analyzed: 03/18/99 Time Analyzed: 2159

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: F50052

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCS84	931623	GH031623B52.D	2251
02	MW-23S-20-22	931492	GH031492B52.D	2345
03	TB-21-3-5	931493	GH031493B52.D	0018
04	TB-21-9-11	931494	GH031494B52.D	0053
05	DP2-.5-4.5	931497	GH031497B52.D	0240
06	DP4-.5-4.5	931499	GH031499B52.D	0352
07	DP5-1-5	931500	GH031500B52.D	0428
08				
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COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKB5

Project:

Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931620

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031620B52.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 03/18/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	10		U
75-01-4	Vinyl Chloride	10		U
75-00-3	Chloroethane	10		U
75-09-2	Methylene Chloride	10	4	J
75-35-4	1,1-Dichloroethene	10		U
75-34-3	1,1-Dichloroethane	10		U
67-66-3	Chloroform	10		U
107-06-2	1,2-Dichloroethane	10		U
71-55-6	1,1,1-Trichloroethane	10		U
56-23-5	Carbon Tetrachloride	10		U
75-27-4	Bromodichloromethane	10		U
10061-01-5	cis-1,3-Dichloropropene	10		U
79-01-6	Trichloroethene	10		U
124-48-1	Dibromochloromethane	10		U
79-00-5	1,1,2-Trichloroethane	10		U
71-43-2	Benzene	10		U
10061-02-6	trans-1,3-Dichloropropene	10		U
75-25-2	Bromoform	10		U
127-18-4	Tetrachloroethene	10		U
79-34-5	1,1,2,2-Tetrachloroethane	10		U
108-88-3	Toluene	10		U
108-90-7	Chlorobenzene	10		U
100-41-4	Ethylbenzene	10		U
100-42-5	Styrene	10		U
78-87-5	1,2-Dichloropropane	10		U
74-87-3	Chloromethane	10		U
75-15-0	Carbon disulfide	10		U
67-64-1	Acetone	10		U
108-10-1	4-Methyl-2-pentanone	10		U
591-78-6	2-hexanone	10		U
78-93-3	2-butanone	10		U
156-60-5	trans-1,2-Dichloroethene	10		U
156-59-2	cis-1,2-Dichloroethene	10		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKB5

Project: Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL Lab Sample ID: 931620

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH031620B52.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/18/99

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	10		U

FORM I VOA

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBLKB8

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab File ID: GR031625A52.D Lab Sample ID: VBLKB8

Date Analyzed: 03/23/99 Time Analyzed: 1808

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: F50052

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCS86	931628	GH031628A52.D	1855
02	MW-22S5-7	931305	GR031305A52.D	2214
03	MW-22S10-12	931306	GR031306A52.D	2247
04				
05				
06				
07				
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COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKB8

Project:

Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL Lab Sample ID: VBLKB8

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GR031625A52.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/23/99

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	10		U
75-01-4	Vinyl Chloride	10		U
75-00-3	Chloroethane	10		U
75-09-2	Methylene Chloride	10	3	J
75-35-4	1,1-Dichloroethene	10		U
75-34-3	1,1-Dichloroethane	10		U
67-66-3	Chloroform	10		U
107-06-2	1,2-Dichloroethane	10		U
71-55-6	1,1,1-Trichloroethane	10		U
56-23-5	Carbon Tetrachloride	10		U
75-27-4	Bromodichloromethane	10		U
10061-01-5	cis-1,3-Dichloropropene	10		U
79-01-6	Trichloroethene	10		U
124-48-1	Dibromochloromethane	10		U
79-00-5	1,1,2-Trichloroethane	10		U
71-43-2	Benzene	10		U
10061-02-6	trans-1,3-Dichloropropene	10		U
75-25-2	Bromoform	10		U
127-18-4	Tetrachloroethene	10		U
79-34-5	1,1,2,2-Tetrachloroethane	10		U
108-88-3	Toluene	10		U
108-90-7	Chlorobenzene	10		U
100-41-4	Ethylbenzene	10		U
100-42-5	Styrene	10		U
78-87-5	1,2-Dichloropropane	10		U
74-87-3	Chloromethane	10		U
75-15-0	Carbon disulfide	10		U
67-64-1	Acetone	10		U
108-10-1	4-Methyl-2-pentanone	10		U
591-78-6	2-hexanone	10		U
78-93-3	2-butanone	10		U
156-60-5	trans-1,2-Dichloroethene	10		U
156-59-2	cis-1,2-Dichloroethene	10		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKB8

Project:

Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: VBLKB8

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GR031625A52.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 03/23/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	10		U

FORM I VOA

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBLKG1

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab File ID: GH032232A52.D Lab Sample ID: 932232

Date Analyzed: 03/24/99 Time Analyzed: 1003

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: F50052

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCS98	932235	GH032235A52.D	1056
02	DP9-.5-4.5	931504	GH031504A52.D	1200
03	DP8-.5-4.5	931503	GH031503A52.D	1310
04	DP7-.5-4.5	931502	GR031502A52.D	1533
05	TB-21-15-17	931495	G2R31495A52.D	1610
06	DP3-.5-4.5	931498	G2R31498A52.D	1723
07				
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COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKG1

Project:

Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 932232

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH032232A52.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	10		U
75-01-4	Vinyl Chloride	10		U
75-00-3	Chloroethane	10		U
75-09-2	Methylene Chloride	10	6	J
75-35-4	1,1-Dichloroethene	10		U
75-34-3	1,1-Dichloroethane	10		U
67-66-3	Chloroform	10		U
107-06-2	1,2-Dichloroethane	10		U
71-55-6	1,1,1-Trichloroethane	10		U
56-23-5	Carbon Tetrachloride	10		U
75-27-4	Bromodichloromethane	10		U
10061-01-5	cis-1,3-Dichloropropene	10		U
79-01-6	Trichloroethene	10		U
124-48-1	Dibromochloromethane	10		U
79-00-5	1,1,2-Trichloroethane	10		U
71-43-2	Benzene	10		U
10061-02-6	trans-1,3-Dichloropropene	10		U
75-25-2	Bromoform	10		U
127-18-4	Tetrachloroethene	10		U
79-34-5	1,1,2,2-Tetrachloroethane	10		U
108-88-3	Toluene	10		U
108-90-7	Chlorobenzene	10		U
100-41-4	Ethylbenzene	10		U
100-42-5	Styrene	10		U
78-87-5	1,2-Dichloropropane	10		U
74-87-3	Chloromethane	10		U
75-15-0	Carbon disulfide	10		U
67-64-1	Acetone	10		U
108-10-1	4-Methyl-2-pentanone	10		U
591-78-6	2-hexanone	10		U
78-93-3	2-butanone	10		U
156-60-5	trans-1,2-Dichloroethene	10		U
156-59-2	cis-1,2-Dichloroethene	10		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKG1

Project: Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL Lab Sample ID: 932232

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH032232A52.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	10		U

FORM I VOA

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBLKH4

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab File ID: CR032437A55.D Lab Sample ID: 932437

Date Analyzed: 03/24/99 Time Analyzed: 2051

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50055

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCS07	932439	CN032439A55.D	2137
02	DP6-1-6	931501	C2R31501A55.D	2227
03	DP10-.5-4.5	931505	C3R31505A55.D	2356
04				
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COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKH4

Project:

Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 932437

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: CR032437A55.D

Level: (low/med) MED

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000(uL)

Soil Aliquot Volume: 100 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	500		U
75-01-4	Vinyl Chloride	500		U
75-00-3	Chloroethane	500		U
75-09-2	Methylene Chloride	500	280	J
75-35-4	1,1-Dichloroethene	500		U
75-34-3	1,1-Dichloroethane	500		U
67-66-3	Chloroform	500		U
107-06-2	1,2-Dichloroethane	500		U
71-55-6	1,1,1-Trichloroethane	500		U
56-23-5	Carbon Tetrachloride	500		U
75-27-4	Bromodichloromethane	500		U
10061-01-5	cis-1,3-Dichloropropene	500		U
79-01-6	Trichloroethene	500		U
124-48-1	Dibromochloromethane	500		U
79-00-5	1,1,2-Trichloroethane	500		U
71-43-2	Benzene	500		U
10061-02-6	trans-1,3-Dichloropropene	500		U
75-25-2	Bromoform	500		U
127-18-4	Tetrachloroethene	500		U
79-34-5	1,1,2,2-Tetrachloroethane	500		U
108-88-3	Toluene	500		U
108-90-7	Chlorobenzene	500		U
100-41-4	Ethylbenzene	500		U
100-42-5	Styrene	500		U
78-87-5	1,2-Dichloropropane	500		U
74-87-3	Chloromethane	500		U
75-15-0	Carbon disulfide	500		U
67-64-1	Acetone	500		U
108-10-1	4-Methyl-2-pentanone	500		U
591-78-6	2-hexanone	500		U
78-93-3	2-butanone	500		U
156-60-5	trans-1,2-Dichloroethene	500		U
156-59-2	cis-1,2-Dichloroethene	500		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKH4

Project: Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL Lab Sample ID: 932437

Sample wt/vol: 5.0 (g/mL) G Lab File ID: CR032437A55.D

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/24/99

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: 100 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	500		U

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBLKH6

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab File ID: GH032454B52.D Lab Sample ID: 932454

Date Analyzed: 03/25/99 Time Analyzed: 2229

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: F50052

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MW-22S19-21	931307	G3R31307B52.D	2322
02	VLCS09	932457	GH032457B52.D	0004
03	DP1-.5-4.5	931496	G3R31496B52.D	0046
04	TB-21-9-11MS	931301	G2R31301B52.D	0128
05	TB-21-9-11MS	931302	G2R31302B52.D	0211
06				
07				
08				
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COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKH6

Project:

Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 932454

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH032454B52.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 03/25/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	10		U
75-01-4	Vinyl Chloride	10		U
75-00-3	Chloroethane	10		U
75-09-2	Methylene Chloride	10	6	J
75-35-4	1,1-Dichloroethene	10		U
75-34-3	1,1-Dichloroethane	10		U
67-66-3	Chloroform	10		U
107-06-2	1,2-Dichloroethane	10		U
71-55-6	1,1,1-Trichloroethane	10		U
56-23-5	Carbon Tetrachloride	10		U
75-27-4	Bromodichloromethane	10		U
10061-01-5	cis-1,3-Dichloropropene	10		U
79-01-6	Trichloroethene	10		U
124-48-1	Dibromochloromethane	10		U
79-00-5	1,1,2-Trichloroethane	10		U
71-43-2	Benzene	10		U
10061-02-6	trans-1,3-Dichloropropene	10		U
75-25-2	Bromoform	10		U
127-18-4	Tetrachloroethene	10		U
79-34-5	1,1,2,2-Tetrachloroethane	10		U
108-88-3	Toluene	10		U
108-90-7	Chlorobenzene	10		U
100-41-4	Ethylbenzene	10		U
100-42-5	Styrene	10		U
78-87-5	1,2-Dichloropropane	10		U
74-87-3	Chloromethane	10		U
75-15-0	Carbon disulfide	10		U
67-64-1	Acetone	10		U
108-10-1	4-Methyl-2-pentanone	10		U
591-78-6	2-hexanone	10		U
78-93-3	2-butanone	10		U
156-60-5	trans-1,2-Dichloroethene	10		U
156-59-2	cis-1,2-Dichloroethene	10		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKH6

Project:

Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 932454

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH032454B52.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 03/25/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	10		U

FORM I VOA

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBLKJ5

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab File ID: CN032672A55.D Lab Sample ID: 932672

Date Analyzed: 03/26/99 Time Analyzed: 1015

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50055

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	DP10-.5-4.5M	931301	C3R31301A55.D	1150
02	DP10-.5-4.5M	931302	C3R31302A55.D	1223
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COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKJ5

Project:

Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL Lab Sample ID: 932672

Sample wt/vol: 5.0 (g/mL) G Lab File ID: CN032672A55.D

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: 100 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	500		U
75-01-4	Vinyl Chloride	500		U
75-00-3	Chloroethane	500		U
75-09-2	Methylene Chloride	500	90	J
75-35-4	1,1-Dichloroethene	500		U
75-34-3	1,1-Dichloroethane	500		U
67-66-3	Chloroform	500		U
107-06-2	1,2-Dichloroethane	500		U
71-55-6	1,1,1-Trichloroethane	500		U
56-23-5	Carbon Tetrachloride	500		U
75-27-4	Bromodichloromethane	500		U
10061-01-5	cis-1,3-Dichloropropene	500		U
79-01-6	Trichloroethene	500		U
124-48-1	Dibromochloromethane	500		U
79-00-5	1,1,2-Trichloroethane	500		U
71-43-2	Benzene	500		U
10061-02-6	trans-1,3-Dichloropropene	500		U
75-25-2	Bromoform	500		U
127-18-4	Tetrachloroethene	500		U
79-34-5	1,1,2,2-Tetrachloroethane	500		U
108-88-3	Toluene	500		U
108-90-7	Chlorobenzene	500		U
100-41-4	Ethylbenzene	500		U
100-42-5	Styrene	500		U
78-87-5	1,2-Dichloropropane	500		U
74-87-3	Chloromethane	500		U
75-15-0	Carbon disulfide	500		U
67-64-1	Acetone	500		U
108-10-1	4-Methyl-2-pentanone	500		U
591-78-6	2-hexanone	500		U
78-93-3	2-butanone	500		U
156-60-5	trans-1,2-Dichloroethene	500		U
156-59-2	cis-1,2-Dichloroethene	500		U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKJ5

Project: Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL Lab Sample ID: 932672

Sample wt/vol: 5.0 (g/mL) G Lab File ID: CN032672A55.D

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: 100 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	500		U

FORM I VOA

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBLKY3

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab File ID: GH031248A52.D Lab Sample ID: 931248

Date Analyzed: 03/15/99 Time Analyzed: 1331

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: F50052

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCS68	931252	GH031252A52.D	1537
02	MW-21S2-4	931300	GH031300B52.D	2050
03	MW-21S8-10	930303	GH031303B52.D	2134
04	MW-21S18-20	931304	GH031304B52.D	2305
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COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKY3

Project:

Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL

Lab Sample ID: 931248

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: GH031248A52.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 03/15/99

GC Column:DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____(uL)

Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
74-83-9	Bromomethane	10		U
75-01-4	Vinyl Chloride	10		U
75-00-3	Chloroethane	10		U
75-09-2	Methylene Chloride	10	4	J
75-35-4	1,1-Dichloroethene	10		U
75-34-3	1,1-Dichloroethane	10		U
67-66-3	Chloroform	10		U
107-06-2	1,2-Dichloroethane	10		U
71-55-6	1,1,1-Trichloroethane	10		U
56-23-5	Carbon Tetrachloride	10		U
75-27-4	Bromodichloromethane	10		U
10061-01-5	cis-1,3-Dichloropropene	10		U
79-01-6	Trichloroethene	10		U
124-48-1	Dibromochloromethane	10		U
79-00-5	1,1,2-Trichloroethane	10		U
71-43-2	Benzene	10		U
10061-02-6	trans-1,3-Dichloropropene	10		U
75-25-2	Bromoform	10		U
127-18-4	Tetrachloroethene	10		U
79-34-5	1,1,2,2-Tetrachloroethane	10		U
108-88-3	Toluene	10		U
108-90-7	Chlorobenzene	10		U
100-41-4	Ethylbenzene	10		U
100-42-5	Styrene	10		U
78-87-5	1,2-Dichloropropane	10		U
74-87-3	Chloromethane	10		U
75-15-0	Carbon disulfide	10		U
67-64-1	Acetone	10		U
108-10-1	4-Methyl-2-pentanone	10		U
591-78-6	2-hexanone	10		U
78-93-3	2-butanone	10		U
156-60-5	trans-1,2-Dichloroethene	10		U
156-59-2	cis-1,2-Dichloroethene	10		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLKY3

Project: Date Sampled: _____

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix: (soil/water) SOIL Lab Sample ID: 931248

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH031248A52.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/15/99

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CONCENTRATION UNITS: UG/KG

CAS NO.	COMPOUND	DL	CONC	Q
1330-20-7	Xylene (total)	10		U

FORM I VOA

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Level:(low/med) LOW

	SAMPLE NO.	SMC1 (DCE) #	SMC2 (DBF) #	SMC3 (TOL) #	OTHER (BFB)	TOT OUT
01	DP1-.5-4.5	88	82	72	68	0
02	DP2-.5-4.5	113	116	103	113	0
03	DP3-.5-4.5	89	90	95	104	0
04	DP4-.5-4.5	112	113	103	107	0
05	DP5-1-5	113	114	101	112	0
06	DP7-.5-4.5	90	93	98	113	0
07	DP8-.5-4.5	94	93	95	120	0
08	DP9-.5-4.5	99	94	97	130	0
09	MW-21S18-20	121	133	97	106	0
10	MW-21S2-4	129	137	96	108	0
11	MW-21S8-10	123	135	95	103	0
12	MW-22S10-12	102	102	93	114	0
13	MW-22S19-21	107	98	78	97	0
14	MW-22S5-7	97	100	94	112	0
15	MW-23S-20-22	110	108	100	116	0
16	TB-21-15-17	89	89	98	112	0
17	TB-21-3-5	109	111	100	114	0
18	TB-21-9-11	115	114	101	108	0
19	TB-21-9-11MS	94	91	93	87	0
20	TB-21-9-11MS	93	91	95	82	0
21	VBLKB5	107	108	102	115	0
22	VBLKB8	88	92	90	109	0
23	VBLKG1	96	94	99	126	0
24	VBLKH6	114	111	117	121	0
25	VBLKY3	121	130	95	100	0
26	VLCS09	124	113	119	108	0
27	VLCS68	122	136	100	104	0
28	VLCS84	106	108	105	115	0
29	VLCS86	93	92	94	113	0
30	VLCS98	98	93	100	122	0

		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(70-139)
SMC2 (DBF)	= Dibromofluoromethane	(71-141)
SMC3 (TOL)	= Toluene-d8	(72-123)
OTHER (BFB)	= Bromofluorobenzene	(65-131)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Level:(low/med) MED

	SAMPLE NO.	SMC1 (DCE)#	SMC2 (DBF)#	SMC3 (TOL)#	OTHER (BFB)	TOT OUT
01	DP10-.5-4.5	82	87	82	84	0
02	DP10-.5-4.5M	104	101	91	92	0
03	DP10-.5-4.5M	100	98	90	89	0
04	DP6-1-6	82	86	79	80	0
05	VBLKH4	89	92	84	86	0
06	VBLKJ5	100	99	89	87	0
07	VLCS07	97	100	92	91	0
08	VLCS17	100	97	89	88	0
09						
10						
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24						
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28						
29						
30						

			QC LIMITS
SMC1	(DCE)	= 1,2-Dichloroethane-d4	(56-134)
SMC2	(DBF)	= Dibromofluoromethane	(60-130)
SMC3	(TOL)	= Toluene-d8	(65-143)
OTHER	(BFB)	= Bromofluorobenzene	(65-141)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix Spike - Sample No.: DP10-.5-4.5 Level:(low/med) MED

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	2874	0.000	3198	111	59-172
Trichloroethene	2874	65650	28880	-99*	62-137
Benzene	2874	0.000	3027	105	66-142
Toluene	2874	0.000	2782	97	59-139
Chlorobenzene	2874	0.000	2624	91	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	2874	930.5	32*	110*	22	59-172
Trichloroethene	2874	27880	-99*	-2	24	62-137
Benzene	2874	3057	106	1	21	66-142
Toluene	2874	2733	95	2	21	59-139
Chlorobenzene	2874	2739	95	4	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 5 outside limits
Spike Recovery: 3 out of 10 outside limits

COMMENTS:

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix Spike - Sample No.: TB-21-9-11 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Bromomethane	52.08	0.000	57.30	110	50-150
Vinyl Chloride	52.08	0.000	53.48	103	50-150
Chloroethane	52.08	0.000	50.36	97	50-150
Methylene Chloride	52.08	4.97	53.42	93	50-150
1,1-Dichloroethene	52.08	0.000	48.72	94	50-150
1,1-Dichloroethane	52.08	0.000	53.40	102	50-150
Chloroform	52.08	0.000	51.14	98	50-150
1,2-Dichloroethane	52.08	0.000	51.48	99	50-150
1,1,1-Trichloroethane	52.08	0.000	49.40	95	50-150
Carbon Tetrachloride	52.08	0.000	46.41	89	50-150
Bromodichloromethane	52.08	0.000	51.63	99	50-150
cis-1,3-Dichloropropene	52.08	0.000	52.61	101	50-150
Trichloroethene	52.08	4.22	56.16	100	50-150
Dibromochloromethane	52.08	0.000	48.78	94	50-150
1,1,2-Trichloroethane	52.08	0.000	47.93	92	50-150
Benzene	52.08	0.000	50.43	97	50-150
trans-1,3-Dichloroprope	52.08	0.000	51.50	99	50-150
Bromoform	52.08	0.000	47.34	91	50-150
Tetrachloroethene	52.08	63.32	147.0	161*	50-150
1,1,2,2-Tetrachloroetha	52.08	0.000	44.70	86	50-150
Toluene	52.08	0.000	48.09	92	50-150
Chlorobenzene	52.08	0.000	43.62	84	50-150
Ethylbenzene	52.08	0.000	45.05	86	50-150
Styrene	52.08	0.000	44.69	86	50-150
1,2-Dichloropropane	52.08	0.000	52.39	100	50-150
Chloromethane	52.08	0.000	52.59	101	50-150
Carbon disulfide	52.08	0.000	48.57	93	50-150
Acetone	52.08	0.000	50.13	96	50-150
4-Methyl-2-pentanone	52.08	0.000	55.09	106	50-150
2-hexanone	52.08	0.000	54.66	105	50-150

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix Spike - Sample No.: TB-21-9-11 Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
2-butanone	52.08	0.000	57.91	111	50-150
trans-1,2-Dichloroethen	52.08	0.000	53.33	102	50-150
cis-1,2-Dichloroethene	52.08	0.000	51.68	99	50-150
Xylene (total)	156.2	0.000	134.0	86	50-150

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix Spike - Sample No.: TB-21-9-11 Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Bromomethane	52.08	57.50	110	0	25	50-150
Vinyl Chloride	52.08	53.60	103	0	25	50-150
Chloroethane	52.08	49.86	96	1	25	50-150
Methylene Chloride	52.08	54.16	94	1	25	50-150
1,1-Dichloroethene	52.08	49.81	96	2	25	50-150
1,1-Dichloroethane	52.08	51.76	99	3	25	50-150
Chloroform	52.08	49.53	95	3	25	50-150
1,2-Dichloroethane	52.08	48.96	94	5	25	50-150
1,1,1-Trichloroethane	52.08	47.33	91	4	25	50-150
Carbon Tetrachloride	52.08	44.90	86	3	25	50-150
Bromodichloromethane	52.08	48.98	94	5	25	50-150
cis-1,3-Dichloropropene	52.08	50.33	97	4	25	50-150
Trichloroethene	52.08	53.76	95	5	25	50-150
Dibromochloromethane	52.08	47.84	92	2	25	50-150
1,1,2-Trichloroethane	52.08	47.87	92	0	25	50-150
Benzene	52.08	48.78	94	3	25	50-150
trans-1,3-Dichloroprope	52.08	49.20	94	5	25	50-150
Bromoform	52.08	46.00	88	3	25	50-150
Tetrachloroethene	52.08	152.5	171*	6	25	50-150
1,1,2,2-Tetrachloroetha	52.08	42.49	82	5	25	50-150
Toluene	52.08	47.23	91	1	25	50-150
Chlorobenzene	52.08	42.40	81	4	25	50-150
Ethylbenzene	52.08	44.69	86	0	25	50-150
Styrene	52.08	41.98	81	6	25	50-150
1,2-Dichloropropane	52.08	51.28	98	2	25	50-150
Chloromethane	52.08	51.31	98	3	25	50-150
Carbon disulfide	52.08	48.73	94	1	25	50-150
Acetone	52.08	47.84	92	4	25	50-150
4-Methyl-2-pentanone	52.08	54.78	105	1	25	50-150
2-hexanone	52.08	52.23	100	5	25	50-150

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Matrix Spike - Sample No.: TB-21-9-11 Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
2-butanone	52.08	60.32	116	4	25	50-150
trans-1,2-Dichloroethen	52.08	52.10	100	2	25	50-150
cis-1,2-Dichloroethene	52.08	50.51	97	2	25	50-150
Xylene (total)	156.2	130.7	84	2	25	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 34 outside limits
Spike Recovery: 2 out of 68 outside limits

COMMENTS: _____

3B

SOIL VOLATILE LAB CONTROL SAMPLE RECOVERY

CLIENT SAMPLE NO.

VLCS07

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab Sample ID: 932439 LCS Lot No.: ME41

Lab File ID: CN032439A55.D Date Analyzed: 03/24/99

Purge Volume: 5.0 (mL) Dilution Factor: 1.0

LCS Aliquot: 500.0 (uL)

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	%REC #	QC LIMITS
Benzene	2500	2448	98	66-142
Trichloroethene	2500	2406	96	62-137
Chlorobenzene	2500	2227	89	60-133
Toluene	2500	2389	96	59-139
1,1-Dichloroethene	2500	2592	104	59-172

Column to be used to flag LCS recovery with an asterisk.
* Values outside of QC limits.

LCS Recovery: 0 outside limits out of 5 total.

COMMENTS:

3B

SOIL VOLATILE LAB CONTROL SAMPLE RECOVERY

CLIENT SAMPLE NO.

VLCS09

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab Sample ID: 932457 LCS Lot No.: ME41

Lab File ID: GH032457B52.D Date Analyzed: 03/26/99

Purge Volume: 5.0 (mL) Dilution Factor: 1.0

LCS Aliquot: 2.5 (uL)

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	%REC #	QC LIMITS
1,1,1-Trichloroethane	50.00	60.73	121	50-150
1,1,2-Trichloroethane	50.00	61.36	123	50-150
1,2-Dichloroethane	50.00	60.65	121	50-150
2-butanone	50.00	73.74	147	50-150
2-hexanone	50.00	73.00	146	50-150
4-Methyl-2-pentanone	50.00	73.71	147	50-150
Acetone	50.00	60.52	121	50-150
Benzene	50.00	57.67	115	50-150
Bromodichloromethane	50.00	60.70	121	50-150
Bromoform	50.00	59.13	118	50-150
Bromomethane	50.00	58.33	117	50-150
Carbon Tetrachloride	50.00	58.60	117	50-150
Carbon disulfide	50.00	56.95	114	50-150
Chloroethane	50.00	55.77	112	50-150
Dibromochloromethane	50.00	58.09	116	50-150
Methylene Chloride	50.00	56.48	113	50-150
Styrene	50.00	56.82	114	50-150
Tetrachloroethene	50.00	52.92	106	50-150
Trichloroethene	50.00	67.78	136	50-150
cis-1,2-Dichloroethene	50.00	58.64	117	50-150
cis-1,3-Dichloropropene	50.00	62.42	125	50-150
trans-1,2-Dichloroethene	50.00	60.94	122	50-150
trans-1,3-Dichloropropene	50.00	60.73	121	50-150
Xylene (total)	150.0	171.7	114	50-150
1,1,2,2-Tetrachloroethane	50.00	71.21	142	50-150
1,1-Dichloroethane	50.00	61.63	123	50-150
1,1-Dichloroethene	50.00	57.20	114	50-150
1,2-Dichloropropane	50.00	62.28	124	50-150
Chlorobenzene	50.00	55.24	110	50-150
Chloroform	50.00	59.67	119	50-150

Column to be used to flag LCS recovery with an asterisk.
* Values outside of QC limits.

3B

SOIL VOLATILE LAB CONTROL SAMPLE RECOVERY

CLIENT SAMPLE NO.

VLCS09

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab Sample ID: 932457 LCS Lot No.: ME41

Lab File ID: GH032457B52.D Date Analyzed: 03/26/99

Purge Volume: 0.0 (mL) Dilution Factor: 1.0

LCS Aliquot: 2.5 (uL)

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	%REC #	QC LIMITS
Chloromethane	50.00	57.36	115	50-150
Ethylbenzene	50.00	56.10	112	50-150
Toluene	50.00	59.14	118	50-150
Vinyl Chloride	50.00	59.16	118	50-150

Column to be used to flag LCS recovery with an asterisk.
* Values outside of QC limits.

LCS Recovery: 0 outside limits out of 34 total.

COMMENTS:

3B

SOIL VOLATILE LAB CONTROL SAMPLE RECOVERY

CLIENT SAMPLE NO.

VLCS17

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab Sample ID: 932675 LCS Lot No.: ME41

Lab File ID: CN032675A55.D Date Analyzed: 03/26/99

Purge Volume: 5.0 (mL) Dilution Factor: 1.0

LCS Aliquot: 500.0 (uL)

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	%REC #	QC LIMITS
Benzene	2500	2312	92	66-142
Trichloroethene	2500	2146	86	62-137
Chlorobenzene	2500	1907	76	60-133
Toluene	2500	2161	86	59-139
1,1-Dichloroethene	2500	2760	110	59-172

Column to be used to flag LCS recovery with an asterisk.
* Values outside of QC limits.

LCS Recovery: 0 outside limits out of 5 total.

COMMENTS:

FORM III

3B

SOIL VOLATILE LAB CONTROL SAMPLE RECOVERY

CLIENT SAMPLE NO.

VLCS68

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab Sample ID: 931252 LCS Lot No.: ME39

Lab File ID: GH031252A52.D Date Analyzed: 03/15/99

Purge Volume: 5.0 (mL) Dilution Factor: 1.0

LCS Aliquot: 2.5 (uL)

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	%REC #	QC LIMITS
1,1,1-Trichloroethane	50.00	64.60	129	50-150
1,1,2-Trichloroethane	50.00	51.61	103	50-150
1,2-Dichloroethane	50.00	62.02	124	50-150
2-butanone	50.00	65.02	130	50-150
2-hexanone	50.00	49.67	99	50-150
4-Methyl-2-pentanone	50.00	47.63	95	50-150
Acetone	50.00	54.77	110	50-150
Benzene	50.00	57.87	116	50-150
Bromodichloromethane	50.00	63.66	127	50-150
Bromoform	50.00	61.21	122	50-150
Bromomethane	50.00	64.41	129	50-150
Carbon Tetrachloride	50.00	68.09	136	50-150
Carbon disulfide	50.00	67.04	134	50-150
Chloroethane	50.00	59.14	118	50-150
Dibromochloromethane	50.00	58.86	118	50-150
Methylene Chloride	50.00	50.29	100	50-150
Styrene	50.00	51.83	104	50-150
Tetrachloroethene	50.00	55.61	111	50-150
Trichloroethene	50.00	61.41	123	50-150
cis-1,2-Dichloroethene	50.00	60.98	122	50-150
cis-1,3-Dichloropropene	50.00	60.83	122	50-150
trans-1,2-Dichloroethene	50.00	58.91	118	50-150
trans-1,3-Dichloropropene	50.00	54.65	109	50-150
Xylene (total)	150.0	161.1	107	50-150
1,1,2,2-Tetrachloroethane	50.00	52.64	105	50-150
1,1-Dichloroethane	50.00	57.37	115	50-150
1,1-Dichloroethene	50.00	51.43	103	50-150
1,2-Dichloropropane	50.00	57.88	116	50-150
Chlorobenzene	50.00	52.81	106	50-150
Chloroform	50.00	63.41	127	50-150

Column to be used to flag LCS recovery with an asterisk.
* Values outside of QC limits.

3B

SOIL VOLATILE LAB CONTROL SAMPLE RECOVERY

CLIENT SAMPLE NO.

VLCS68

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab Sample ID: 931252 LCS Lot No.: ME39

Lab File ID: GH031252A52.D Date Analyzed: 03/15/99

Purge Volume: 0.0 (mL) Dilution Factor: 1.0

LCS Aliquot: 2.5 (uL)

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	%REC #	QC LIMITS
Chloromethane	50.00	57.88	116	50-150
Ethylbenzene	50.00	53.36	107	50-150
Toluene	50.00	51.02	102	50-150
Vinyl Chloride	50.00	60.60	121	50-150

Column to be used to flag LCS recovery with an asterisk.
* Values outside of QC limits.

LCS Recovery: 0 outside limits out of 34 total.

COMMENTS:

3B

SOIL VOLATILE LAB CONTROL SAMPLE RECOVERY

CLIENT SAMPLE NO.

VLCS84

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab Sample ID: 931623 LCS Lot No.: ME40

Lab File ID: GH031623B52.D Date Analyzed: 03/18/99

Purge Volume: 5.0 (mL) Dilution Factor: 1.0

LCS Aliquot: 2.5 (uL)

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	%REC #	QC LIMITS
1,1,1-Trichloroethane	50.00	48.83	98	50-150
1,1,2-Trichloroethane	50.00	47.93	96	50-150
1,2-Dichloroethane	50.00	51.66	103	50-150
2-butanone	50.00	58.39	117	50-150
2-hexanone	50.00	51.24	102	50-150
4-Methyl-2-pentanone	50.00	51.79	104	50-150
Acetone	50.00	51.38	103	50-150
Benzene	50.00	50.28	100	50-150
Bromodichloromethane	50.00	50.20	100	50-150
Bromoform	50.00	48.11	96	50-150
Bromomethane	50.00	45.25	90	50-150
Carbon Tetrachloride	50.00	49.32	99	50-150
Carbon disulfide	50.00	48.30	97	50-150
Chloroethane	50.00	47.78	96	50-150
Dibromochloromethane	50.00	48.77	98	50-150
Methylene Chloride	50.00	49.99	100	50-150
Styrene	50.00	45.35	91	50-150
Tetrachloroethene	50.00	44.29	88	50-150
Trichloroethene	50.00	48.12	96	50-150
cis-1,2-Dichloroethene	50.00	52.39	105	50-150
cis-1,3-Dichloropropene	50.00	49.82	100	50-150
trans-1,2-Dichloroethene	50.00	47.23	94	50-150
trans-1,3-Dichloropropene	50.00	50.00	100	50-150
Xylene (total)	150.0	139.4	93	50-150
1,1,2,2-Tetrachloroethane	50.00	47.65	95	50-150
1,1-Dichloroethane	50.00	51.04	102	50-150
1,1-Dichloroethene	50.00	48.20	96	50-150
1,2-Dichloropropane	50.00	52.38	105	50-150
Chlorobenzene	50.00	45.36	91	50-150
Chloroform	50.00	50.22	100	50-150

Column to be used to flag LCS recovery with an asterisk.
* Values outside of QC limits.

3B

SOIL VOLATILE LAB CONTROL SAMPLE RECOVERY

CLIENT SAMPLE NO.

VLCS84

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab Sample ID: 931623 LCS Lot No.: ME40

Lab File ID: GH031623B52.D Date Analyzed: 03/18/99

Purge Volume: 0.0 (mL) Dilution Factor: 1.0

LCS Aliquot: 2.5 (uL)

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	%REC #	QC LIMITS
Chloromethane	50.00	43.98	88	50-150
Ethylbenzene	50.00	46.39	93	50-150
Toluene	50.00	48.28	96	50-150
Vinyl Chloride	50.00	48.00	96	50-150

Column to be used to flag LCS recovery with an asterisk.
* Values outside of QC limits.

LCS Recovery: 0 outside limits out of 34 total.

COMMENTS:

3B

SOIL VOLATILE LAB CONTROL SAMPLE RECOVERY

CLIENT SAMPLE NO.

VLCS86

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab Sample ID: 931628 LCS Lot No.: ME40

Lab File ID: GH031628A52.D Date Analyzed: 03/23/99

Purge Volume: 5.0 (mL) Dilution Factor: 1.0

LCS Aliquot: 2.5 (uL)

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	%REC #	QC LIMITS
1,1,1-Trichloroethane	50.00	45.39	91	50-150
1,1,2-Trichloroethane	50.00	41.49	83	50-150
1,2-Dichloroethane	50.00	46.13	92	50-150
2-butanone	50.00	55.47	111	50-150
2-hexanone	50.00	58.98	118	50-150
4-Methyl-2-pentanone	50.00	57.70	115	50-150
Acetone	50.00	50.56	101	50-150
Benzene	50.00	45.79	92	50-150
Bromodichloromethane	50.00	45.48	91	50-150
Bromoform	50.00	42.64	85	50-150
Bromomethane	50.00	38.92	78	50-150
Carbon Tetrachloride	50.00	46.30	93	50-150
Carbon disulfide	50.00	44.60	89	50-150
Chloroethane	50.00	40.01	80	50-150
Dibromochloromethane	50.00	43.41	87	50-150
Methylene Chloride	50.00	42.92	86	50-150
Styrene	50.00	41.22	82	50-150
Tetrachloroethene	50.00	40.73	81	50-150
Trichloroethene	50.00	44.95	90	50-150
cis-1,2-Dichloroethene	50.00	44.42	89	50-150
cis-1,3-Dichloropropene	50.00	46.34	93	50-150
trans-1,2-Dichloroethene	50.00	43.15	86	50-150
trans-1,3-Dichloropropene	50.00	46.57	93	50-150
Xylene (total)	150.0	127.6	85	50-150
1,1,2,2-Tetrachloroethane	50.00	42.96	86	50-150
1,1-Dichloroethane	50.00	44.63	89	50-150
1,1-Dichloroethene	50.00	43.09	86	50-150
1,2-Dichloropropane	50.00	46.53	93	50-150
Chlorobenzene	50.00	41.26	82	50-150
Chloroform	50.00	45.28	90	50-150

Column to be used to flag LCS recovery with an asterisk.
* Values outside of QC limits.

3B

SOIL VOLATILE LAB CONTROL SAMPLE RECOVERY

CLIENT SAMPLE NO.

VLCS86

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab Sample ID: 931628 LCS Lot No.: ME40

Lab File ID: GH031628A52.D Date Analyzed: 03/23/99

Purge Volume: 0.0 (mL) Dilution Factor: 1.0

LCS Aliquot: 2.5 (uL)

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	%REC #	QC LIMITS
Chloromethane	50.00	43.94	88	50-150
Ethylbenzene	50.00	44.06	88	50-150
Toluene	50.00	44.17	88	50-150
Vinyl Chloride	50.00	37.93	76	50-150

Column to be used to flag LCS recovery with an asterisk.
* Values outside of QC limits.

LCS Recovery: 0 outside limits out of 34 total.

COMMENTS:

3B

SOIL VOLATILE LAB CONTROL SAMPLE RECOVERY

CLIENT SAMPLE NO.

VLCS98

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab Sample ID: 932235 LCS Lot No.: ME41

Lab File ID: GH032235A52.D Date Analyzed: 03/24/99

Purge Volume: 5.0 (mL) Dilution Factor: 1.0

LCS Aliquot: 2.5 (uL)

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	%REC #	QC LIMITS
1,1,1-Trichloroethane	50.00	43.85	88	50-150
1,1,2-Trichloroethane	50.00	42.08	84	50-150
1,2-Dichloroethane	50.00	44.67	89	50-150
2-butanone	50.00	33.76	68	50-150
2-hexanone	50.00	34.11	68	50-150
4-Methyl-2-pentanone	50.00	35.09	70	50-150
Acetone	50.00	37.33	75	50-150
Benzene	50.00	40.09	80	50-150
Bromodichloromethane	50.00	42.68	85	50-150
Bromoform	50.00	40.34	81	50-150
Bromomethane	50.00	36.61	73	50-150
Carbon Tetrachloride	50.00	45.17	90	50-150
Carbon disulfide	50.00	42.42	85	50-150
Chloroethane	50.00	38.73	77	50-150
Dibromochloromethane	50.00	45.69	91	50-150
Methylene Chloride	50.00	28.73	57	50-150
Styrene	50.00	40.41	81	50-150
Tetrachloroethene	50.00	41.06	82	50-150
Trichloroethene	50.00	40.87	82	50-150
cis-1,2-Dichloroethene	50.00	39.15	78	50-150
cis-1,3-Dichloropropene	50.00	42.86	86	50-150
trans-1,2-Dichloroethene	50.00	41.47	83	50-150
trans-1,3-Dichloropropene	50.00	48.53	97	50-150
Xylene (total)	150.0	124.2	83	50-150
1,1,2,2-Tetrachloroethane	50.00	42.07	84	50-150
1,1-Dichloroethane	50.00	43.73	87	50-150
1,1-Dichloroethene	50.00	39.94	80	50-150
1,2-Dichloropropane	50.00	41.89	84	50-150
Chlorobenzene	50.00	41.79	84	50-150
Chloroform	50.00	43.43	87	50-150

Column to be used to flag LCS recovery with an asterisk.
* Values outside of QC limits.

3B

SOIL VOLATILE LAB CONTROL SAMPLE RECOVERY

CLIENT SAMPLE NO.

VLCS98

Lab Name: COMPUCHEM Contract: 500944

Lab Code: COMPU Case No.: 34180 SAS No.: SDG No.: 21501

Lab Sample ID: 932235 LCS Lot No.: ME41

Lab File ID: GH032235A52.D Date Analyzed: 03/24/99

Purge Volume: 0.0 (mL) Dilution Factor: 1.0

LCS Aliquot: 2.5 (uL)

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	%REC #	QC LIMITS
Chloromethane	50.00	36.55	73	50-150
Ethylbenzene	50.00	41.54	83	50-150
Toluene	50.00	43.28	86	50-150
Vinyl Chloride	50.00	34.16	68	50-150

Column to be used to flag LCS recovery with an asterisk.
* Values outside of QC limits.

LCS Recovery: 0 outside limits out of 34 total.

COMMENTS:

EPA Region 5 Records Ctr.
349832

Heat up. Cool down.

BEHR

June 18, 2003

Mr. James Simpson, Manager
Division of Surface Water
Lazarus Government Center
122 South Front Street
Columbus, OH 43215

Re: Resubmittal of NPDES Permit Modification Application

Dear Mr. Simpson:

BEHR Dayton Thermal Products is in receipt of your letter (copy attached) dated May 21, 2003. In your letter you state that OEPA is unable to review our application for a modification to our NPDES Permit at this time due to a dispute in authority between OEPA and the State Board of Registration for Professional Engineers and Surveyors. You enclosed the application being returned for the stated reason.

We believe this puts BEHR Dayton Thermal Products at severe disadvantage due to being in effect "caught in the middle" of a controversy involving two parties not related to Behr Dayton Thermal Products. Our goal is to comply with all existing OEPA regulations and we as such filed the Permit Modification Application to update our existing NPDES Permit to reflect a discharge flow increase anticipated later this year. The application was filed in compliance with existing EPA protocol as of the filing date of January 21, 2003. These regulations did not then and do not now require a PE Stamp on Plans and Specifications and such a stamp has not been required under OEPA Regulations dating back to at least 1972.

In the spirit of keeping our Permit in full compliance Behr Dayton Thermal Products has obtained a review and PE certification stamp and is herewith resubmitting the said Permit Modification Application for your review and action. This should not be interpreted in any way as our acceptance that a PE stamp should be required on Plans and Specifications. This is merely our good faith action to keep our Application on-going in the review process.

We further request that our official application filing date be January 21, 2003 as stamped on the original documents when you received them, so that our permit modification may be issued on a timely basis.

ehr America, Inc.
'00 Daley Drive
oy, MI 48083
l: (248) 743-3700

Behr America, Inc.
1307 Highview Drive
Webberville, MI 48892
Tel: (517) 521-1910

Behr Climate Systems, Inc.
5020 Augusta Drive
Fort Worth, TX 76106
Tel: (817) 624-7273

Behr Heat Transfer Systems, Inc.
4500 Leeds Avenue
Charleston, SC 29405
Tel: (843) 745-1233

47920 5th Street
Canton, SD 57013
Tel: (605) 764-2347

Behr Dayton Thermal Products, LLC
1600 Webster Street
Dayton, OH 45404
Tel: (937) 224-2900

Member of the Behr Group

If you should have any questions, or need any additional information, please let me know.

Sincerely,

Bill Huston

Bill Huston
Environmental Engineer

Cc to: John Spitler – OEPA Southwest District Office
Katja Knupfer – BEHR Legal Department

Ohio EPA

State of Ohio Environmental Protection Agency

Street Address
Lazarus Government Center
122 South Front Street
Columbus, Ohio 43215

Mailing Address
P.O. Box 1049
Columbus, Ohio 43216-1049

May 21, 2003

CERTIFIED MAIL

Mr. Bill Huston
Behr Dayton Thermal Products
1600 Webster Street
Dayton, OH 45404

RE: REQUIREMENTS FOR PROFESSIONAL ENGINEER STAMP ON ALL WASTEWATER PLANS

Dear Mr. Huston:

On May 11, 1999, Director Jones requested a formal Attorney General Opinion in order to receive clarification as to whether Ohio EPA has the regulatory authority to review and approve engineering plans that have not been prepared by a Professional Engineer. On November 17, 1999 the Attorney General issued a formal Opinion No. 99-053 in response to the request. The Opinion contained the following legal conclusion:

"Absent a statute or validly adopted rule that authorizes the Director of Environmental Protection to reject plans that have been submitted to the Ohio Environmental Protection Agency for review under R.C. Chapter 6109 or R.C. Chapter 6111 on the basis that such plans have not been prepared by a registered engineer, the Director is with out authority to reject such plans on that basis".

Currently, Ohio EPA does not have any existing rules in its surface water, drinking water, air, or solid waste programs that authorize the Director to reject engineering plans on the basis that they have not been prepared by a professional engineer.

After receiving this Opinion, Ohio EPA was preparing to move forward and process all pending plans. As part of those preparations, on December 14, 1999, Ohio EPA met with the State Board of Registration for Professional Engineers and Surveyors to ensure the Board was comfortable with Ohio EPA engineers approving plans that were not prepared by a professional engineer.

On February 4, 2000 the State Board of Registration for Professional Engineers and Surveyors sent a letter to Ohio EPA indicating its opinion that Ohio EPA engineers should not process any plans that have not been prepared by a professional engineer. In its letter, the Board states that any Ohio EPA engineer that would approve such plans would not only be subject to professional discipline, but the Board believes that the engineer could be guilty of aiding and abetting in the unregistered practice of engineering, a criminal offense.

Obviously, the Board's statement have placed Ohio EPA in an impossible position. If the Agency approves plans that lack a PE Stamp in accordance with the Attorney General's Opinion, Ohio EPA engineers are faced with professional discipline as well as the threat of criminal charges. Therefore, it is Ohio EPA belief that the only appropriate action at the present time is to not approve any pending engineering plans that were not prepared by a professional engineer.

Ohio EPA will be attempting to resolve this issue by drafting rules and seeking guidance from the Board as to which plans the Board believes can be approved without a PE stamp. However, there are no assurances that Ohio EPA will receive interim guidance that will enable it to process plans prior to promulgation of rules.

You have submited plans to our Office for the Division of Surface Water. Our review of those plans indicates that they do not have a PE Stamp. Because of the circumstances noted above, Ohio EPA is not able to complete its review of your plans at this time. Your options are as follows: 1) Request return of the plans and other application materials with the associated fee; or 2) Resubmit plans that do have a PE Stamp.

In developing rules on this issue, Ohio EPA will seek input from all interested parties. You will have an opportunity to comment on the draft rule requirements for plans at that time. You should also be aware that H.B. 560 has been introduced on behalf of the Board. An excerpt from H.B. 560 is as follows:

"No Public Authority...shall accept or use any engineering or surveying plan from any person not registered as a professional engineer or professional surveyor under this Chapter."

Passage of this legislation, as currently written, would impact Ohio EPA's promulgation of rules on this issue.

Enclosed you will find your check #101396 in the amount of $864.30 and your application with your plans. Also you will find your NPDES Modification Permit which was received without the required $200.00 fee.

We regret any problems that this may cause for you or your project. Thank you for you patience in this matter. Ohio EPA hopes that a resolution is reached on this issue in the near future.

Sincerely,

James Simpson, Manager
Division of Surface Water

Enclosures

Heat up. Cool down.

BEHR

Mr. John Spitler
OEPA
Division of Surface Water
Southwest District Office
401 East Fifth Street
Dayton, OH 45402

Re: Modification of NPDES Permit for BEHR Dayton Thermal Products

Dear Mr. Spitler:

Enclosed is a completed permit modification and PTI for the expanded SVE system at the BEHR Dayton Thermal Products plant. You will recall we discussed the system and the permit modification at a recent meeting held here at the Plant.

If you should have any additional questions, or need any additional information, please give me a call at 224-2467.

Sincerely,

Bill Huston

Bill Huston
Environmental Engineer

hr America, Inc.
00 Daley Drive
y, MI 48083
: (248) 743-3700

Behr America, Inc.
1307 Highview Drive
Webberville, MI 48892
Tel: (517) 521-1910

Behr Climate Systems, Inc.
5020 Augusta Drive
Fort Worth, TX 76106
Tel: (817) 624-7273

Behr Heat Transfer Systems, Inc.
4500 Leeds Avenue
Charleston, SC 29405
Tel: (843) 745-1233
47920 5th Street
Canton, SD 57013
Tel: (605) 764-2347

Behr Dayton Thermal Products, LLC
1600 Webster Street
Dayton, OH 45404
Tel: (937) 224-2900

JUL 09 '03 13:20 FR DAYTON THERMAL PROD 937 224 2071 TO 8 19204300330 00 P.01/20

Behr DTP, LLC
1600 Webster St.
Dayton, OH 45404

Stub 1 of 1
Check Date:

NO. 00101396

INVOICE NO.	DATE	DESCRIPTION	GROSS	DEDUCTIONS	AMOUNT PAID
	01/14/03	OHIO EPA PERMIT APPLICATION FEE			$ 864.30
		TREASURER, STATE OF OHIO			

VENDOR

THIS CHECK IS VOID WITHOUT A COLORED BACKGROUND AND AN ARTIFICIAL FINGERPRINT & CERTIFICATION SEAL WATERMARK ON THE BACK - HOLD AT ANGLE TO VIEW

BEHR AMERICA

Behr DTP, LLC
1600 Webster St.
Dayton, OH 45404

32-2/1110
NATIONAL CITY BANK - OH
DAYTON, OH
OPERATING ACCOUNT

NO. 101396

VENDOR

DATE 01/14/03

AMOUNT $ 864.30

PAY EIGHT HUNDRED SIXTY-FOUR AND 30/100 DOLLARS

TO THE ORDER OF TREASURER, STATE OF OHIO

AUTHORIZED SIGNATURE

SIGNATURE HAS A COLORED BACKGROUND & BORDER CONTAINS MICROPRINTING

⑈ 101396 ⑈ ⑆044000116⑆ 6573876 17⑈

SEE ENDORSEMENT AREA ON BACK FOR U.S. PATENT 5538290;5579508;5841183

A

OhioEPA

Ohio Environmental Protection Agency

Permit to Install/Plan Approval Application

FOR AGENCY USE ONLY

Date Received: / / Application Number: _____ Basin Code: _____

Check Date: / / Check Number: _____ Check Amount: _____

1. Project Name: Dayton Thermal Products Groundwater Remediation

2. Applicant:
   Name: Behr Dayton Thermal Products
   Mailing Address: 1600 Webster Street
   City: Dayton State: Ohio Zip: 45404
   Contact Name: Bill Huston Title: Environmental Engineer
   Phone: (937) 224 - 2467 Fax: (937) 224 - 2571

3. Application/Plans Prepared by:
   Name: Earth Tech
   Mailing Address: 4135 Technology Parkway
   City: Sheboygan State: WI Zip: 53083
   Contact Name: Rob Stenson Title: Project Manager
   Phone: (937) 458-8711 Fax: (937) 458-0550

4. Billing Address (if different than Applicant):
   Name: * SAME *
   Mailing Address:
   City: State: Zip:
   Contact Name: Title:
   Phone: ( ) - Fax: ( ) -

5. Owner (if different than Applicant):
   Name: *SAME *
   Mailing Address:
   City: State: Zip:
   Contact Name: Title:
   Phone: ( ) - Fax: ( ) -

6. Project Location:
   Street Address or Location Description: 1600 Webster Street
   County: Montgomery Township/Municipality:
   Latitude: 39° 47' 05" Longitude: 84° 10' 50" Method of Determination: USGS MAP

A

7. Brief Project Description:
Installation of two (2) air strippers for the treatment of up to 400 gallons per minute of groundwater and 600 feet of 4" HDPE discharge piping.

Will five acres or more be disturbed during construction of this project? ___ Yes X No

8. a. Is this application part of a combined permit to install application? (e.g. Air + Water) ___ Yes X No
b. Has an application for a Class V injection well Permit to Install been submitted? X Yes ___ No
If yes, date submitted: _____

9. **Is this application for the construction or installation of a private sewage disposal system as specified by Ohio Revised Code (ORC) 6112.02?** ___ Yes X No
If yes, have you applied for and obtained a certificate of public convenience and necessity from PUCO as specified by ORC 6112.03? ___ Yes ___ No

10. **Compliance Status**
a. Does this facility have a NPDES permit? X Yes ___ No
If yes, permit numbers: OH 0009199 _____
b. Is this application filed in compliance with findings and orders, a consent decree, and/or NPDES permit schedule?
___ Yes Effective Date of the document containing the schedule: ___/___/___
X No

11. **Have pollution prevention concepts been considered for this project?** X Yes ___ No
If yes, please describe (*attach additional pages if necessary*):
All piping will be pressure tested at 150% of process pressure. All treatment equipment will be housed in a bermed building with a sump. sensors will shut down the system if rapid pressure loss is detected.

12. Estimated Project Schedule:
Beginning construction date: 3 / 31 / 03
Ending construction date: 6 / 30 / 03
Beginning operation date: 7 / 1 / 03

13. Project Cost:
Installation/Construction Cost: $ 102,000.00
(Mark one): Actual_____ Bid_____ Estimate X
Annual Operation/Maintenance Cost (if applicable - this project only) $ 4,000.00
Are Water Pollution Control Loan Funds going to be used for this project? ___ Yes X No
If no, Funding Source: Behr

A

14. **Attachments.** The following are included in this application package (indicate how many copies of each are provided):

____ Detail Plans
____ Engineering Report
_4_ Engineering Specifications
____ Management Plan
____ Hydrogeologic Site Investigation Report
____ Other (describe): _____

15. **Form B Submission** (check all that apply):

	Form
☐ Sewer and Pump Station Construction	B1
☐ On-Site Sanitary Wastewater Disposal	B2
☐ Wastewater Treatment Plants Less Than 100,000 GPD	B3
☐ Wastewater Treatment Plants Greater Than or Equal to 100,000 GPD and all Pond Systems	B4
☒ Industrial Direct Discharge Facility	B5
☐ Industrial Indirect Discharge Facility	B6
☐ Underground Storage Tank Remediation	B7
☐ Livestock Waste	B8
☐ Land Application or Sludge Management Plan	B9

16. **Fee Calculations:**

Permit to Install (maximum total fee $15,100)

a. Application fee:	$ 100.00
b. Plan review fee:	$ 100.00
c. Plan review fee (installation/construction cost x .0065):	$ 664.30
d. Total Fee (a + b + c):	$ 864.30

Land Application*/Livestock Plan Approval

a. Application fee:	$ 100.00
b. Plan review fee:	$ 100.00
c. Total fee (a + b):	$ 200.00

* No separate fee is needed for land application of treated wastewater if the management plan is submitted as part of the PTI application for system installation.

17. **Signature of the Applicant:** (see Ohio Administrative Code 3745-31-04)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision and that all the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are substantial penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Typed name: Wilhelm Baum

Title: Operations Manager

Signature: _____

Date: 14/01/03

Ohio Environmental Protection Agency
Application for Modification of
Ohio NPDES Permit

For Agency Use	Application Number
	Date Received
	Year Month Day

1. Number of permit for which modification is being requested OH 0009199

2. Name of organization responsible for facility Behr Dayton Thermal Prod.

3. Address, location, and telephone number of facility producing discharge:

   A. Name Behr Dayton Thermal Products

   B. Mailing Address:

      1. Street Address 1600 Webster Street

      2. City Dayton

      3. State Ohio 4. Zip Code 45404

   C. Location:

      1. Street ** SAME **

      2. City 3. County Montgomery

   D. Telephone No. 937 224-2467
      Area Code

4. Describe in detail the provision(s) of the permit the applicant wishes to modify.
   Daily average flow to outfall will increase by approximitely 200,000 gallons per day

5. Describe in detail the reason a modification is desired. (See Regulation OAC 3745-33-06 for grounds for modification.)

   Ground water removal of contaminants is to be discharged to existing storm water out fall 002.

6. Name of receiving water or waters Great Miami River

7. Describe requested modification in sufficient detail to allow Ohio Environmental Protection Agency to process your request. If a Permit to Install is required under Regulation OAC 3745-31 attach a completed application for a Permit to Install and make no other entries in this section. If a Permit to Install is not required and additional space is needed provide the additional information on 8-1/2 by 11 bond paper and mark item 7 continued in the upper left hand corner of each extra sheet.

Under OEPA's Vap program, a ground water remediation project is being initiated at Behr Dayton Thermal Products. A SVE system is to be installed to pump the groundwater in the affected area and remove the contaminates by a combination of air purging and activated carbon absorption, cleaned water of equal quality to the non-contact cooling water in storm water outfall 002 will then be discharged via outfall 002.

(This application must be signed by the person who applied for the original permit or some other person eligible under OAC 3745-33-03.)

I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate.

Wilhelm Baum
Printed Name of Person Signing

Operations Manager
Title

14/01/03
Date Application Signed

Signature of Applicant

Mail or take this form to the Ohio EPA District Office to which you send monitoring reports.

OhioEPA

Ohio Environmental Protection Agency

Permit to Install/Plan Approval Application

Industrial Direct Discharger Facility

AGENCY USE ONLY

Application Number:

Date Submitted:

Applicant: Behr Dayton Thermal Products

Facility Owner:

Application/Plans Prepared by: Bill Huston

Project Name:

1. **Effluent quality of discharge from proposed treatment facility or project (concentration and loadings required)**

	30 Day Average		Daily Maximum	
Parameter	Concentration (units)	Load (kg/day)	Concentration (units)	Load (kg/day)
I,I, I, TCA	<1 PPb	0	<1 PPb	0
PERC	<1 PPb	0	<1 PPb	0
TCE	<1 PPb	0	<1 PPb	0
CIS 1, 2 DCE	3 PPb	$2.8X10^{-5}$	<3 PPb	2.8×10^{-5}
1, 1 DCE	<1 PPb	0	<1 PPb	0
Vinyl Chloride	<1 PPb	0	<1 PPb	0

* Load calculations completed by using 0.58 MGD flow.

2. **List the hydraulic design capacity of the major components of the wastewater treatment system:**

Component	gpm

Component	gpm

3. **List the sequence of receiving streams from the initial discharge point up to the first named stream:**

A. City of Dayton Storm sewer at webster street
B. Great Miami River

4. **Is this facility regulated by an NPDES permit?** ☒ Yes ☐ No

If yes, permit numbers: OH 0009199

Supplement to Form A

B5

5. **Contact person responsible for the technical aspects of this project:**

Name: Bill Huston
Title: Env. Engineer
Phone No.: (937) 224-2467
Company: Behr

6. **If the proposed wastewater treatment system is for a new facility or operation, has a site inspection been conducted by an Ohio EPA, Division of Surface Water representative?** ☐ Yes ☐ No

If no, contact your Ohio EPA district office

7. **Submittals**

This application must include the following unless otherwise directed by the Ohio EPA district office:

- ☒ Four copies of the detail plans which include site plans, vicinity map, schematic diagrams, plan views, elevation views and cross-sectional views necessary to evaluate the processes
- ☒ Two copies of complete technical specifications
- ☒ Two copies of the Permit to Install/Plan Approval Application including Form A and the appropriate B forms
- ☒ Fee check made payable to "Treasurer, State of Ohio"

8. The foregoing data is a true statement of facts pertaining to this proposed industrial direct discharge installation.

Date: 1-13-03 Signed: Bill Huston

Engineer preparing plans

OhioEPA
State of Ohio Environmental Protection Agency

DIVISION OF SURFACE WATER

Antidegradation Addendum

In accordance with Ohio Administrative Code 3745-1-05 (Antidegradation), additional information may be required to complete your application for a permit to install or NPDES permit. For any application that may result in an increase in the level of pollutants being discharged (NPDES and/or PTI)or for which there might be activity taking place within a stream bed, the processing of the permit(s) may be required to go through procedures as outlined in the antidegradation rule. The rule outlines procedures for public notification and participation as well as procedures pertaining to the levels of review necessary. The levels of review necessary depend on the degradation being considered/requested. The rule also outlines exclusions from portions of the application and review requirements and waivers that the Director may grant as specified in Section 3745-1-05(D) of the rule. Please complete the following questions. The answers provided will allow the Ohio EPA to determine if additional information is needed. **All projects that require both an NPDES and PTI should submit both applications simultaneously to avoid going through the antidegradation process separately for each permit.**

A. **Applicant:** Behr Dayton Thermal Products

Facility Owner: (SAME)

Facility Location (city and county): Dayton - Montgomery County

Application or Plans Prepared By: Bill Huston

Project Name: SVE Discharge to existing storm water outfall 002

NPDES Permit Number (if applicable): OH 0009199

B. **Antidegradation Applicability**

Is the application for? (check as many as apply):

____ Application with no direct surface water discharge (Projects that do not meet the applicability section of 3745-1-05(B)1, i.e., on-site disposal, extensions of sanitary sewers, spray irrigation, indirect discharger to POTW, etc.). (Complete Section E)

X Renewal NPDES application or PTI application with no requested increase in loading of currently permitted pollutants. (Complete Section E. Do not complete Sections C or D).

____ PTI and NPDES application for a new wastewater treatment works that will discharge to a surface water. (Complete Sections C and E)

____ An expansion/modification of an existing wastewater treatment works discharging to a surface water that will result in any of the following (PTI and NPDES):(Complete Section C and E)

- addition of any pollutant not currently in the discharge, or
- an increase in mass or concentration of any pollutant currently in the discharge, or
- an increase in any current pollutant limitation in terms of mass or concentration.

_____ PTI that involves placement of fill or installation of any portion of a sewerage system (i.e., sanitary sewers, pump stations, WWTP, etc.)within 150 feet of a stream bed. Please provide information requested on the stream evaluation addendum (i.e., number of stream crossings, fill placement, etc.) and complete section E.

_____ Initial NPDES permit for an existing treatment works with a wastewater discharge prior to October 1, 1996. (Complete Sections D and E)

_____ Renewal NPDES permit or modification to an effective NPDES permit that will result in any of the following:(Complete Section C and E)

- a new permit limitation for a pollutant that previously had no limitation, or
- an increase in any mass or concentration limitation of any pollutant that currently has a limitation.

C. Antidegradation Information

1. Does the PTI and/or NPDES permit application meet an exclusion as outlined by OAC 3745-1-05(D)(1) of the Antidegradation rule?

   _____ Yes (Complete Question C.2)

   _____ No (Complete Questions C.3 and C.4)

2. For projects that would be eligible for exclusions provide the following information:

   a. Provide justification for the exclusion.

   b. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

   c. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

3. Are you requesting a waiver as outlined by OAC 3745-1-05(D)(2-7) of the Antidegradation rule?

   _____ No

   _____ Yes

   If you wish to pursue one of the waivers, please identify the waiver and submit the necessary information to support the request. Depending on the waiver requested, the information required under question C.4 may be required to complete the application.

4. For all projects that do <u>not</u> qualify for an exclusion a report must accompany this application evaluating the preferred design alternative, non-degradation alternatives, minimal degradation alternatives, and mitigative techniques/measures for the design and operation of the activity. The information outlined below should be addressed in this report. If a waiver is requested, this section is still required.

a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

b. List and describe all government and/or privately sponsored conservation projects that may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the effected water resource.

c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and there respective operational and maintenance needs. (If additional space is needed please attach additional sheets to the end of this addendum).

Preferred design alternative: _____

_____

_____

Non-degradation alternative'(s): _____

_____

_____

Minimal degradation alternative'(s): _____

_____

_____

Mitigative technique/measure'(s): _____

_____

_____

_____

At a minimum, the following information must be included in the report for each alternative evaluated.

d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

g. Describe any impacts to human health and the overall quality and value of the water resource.

h. Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues generated.

i. Describe environmental benefits to be realized through this proposed project.

j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

k. Describe the environmental benefits lost as a result of this project. Include the impact on the aquatic life, wildlife, threatened or endangered species.

l. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

m. Provide any other information that may be useful in evaluating this application.

D. Discharge Information

1. For treatment/disposal systems constructed pursuant to a previously issued Ohio EPA PTI, provide the following information:

PTI Number _____
PTI Issuance Date _____
Initial Date of Discharge _____

2. Has the appropriate NPDES permit application form been submitted including representative effluent data?

_____ Yes (go to E)

_____ No (see below)

If no, submit the information as applicable under a OR b as follows:

a. For entities discharging process wastewater attach a completed 2C form.

b. For entities discharging wastewater of domestic origin attach the results of at least one chemical analysis of the wastestream for all pollutants for which authorization to discharge is being requested and a measurement of the daily volume (gallons per day) of wastewaters being discharged.

E. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete.

This section must be signed by the same responsible person who signed the accompanying permit application or certification as per 40 CFR 122.22.

Signature _____

Date 14/01/03

Stream Evaluation Addendum

1. Are there any sewer line stream crossings as part of this PTI? Yes___ No X

2. Will there be any other activity in the stream bed (i.e. channelization, relocation, rip-rap)? Yes___ No X

3. Is the drainage area of the stream (at the location of the project) less than 20 square miles? Yes X No___

4. Will there be any construction activity within 2.5 times the width of the streambed (measured from each side)? Yes___ No X

5. Is the stream designated one of the following uses? Coldwater Habitat, Seasonal Salmonid Habitat, Exceptional Warmwater Habitat, State Resource Water. Yes X No___

If you answered "no" to all five questions, do not complete sections I and II of this addendum. If you answered yes to any of the questions, please complete sections I and II.

I. Fill in the number of sewer line stream crossings for the appropriate use designation of the stream that is being crossed. If more than 2 stream crossings in any one mile segment the amount of points should be doubled for this section. (NOT APPLICABLE)

Use Designation	Points		Total # Crossings		Points		Total Points
LRW, NP	10	x	___	=	___		
MWH	15	x	___	=	___		
WWH	20	x	___	=	___		
EWH	25	x	___	=	___		
CWH	50	x	___	=	___		
SRW or SSH	10	x	___	=	___		
TOTAL					___	X2 (if >2 crossings/mile ave)	___

II. Tabulate the conversion factor column for the appropriate use designation and stream width adding the appropriate factor for any streams that are state resource waters. Multiply the conversion factor by the total lineal footage parallel to but not crossing the stream bed.

(NOT APPLICABLE)

Use Designation	Stream Width (Average) <10'	10'<100'	>100'		Lineal footage of Construction Activity	
LRW, NP	.1	.07	.04		x(total within 25')	
MWH	.12	.09	.06		x(total within 35')	
WWH	.14	.11	.08		x(total within 100')	
EWH	.16	.13	.1		x(total within 100')	
CWH	.2	.17	.14		x(total within 150')	
SRW or SSH	+.04	+.03	+.02		x(total within 150')	
TOTAL	___	___	___	X	___(Lineal ft)=	___

Total Points I + II ___

0	40	60	100
Low Impact Project	Intermediate		High Impact Project

EARTH TECH

A tyco INTERNATIONAL LTD. COMPANY

DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME: WELL PLACEMENT REV1
CHECKED BY: JE	DATE: DEC. 20, 2002	SCALE: ------	

FIGURE 1
VICINITY MAP
DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

Email Address:	Billy.huston@us.behrgroup.com
Date:	9-Jul-03
No. Pages:	23

Subject: NPDES Permit Modification Application

Heat up. Cool down.

BEHR

Fax

To:	Rob Stenson	**From:**	Bill Huston
Fax Number:	(920) 458-0550	Department:	Environmental
Company:	Earth Tech	Telephone Number:	(937) 224-2467
		Fax Number:	(937) 224-2571

EPA Region 5 Records Ctr.
349833

BEHR

September 18, 2003

Ms. Michelle Jones Simmons
City of Dayton
Department of Water
Div. of Environmental Management
320 West Monument Ave.
Dayton, OH 45402

Re: Feasibility Study of Storm Water Treatment Options

Dear Ms Simmons:

As you know, as part of the on-going SVE/Groundwater Remediation Project being conducted by Earth Tech on behalf of DaimlerChrysler at the Behr Dayton Thermal Products Plant plans are to reroute the Stormwater discharge 002 north to Lucille Station. Earth Tech will be filing the necessary information to obtain a City permit to do the reroute.

As a further enhancement of this project, Behr commissioned LJB Consulting Engineers to study the feasibility of addressing the occasional oil sheens noted at discharge 002, to reduce/eliminate them. Their study (copy attached) concludes that it is not practical financially and from a logistics point of view to install an oil water separator in the discharge 002. However, oil removal via catch basin inserts is a viable option.

Behr has asked LJB to develop a system design using catch basin inserts at critical catch basins to address the issues. Please review the report from LJB and let me know if you have any additional questions or comments.

By way of a copy of this letter, I am asking John Spitler from OEPA to let me know if a PTI is required to use the Catch Basin Inserts as a treatment option.

Sincerely,

Bill Huston

Bill Huston
Environmental Engineer

cc to: John Spitler - OEPA
Robert Stenson – Earth Tech

Behr America, Inc.
2700 Daley Drive
Troy, MI 48083
Tel: (248) 743-3700

Behr America, Inc.
1307 Highview Drive
Webberville, MI 48892
Tel: (517) 521-1910

Behr Climate Systems, Inc.
5020 Augusta Drive
Fort Worth, TX 76106
Tel: (817) 624-7273

Behr Heat Transfer Systems, Inc.
4500 Leeds Avenue
Charleston, SC 29405
Tel: (843) 745-1233

47920 5th Street
Canton, SD 57013
Tel: (605) 764-2347

Behr Dayton Thermal Products, LLC
1600 Webster Street
Dayton, OH 45404
Tel: (937) 224-2900

Member of the Behr Group
www.behrgroup.com

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3100 Research Blvd • PO Box 20246 • Dayton, OH 45420-0246

September 9, 2003

Mr. Bill Huston
Environmental Engineer
Behr Dayton Thermal Products LLC
1600 Webster Street
Dayton, OH 45404-1205

Re: Report for Feasibility Study of Storm Water Treatment Options

Dear Mr. Huston:

In accordance with your request, LJB Inc. has completed the following report on the feasibility of storm water treatment options.

Treatment options that were considered included oil/water separators, oil skimmers and catch basin inserts. Each of the options will be detailed below:

Oil/Water Separators

Preliminary discussions with oil/water separator suppliers, indicate that an oil/water separator designed for treating dry weather flows only (maximum daily flow of ~300,000 gpd plus 200,000 gpd from SVE system), could be as large as six feet in diameter by ten feet in length. Discussions with both the City of Dayton and the Ohio EPA indicate that oil/water separator design guidance or requirements are not available and treatment systems are approved on a case by case basis. Please note that it is normal design practice to size the oil/water separator to treat storm water runoff in addition to dry weather flow, which would greatly increase the size of the separator.

The City of Dayton and/or the Ohio EPA are likely to require the oil/water separator to be designed to treat storm water runoff. The drainage area into the 30" storm sewer was measured to be 621,000 sq. feet or 14.2 acres. Based on the typical oil/water separator design of 2-2.4 inches of rain per hour for the Miami Valley, the maximum flow would be 12,920 gallons/minute (28.8 cubic feet/second). This would require a 150,000-gallon oil/water separator. If the oil water separator is designed for a less intense rainfall of one-inch per hour, it would be possible to use a smaller volume, of 60,000 gallons. The largest oil/water separator available through Hamilton Tanks is a 30,000-gallon tank that will handle a peak flow of 6,000 gpm. Two of these oil water separators installed in parallel, would have a total volume of 60,000 gallon with a flow capacity of 12,000 gpm. The size of each 30,000-gallon unit would be 12' diameter by 35 feet long. The estimated material cost of these two units is between $50,000-$80,000. See Table 2: Treatment Option Comparison for additional characteristics of the oil/water separator.

Oil Skimmers

The design of an oil skimmer involves providing a quiescent area in which oil would float to the top and allow for separation by skimming. The design requires a large volume and area similar to the oil/water separator. In addition, an oil skimmer could potentially require much maintenance. An oil skimmer is typically used to recover large amounts of floating oil and not the relatively minor amounts of oil that could be expected to enter the storm sewer system at Behr Dayton Thermal Products. Because of the above items, we have not further investigated the addition of oil skimmers.

Catch Basin Inserts

Catch basin inserts will be used in this report to refer to all types of treatment that is performed at the individual catch basins. The inserts will treat the storm water runoff at individual catch basins and not the storm sewer flow. Inserts can be as simple as a fabric filter system that is installed below the catch basin grate that removes oils and sediment from the storm water flowing to the catch basin by filtering the influent storm water. Lab Safety Supply's Ultra-Drain Guard™ catch basin inserts fit openings of up to 30" x 40". The Ultra-Drain Guard™ needs to be maintained on a regular basis, as the fabric could become plugged and decrease the allowable flow through the catch basin, which may lead to flooding. See the attached information for more details.

The Drainpac Storm Drain Filter supplied by United Storm Water, Inc. has a support basket into which the fabric filter is placed. This can be added to most catch basins. Bypass flapper valves allow flow to bypass the filter during heavy rain events or if the filter is partially plugged. See the attached information for more details.

Other inserts provide additional treatment by adding more filter media and providing a pre-settling sediment chamber. The Hydro-KleenTM Filtration Systems supplied by Hydro Compliance Management, Inc. has media filters that would provide a higher level of treatment. In high flows, storm water is diverted through to the overflow outlet to prevent flooding. See the attached information for more details.

During a site visit, we identified 25 catch basins that collect storm water in the drainage area of Outall 002. Further information on the catch basins is in Table 1: Catch Basin Characteristics.

Table 1: Catch Basin Characteristics

Circular or Rectangular	Size (inches)	Depth (inches)	Comments
Rectangular	30x30	37	High volume of truck traffic
Rectangular	30x30	34	High volume of truck traffic
Rectangular	30x30	41	High volume of truck traffic
Rectangular	30x30	53	High volume of truck traffic
Circular	20	42	High volume of truck traffic
Circular	20	ND	
Circular	19	ND	
Rectangular	28x28	ND	
Circular	27	23	
Circular	23	19	
Circular	24	ND	
Rectangular	27.5x27.5	33	
Circular	24	52	
Rectangular	24x24	16	
Circular	24.5	59	High volume of truck traffic
Circular	23	78	
Circular	23	62	
Circular	20	47	
Circular	23	89	
Circular	30	29	
Circular	23	90	
Circular	23	80	
Circular	23	90	
Circular	20	57	
Circular	24.5	ND	High volume of truck traffic

ND indicates the depth was not able to be determined.

Please note that the dimensions were field measured and may not be exact.

Table 2: Treatment Options Comparison

Treatment Device	Cost Estimate	Characteristics
Oil/water Separator	$120,000	1) Treats entire flow 2) Moderate maintenance required 3) Travel impacted during construction
Oil Skimmers	Not determined	1) Treats entire flow 2) Moderate to high maintenance required 3) Travel impacted during construction
Catch Basin Inserts	$100 to $2,000 per catch basin	1) Only treats flow through "guarded" catch basins 2) High maintenance required 3) Negligible impact to travel 4) Easy installation

Recommendations

Based on discussions with Behr personnel, the storm water treatment was requested by the City of Dayton upon Behr inquiring about adding remediation water to the storm water flow from Outfall 002. The source of potential contamination has not been determined (i.e. it is not know whether oil contamination could come from the storm sewers themselves, from surface runoff or from a combination of both). Because of these unknowns, LJB recommends that Behr initially install inserts at catch basins that would have the most potential to receive oils contaminated storm water. This option is the lowest cost and would provide treatment of potential spills within the drainage area of "protected" catch basins. This option also would show the City of Dayton that Behr has worked at improving the quality of storm water discharge by minimizing the potential for surface spills to enter the storm water. With the many types of catch basin inserts available, the type of insert should be determined on an individual catch basin basis. Those catch basins in areas that have a higher potential for oily runoff should have the most protection and therefore the highest level of treatment. Other catch basins may need much less treatment or none at all.

LJB appreciated the opportunity to work with you on this project. We would be happy to discuss this report and our findings with you and to help identify the highest risk catch basins. If you have any questions on this report, please call me at (517) 349-9280.

Sincerely,

LJB Inc.

Craig J. Galecka LJK

Craig J. Galecka, PE, CSP
Environmental/Chemical Engineer

cc: Kyle Kusmer – LJB
Larry Kremer, PE - LJB

OhioEPA
State of Ohio Environmental Protection Agency

EPA Region 5 Records Ctr.
349834

STREET ADDRESS:
Lazarus Government Center
122 S. Front Street
Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

July 26, 2002

Re: NPDES Permit Transfer
Ohio EPA Permit No. 1IN00089*DD
Application No. OH0009199

Behr
Dayton Thermal Works
1600 Webster Street
Dayton OH 45404

Ladies and Gentlemen:

Ohio EPA has received a notice of intent to transfer the above permit. Pursuant to Ohio Revised Code 6111.03(J) and Ohio Administrative Code 3745-33-08, the proposed transfer of the Ohio National Pollutant Discharge Elimination System permit is hereby approved. In accordance with the terms and conditions conveyed in the agreement to transfer the permit, the effective date of the transfer shall be May 1, 2002.

Behr, the permittee, shall assume all responsibility, coverage, and liability specified in the permit.

Sincerely,

Christopher Jones
Director

CJ/dks

CERTIFIED MAIL

cc: Southwest District Office
S. Kemper, Enforcement
Daimler Chrysler Corporation
Journal Room
File

Application No. OH0009199

Issue Date: September 5, 2001

Effective Date: October 1, 2001

Expiration Date: September 30, 2006

Ohio Environmental Protection Agency
Authorization to Discharge Under the
National Pollutant Discharge Elimination System

In compliance with the provisions of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et. seq., hereinafter referred to as the "Act"), and the Ohio Water Pollution Control Act (Ohio Revised Code Section 6111),

DaimlerChrysler Corporation

is authorized by the Ohio Environmental Protection Agency, hereinafter referred to as "Ohio EPA," to discharge from the Dayton Thermal Products wastewater treatment works located at 1600 Webster Street, Dayton, Ohio, Montgomery County and discharging to The Great Miami River via storm sewer in accordance with the conditions specified in Parts I, II, III, IV, V, and VI of this permit.

This permit is conditioned upon payment of applicable fees as required by Section 3745.11 of the Ohio Revised Code.

This permit and the authorization to discharge shall expire at midnight on the expiration date shown above. In order to receive authorization to discharge beyond the above date of expiration, the permittee shall submit such information and forms as are required by the Ohio EPA no later than 180 days prior to the above date of expiration.

Christopher Jones
Director

Total Pages: 27

JUL 10 '03 11:38 FR DAYTON THERMAL PROD 937 224 2571 TO 8-19204580550-06 P.04/17

Part I, A. - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from outfall 1IN00089001. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Final Outfall - 001 - Final

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day					
Parameter	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly	Measuring Frequency	Sampling Type	Monitoring Months
00010 - Water Temperature - C	-	-	-	-	-	-	-	1 / 2 Weeks	Continuous	All
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	24hr Total	All
61941 - pH, Maximum - S.U.	9.0	-	-	-	-	-	-	1 / 2 Weeks	Grab	All
61942 - pH, Minimum - S.U.	-	6.5	-	-	-	-	-	1 / 2 Weeks	Grab	All

Notes for Station Number 1IN00089001:

This discharge is limited to non-contact cooling water and storm runoff; it is to be free of process wastes and other contaminants.

Sampling shall be performed when discharging. If NO DISCHARGE OCCURS DURING THE ENTIRE MONTH, report "AL" in the first column of the first day of the month on the 4500 Form (Monthly Operating Report). A signature is still required.

Use of a maximum indicating thermometer for temperature is acceptable.

JUL 10 '03 11:38 FR DAYTON THERMAL PROD 937 224 2571 TO 8-19204580550-06 P.05/17

Part I, A. - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from outfall 1IN00089002. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Final Outfall - 002 - Final

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day					
Parameter	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly	Measuring Frequency	Sampling Type	Monitoring Months
00010 - Water Temperature - C	-	-	-	-	-	-	-	1 / 2 Weeks	Continuous	All
00530 - Total Suspended Solids - mg/l	45	-	-	30	-	-	-	1/Month	24hr Composite	All
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	24hr Total	All
61941 - pH, Maximum - S.U.	9.0	-	-	-	-	-	-	1/Month	Grab	All
61942 - pH, Minimum - S.U.	-	6.5	-	-	-	-	-	1/Month	Grab	All

Notes for Station Number 1IN00089002:

This discharge is limited to non-contact cooling water, cooling tower blowdown, and storm water runoff; it is to be free of process wastes and other contaminants.

Sampling shall be performed when discharging. If NO DISCHARGE OCCURS DURING THE ENTIRE MONTH, report "AL" in the first column of the first day of the month on the 4500 Form (Monthly Operating Report). A signature is still required.

Use of a maximum indicating thermometer for temperature is acceptable.

JUL 10 '03 11:38 FR DAYTON THERMAL PROD 937 224 2571 TO 8-19204580550-06 P.06/17

Part I, A. - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from outfall 1IN00089003. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Final Outfall - 003 - Final

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day					
Parameter	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly	Measuring Frequency	Sampling Type	Monitoring Months
00010 - Water Temperature - C	-	-	-	-	-	-	-	1 / 2 Weeks	Continuous	All
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	24hr Total	All
61941 - pH, Maximum - S.U.	9.0	-	-	-	-	-	-	1 / 2 Weeks	Grab	All
61942 - pH, Minimum - S.U.	-	6.5	-	-	-	-	-	1 / 2 Weeks	Grab	All

Notes for Station Number 1IN00089003:

This discharge is limited to non-contact cooling water and storm runoff; it is to be free of process wastes and other contaminants.

Sampling shall be performed when discharging. If NO DISCHARGE OCCURS DURING THE ENTIRE MONTH, report "AL" in the first column of the first day of the month on the 4500 Form (Monthly Operating Report). A signature is still required.

Use of a maximum indicating thermometer for temperature is acceptable.

Part II, OTHER REQUIREMENTS

A. Description of the location of the required sampling stations are as follows:

Sampling Station	Description of Location
1IN00089001	At manhole adjacent to Leo Street prior to discharge to city storm sewer (Lat: 39 47' 12"; Long: 84 10' 50")
1IN00089002	At manhole adjacent to Webster Street prior to discharge to city storm sewer (Lat: 39 47' 05": Long: 84 10' 50")
1IN00089003	At manhole adjacent to Leo Street prior to discharge to city storm sewer (Lat: 39 46' 58:; Long: 84 10' 50")

B. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved.

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

C. All parameters, except flow, need not be monitored on days when the plant is not normally staffed (Saturdays, Sundays, and Holidays). On those days, report "AN" on the monthly report form.

D. In the event that the permittee's operation requires the use of cooling or boiler water treatment additives that are discharged to surface waters of the state, written permission must be obtained from the director of the Ohio EPA prior to use. Reporting and testing requirements to apply for permission to use additives can be obtained from the Ohio EPA, Central Office, Division of Surface Water, Water Resources Management Section. Reported information will be used to evaluate whether the use of the additive(s) at concentrations expected in the final discharge will be harmful or inimical to aquatic life.

PART III - GENERAL CONDITIONS

1. DEFINITIONS

"Daily load" is the total discharge by weight during any calendar day. If only one sample is taken during a day, the weight of pollutant discharge calculated from it is the daily load.

"Daily concentration" means the arithmetic average of all the determinations of concentration made during the day. If only one sample is taken during the day, its concentration is the daily concentration. Coliform bacteria limitations compliance shall be determined using the geometric mean.

"Weekly load" is the total discharge by weight during any 7-day period divided by the number of days in that 7-day period that the facility was in operation. If only one sample is taken in a 7-day period, the weight of pollutant discharge calculated from it is the 7-day load. If more than one sample is taken during the 7-day period, the 7-day load is calculated by determining the daily load for each day sampled, totaling the daily loads for the 7-day period, and dividing by the number of days sampled.

"Weekly concentration" means the arithmetic average of all the determinations of daily concentration limitation made during the 7-day period. If only one sample is taken during the 7-day period, its concentration is the 7-day concentration for that 7-day period. Coliform bacteria limitations compliance shall be determined using the geometric mean.

"Monthly load" is the total discharge by weight during all days in a calander month divided by the number of days that the facility was in operation during that month. If only one sample is taken during the month the weight of pollutant discharge calculated from it is the monthly load. If more than one sample is taken during the month, the monthly load is calculated by determining the daily load for each day sampled, totaling the daily loads for the month and dividing by the number of days sampled.

"Monthly concentration" means the arithmetic average of all the determinations of daily concentration made during any calender month. If only one sample is taken during the month, its concentration is the monthly concentration for that period. Coliform bacteria limitations compliance shall be determined using the geometric mean.

"85 percent removal" means the arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

"Absolute Limitations" Compliance with limitations having descriptions of "shall not be less than," "nor greater than," "shall not exceed," "minimum," or "maximum" shall be determined from any single value for effluent samples and/or measurements collected.

"Net concentration" shall mean the difference between the concentration of a given substance in a sample taken of the discharge and the concentration of the same substances in a sample taken at the intake which supplies water to the given process. For the purpose of this definition, samples that are taken to determine the net concentration shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"Net load" shall mean the difference between the load of a given substance as calculated from a sample taken of the discharge and the load of the same substance in a sample taken at the intake which supplies water to given process. For purposes of this definition, samples that are taken to determine the net Loading shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"MGD" means million gallons per day.

"mg/l" means milligrams per liter.

"ug/l" means micrograms per liter.

"Reporting Code" is a five digit number used by the Ohio EPA in processing reported data. The reporting code does not imply the type of analysis used nor the sampling techniques employed.

"Quarterly (1/Quarter) sampling frequency" means the sampling shall be done in the months of March, June, August, and December, unless specificially identified otherwise in the Effluent Limitations and Monitoring Requirements table.

"Yearly (1/Year) sampling frequency" means the sampling shall be done in the month of September, unless specificially identified otherwise in the effluent limitations and monitoring requirements table.

"Semi-annual (2/Year) sampling frequency" means the sampling shall be done during the months of June and December, unless specificially identified otherwise.

"Winter" shall be considered to be the period from November 1 through April 30.

"Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.

"Summer" shall be considered to be the period from May 1 through October 31.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2. GENERAL EFFLUENT LIMITATIONS

The effluent shall, at all times, be free of substances:

A. In amounts that will settle to form putrescent, or otherwise objectionable, sludge deposits; or that will adversely affect aquatic life or water fowl;

B. Of an oily, greasy, or surface-active nature, and of other floating debris, in amounts that will form noticeable accumulations of scum, foam or sheen;

C. In amounts that will alter the natural color or odor of the receiving water to such degree as to create a nuisance;

D. In amounts that either singly or in combination with other substances are toxic to human, animal, or aquatic life;

E. In amounts that are conducive to the growth of aquatic weeds or algae to the extent that such growths become inimical to more desirable forms of aquatic life, or create conditions that are unsightly, or constitute a nuisance in any other fashion;

F. In amounts that will impair designated instream or downstream water uses.

3. FACILITY OPERATION AND QUALITY CONTROL

All wastewater treatment works shall be operated in a manner consistent with the following:

A. At all times, the permittee shall maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee necessary to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with conditions of the permit.

B. The permittee shall effectively monitor the operation and efficiency of treatment and control facilities and the quantity and quality of the treated discharge.

C. Maintenance of wastewater treatment works that results in degradation of effluent quality shall be scheduled during non-critical water quality periods and shall be carried out in a manner approved by Ohio EPA as specified in the Paragraph in the PART III entitled, "UNAUTHORIZED DISCHARGES".

4. REPORTING

A. Monitoring data required by this permit may be submitted in hardcopy format on the Ohio EPA 4500 report form pre-printed by Ohio EPA or an approved facsimile. Ohio EPA 4500 report forms for each individual sampling station are to be received no later than the 15th day of the month following the month-of-interest. The original report form must be signed and mailed to:

Ohio Environmental Protection Agency
Lazarus Government Center
Division of Surface Water
Enforcement Section ES/MOR
P.O. Box 1049
Columbus, Ohio 43216-0149

Monitoring data may also be submitted electronically using Ohio EPA developed SWIMware software. Data must be transmitted to Ohio EPA via electronic mail or the bulletin board system by the 20th day of the month following the month-of-interest. A Surface Water Information Management System (SWIMS) Memorandum of Agreement (MOA) must be signed by the responsible official and submitted to Ohio EPA to receive an authorized Personal Identification Number (PIN) prior to sending data electronically. A hardcopy of the Ohio EPA 4500 form must be generated via SWIMware, signed and maintained onsite for records retention purposes.

B. If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified below, the results of such monitoring shall be included in the calculation and reporting of the values required in the reports specified above.

C. Analyses of pollutants not required by this permit, except as noted in the preceding paragraph, shall not be reported on Ohio EPA report form (4500) but records shall be retained as specified in the paragraph entitled "RECORDS RETENTION".

5. SAMPLING AND ANALYTICAL METHOD

Samples and measurements taken as required herein shall be representative of the volume and nature monitored flow. Test procedures for the analysis of pollutants shall conform to regulation 40 CFR 136, "Test Procedures For The Analysis of Pollutants" unless other test procedures have been specified in this permit. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and instrumentation at intervals to insure accuracy of measurements.

6. RECORDING OF RESULTS

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

A. The exact place and date of sampling; (time of sampling not required on EPA 4500)

B. The person(s) who performed the sampling or measurements;

C. The date the analyses were performed on those samples;

D. The person(s) who performed the analyses;

E. The analytical techniques or methods used; and

F. The results of all analyses and measurements.

7. RECORDS RETENTION

The permittee shall retain all of the following records for the wastewater treatment works for a minimum of three years, including:

A. All sampling and analytical records (including internal sampling data not reported);

B. All original recordings for any continuous monitoring instrumentation;

C. All instrumentation, calibration and maintenance records;

D. All plant operation and maintenance records;

E. All reports required by this permit; and

F. Records of all data used to complete the application for this permit for a period of at least three years from the date of the sample, measurement, report, or application.

These periods will be extended during the course of any unresolved litigation, or when requested by the Regional Administrator or the Ohio EPA. The three year period for retention of records shall start from the date of sample, measurement, report, or application.

8. AVAILABILITY OF REPORTS

Except for data determined by the Ohio EPA to be entitled to confidential status, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the appropriate district offices of the Ohio EPA. Both the Clean Water Act and Section 6111.05 Ohio Revised Code state that effluent data and receiving water quality data shall not be considered confidential.

9. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

10. RIGHT OF ENTRY

The permittee shall allow the Director or an authorized representative upon presentation of credentials and other documents as may be required by law to:

A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.

B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.

C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.

D. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

11. UNAUTHORIZED DISCHARGES

A. Bypassing or diverting of wastewater from the treatment works is prohibited unless:

1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of downtime. This condition is not satisfied if adequate back up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

3. The permittee submitted notices as required under paragraph D. of this section,

B. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

C. The Director may approve an unanticipated bypass after considering its adverse effects, if the Director determines that it has met the three conditions listed in paragraph 11.A. of this section.

D. The permittee shall submit notice of an unanticipated bypass as required in section 12. A.

E. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded if that bypass is for essential maintenance to assure efficient operation.

12. NONCOMPLIANCE NOTIFICATION

A. The permittee shall by telephone report any of the following within twenty-four (24) hours of discovery at (toll free) 1-800-282-9378:

1. Any noncompliance which may endanger health or the environment;

2. Any unanticipated bypass which exceeds any effluent limitation in the permit; or

3. Any upset which exceeds any effluent limitation in the permit.

4. Any violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit.

B. For the telephone reports required by Part 12.A., the following information must be included:

1. The times at which the discharge occurred, and was discovered;

2. The approximate amount and the characteristics of the discharge;

3. The stream(s) affected by the discharge;

4. The circumstances which created the discharge;

5. The names and telephone numbers of the persons who have knowledge of these circumstances;

6. What remedial steps are being taken; and

7. The names and telephone numbers of the persons responsible for such remedial steps.

C. These telephone reports shall be confirmed in writing within five days of the discharge and submitted to the appropriate Ohio EPA district office. The report shall include the following:

1. The limitation(s) which has been exceeded;

2. The extent of the exceedance(s);

3. The cause of the exceedance(s);

4. The period of the exceedance(s) including exact dates and times;

5. If uncorrected, the anticipated time the exceedance(s) is expected to continue, and

6. Steps being taken to reduce, eliminate, and/or prevent occurrence of the exceedance(s).

D. Compliance Schedule Events:

If the permittee is unable to meet any date for achieving an event, as specified in the schedule of compliance, the permittee shall submit a written report to the appropriate district office of the Ohio EPA within 14 days of becoming aware of such situation. The report shall include the following:

1. The compliance event which has been or will be violated;

2. The cause of the violation;

3. The remedial action being taken;

4. The probable date by which compliance will occur; and

5. The probability of complying with subsequent and final events as scheduled.

E. The permittee shall report all instances of noncompliance not reported under paragraphs A, B, or C of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraphs B and C of this section.

F. Where the permittee becomes aware that it failed to submit any relevant application or submitted incorrect information in a permit application or in any report to the director, it shall promptly submit such facts or information.

13. RESERVED

14. DUTY TO MITIGATE

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

15. AUTHORIZED DISCHARGES

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than, or at a level in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such violations may result in the imposition of civil and/or criminal penalties as provided for in Section 309 of the Act and Ohio Revised Code Sections 6111.09 and 6111.99.

16. DISCHARGE CHANGES

The following changes must be reported to the appropriate Ohio EPA district office as soon as practicable:

A. For all treatment works, any significant change in character of the discharge which the permittee knows or has reason to believe has occurred or will occur which would constitute cause for modification or revocation and reissuance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Notification of permit changes or anticipated noncompliance does not stay any permit condition.

B. For publicly owned treatment works:

1. Any proposed plant modification, addition, and/or expansion that will change the capacity or efficiency of the plant;

2. The addition of any new significant industrial discharge; and

3. Changes in the quantity or quality of the wastes from existing tributary industrial discharges which will result in significant new or increased discharges of pollutants.

C. For non-publicly owned treatment works any proposed facility expansions, production increases, or process modifications, which will result in new, different, or increased discharges of pollutants.

Following this notice, modifications to the permit may be made to reflect any necessary changes in permit conditions, including any necessary effluent limitations for any pollutants not identified and limited herein. A determination will also be made as to whether a National Environmental Policy Act (NEPA) review will be required. Sections 6111.44 and 6111.45, Ohio Revised Code, require that plans for treatment works or improvements to such works be approved by the Director of the Ohio EPA prior to initiation of construction.

D. In addition to the reporting requirements under 40 CFR 122.41(l) and per 40 CFR 122.42(a), all existing manufacturing, commercial mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic pollutant which is not limited in the permit. If that discharge will exceed the highest of the "notification levels" specified in 40 CFR Sections 122.42(a)(1)(i) through 122.42(a)(1)(iv).

2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" specified in 122.42(a)(2)(i) through 122.42(a)(2)(iv).

17. TOXIC POLLUTANTS

The permittee shall comply with effluent standards or prohibitions established under Section 307 (a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement. Following establishment of such standards or prohibitions, the Director shall modify this permit and so notify the permittee.

18. PERMIT MODIFICATION OR REVOCATION

A. After notice and opportunity for a hearing, this permit may be modified or revoked, by the Ohio EPA, in whole or in part during its term for cause including, but not limited to, the following:

1. Violation of any terms or conditions of this permit;

2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

3. Change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

B. Pursuant to rule 3745-33-04, Ohio Administrative Code, the permittee may at any time apply to the Ohio EPA for modification of any part of this permit. The filing of a request by the permittee for a permit modification or revocation does not stay any permit condition. The application for modification should be received by the appropriate Ohio EPA district office at least ninety days before the date on which it is desired that the modification become effective. The application shall be made only on forms approved by the Ohio EPA.

19. TRANSFER OF OWNERSHIP OR CONTROL

This permit may be transferred or assigned and a new owner or successor can be authorized to discharge from this facility, provided the following requirements are met:

A. The permittee shall notify the succeeding owner or successor of the existence of this permit by a letter, a copy of which shall be forwarded to the appropriate Ohio EPA district office. The copy of that letter will serve as the permittee's notice to the Director of the proposed transfer. The copy of that letter shall be received by the appropriate Ohio EPA district office sixty (60) days prior to the proposed date of transfer;

B. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) shall be submitted to the appropriate Ohio EPA district office within sixty days after receipt by the district office of the copy of the letter from the permittee to the succeeding owner;

At anytime during the sixty (60) day period between notification of the proposed transfer and the effective date of the transfer, the Director may prevent the transfer if he concludes that such transfer will jeopardize compliance with the terms and conditions of the permit. If the Director does not prevent transfer, he will modify the permit to reflect the new owner.

20. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

21. SOLIDS DISPOSAL

Collected screenings, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes into waters of the state. For publicly owned treatment works, these shall be disposed of in accordance with the approved Ohio EPA Sludge Management Plan.

22. CONSTRUCTION AFFECTING NAVIGABLE WATERS

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

23. CIVIL AND CRIMINAL LIABILITY

Except as exempted in the permit conditions on UNAUTHORIZED DISCHARGES or UPSETS, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

24. STATE LAWS AND REGULATIONS

Nothing in this permit shall be construed to preclude the institution of any legal action nor relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act.

25. PROPERTY RIGHTS

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

26. UPSET

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "upset," see Part III, Paragraph 1, DEFINITIONS.

27. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

28. SIGNATORY REQUIREMENTS

All applications submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR 122.22.

All reports submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR Section 122.22.

29. OTHER INFORMATION

A. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

B. ORC 6111.99 provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $25,000 per violation.

C. ORC 6111.99 states that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $25,000 per violation.

D. ORC 6111.99 provides that any person who violates Sections 6111.04, 6111.042, 6111.05, or division (A) of Section 6111.07 of the Revised Code shall be fined not more than $25,000 or imprisoned not more than one year, or both.

30. NEED TO HALT OR REDUCE ACTIVITY

40 CFR 122.41(c) states that it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with conditions of this permit.

31. APPLICABLE FEDERAL RULES

All references to 40 CFR in this permit mean the version of 40 CFR which is effective as of the effective date of this permit.

Part IV. STORM WATER POLLUTION PREVENTION PLANS

A storm water pollution prevention plan (plan) shall be developed to address each outfall that discharges to waters of the state that contains storm water associated with industrial activity. Storm water pollution prevention plans shall be prepared in accordance with good engineering practices. The plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. Facilities must implement the provisions of the storm water pollution prevention plan required under this part as a condition of this permit.

A. Deadlines for Plan Preparation and Compliance.

1. The plan for a storm water discharge associated with industrial activity:

   a. shall be prepared within six months of the effective date of this permit (and updated as appropriate);
   b. shall provide for implementation and compliance with the terms of the plan within twelve months of the effective date of this permit.

2. Upon a showing of good cause, the Director may establish a later date for preparing and compliance with a plan for a storm water discharge associated with industrial activity.

B. Signature and Plan Review.

1. The plan shall be signed in accordance with Part VI, and be retained on-site at the facility which generates the storm water discharge.

2. The permittee shall make plans available upon request to the Ohio EPA Director, or authorized representative, or Regional Administrator of U.S. EPA, or in the case of a storm water discharge associated with industrial activity which discharges through a municipal separate storm sewer system, to the operator of the municipal system.

3. The Director may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this Part. Within 30 days of such notification from the Director, the permittee shall make the required changes to the plan and shall submit to the Director a written certification that the requested changes have been made.

4. All storm water pollution prevention plans required under this permit are considered reports that shall be available to the public under Section 308(b) of the Act. The permittee may claim any portion of a storm water pollution plan as confidential in accordance with 40 CFR Part 2 and does not have to release any portion of the plan describing facility security measures (such as provided for in Part IV.D.7.b.(8) of this permit). An interested party wishing a copy of a discharger's SWP3 will have to contact the Ohio EPA to obtain a copy.

C. Keeping Plans Current.

The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, that has a significant effect on the potential for the discharge of pollutants to the waters of the State or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under Part IV.D.2 of this permit, or otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Amendments to the plan may be reviewed by Ohio EPA in the same manner as Part IV.B above.

D. Contents of Plan. The plan shall include, at a minimum, the following items:

1. Pollution Prevention Team - Each plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team that are responsible for developing the storm water pollution prevention plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.

2. Description of Potential Pollutant Sources. Each plan shall provide a description of potential sources which may reasonably be expected to add significant amounts of pollutants to storm water discharges or which may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. Each plan shall identify all activities and significant materials which may potentially be significant pollutant sources. Each plan shall include, at a minimum:

   a. Drainage.

      (1) A site map indicating an outline of the drainage area of each storm water outfall, each existing structural control measure to reduce pollutants in storm water runoff, surface water bodies, locations where significant materials are exposed to precipitation, locations where major spills or leaks identified under Part IV.D.2.c of this permit have occurred, and the locations of the following activities where such activities are exposed to precipitation: fueling stations, vehicle

Part IV. STORM WATER POLLUTION PREVENTION PLANS (continued)

D. (continued)

and equipment maintenance and/or cleaning areas, loading/unloading areas, locations used for the treatment, storage or disposal of wastes, liquid storage tanks, processing areas and storage areas.

(2) For each area of the facility that generates storm water discharges associated with industrial activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow, and an estimate of the types of pollutants which are likely to be present in storm water discharges associated with industrial activity. Flows with a significant potential for causing erosion shall be identified.

b. Inventory of Exposed Materials. An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of three years prior to the date of the issuance of this permit and the present; method and location of on-site storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff between the time of three years prior to the date of the issuance of this permit and the present; the location and a description of existing structural and non-structural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.

c. Spills and Leaks. A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at the facility after the date of three years prior to the effective date of this permit.

d. Sampling Data. A summary of existing discharge sampling data describing pollutants in storm water discharges from the facility.

e. Risk Identification and Summary of Potential Pollutant Sources. A narrative description of the potential pollutant sources at the following areas: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and on-site waste disposal practices. The description shall specifically list any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g. biochemical oxygen demand, etc.) of concerns shall be identified.

3. Measures and Controls. Each facility covered by this permit shall develop a description of storm water management controls appropriate for the facility, and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls:

a. Good Housekeeping - Good housekeeping requires the maintenance of a clean, orderly facility.

b. Preventive Maintenance - A preventive maintenance program shall involve inspection and maintenance of storm water management devices (e.g. cleaning oil/water separators, catch basins) as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems.

c. Spill Prevention and Response Procedures - Areas where potential spills can occur, and their accompanying drainage points shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean up should be available to personnel.

d. Inspections - *In addition to or as part of the comprehensive site evaluation required under Part IV.4. of this permit,* qualified facility personnel shall be identified to inspect designated equipment and areas of the facility at appropriate intervals specified in the plan. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained.

e. Employee Training - Employee training programs shall inform personnel at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The plan shall identify periodic dates for such training.

f. Recordkeeping and Internal Reporting Procedures - A description of incidents such as spills, or other discharges, along with other information describing the quality and quantity of storm water discharges shall be included in the plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.

g. Non-Storm Water Discharges

(1) The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges. The certification shall include the identification of potential significant sources of non-storm water at the site, a description of the results of any

Part IV. STORM WATER POLLUTION PREVENTION PLANS (continued)

D. (continued)

test and/or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the on-site drainage points that were directly observed during the test. Such certification may not be feasible if the facility operating the storm water discharge associated with industrial activity does not have access to an outfall, manhole, or other point of access to the ultimate conduit which receives the discharge. In such cases, the source identification section of the storm water pollution plan shall indicate why the certification required by this part was not feasible, along with the identification of potential significant sources of non-storm water at the site. A discharger that is unable to provide the certification required by this paragraph must notify in accordance with Part IV.A of this permit.

(2) Except for flows from fire fighting activities, sources of non-storm water listed in Part VI of this permit that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

h. Sediment and Erosion Control - The plan shall identify areas which, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify measures to limit erosion.

i. Management of Runoff - The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (practices other than those which control the source of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The plan shall provide that measures determined to be reasonable and appropriate shall be implemented and maintained. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity (see Parts IV.D.2.(b), (d) and (e) of this permit) shall be considered when determining reasonable and appropriate measures. Appropriate measures may include: including vegetative swales and practices, reuse of collected storm water (such as for a process or as an irrigation source), inlet controls (such as oil/water separators), snow management activities, infiltration devices, and wet detention/retention devices.

4. Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct site compliance evaluations at appropriate intervals specified in the plan, but, except as provided in paragraph IV.D.4.d, in no case less than once a year. Such evaluations shall provide:

a. Material handling areas and other potential sources of pollution identified in the plan in accordance with paragraph IV.D.2 of this permit shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Structural storm water management measures, sediment and control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

b. Based on the results of the inspection, the description of potential pollutant sources identified in the plan in accordance with paragraph IV.D.2 of this permit and pollution prevention measures and controls identified in the plan in accordance with paragraph IV.D.3 of this permit shall be revised as appropriate within two weeks of such inspection and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than twelve weeks after the inspection.

c. A report summarizing the scope of the inspection, personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph IV.D.4.b of the permit shall be made and retained as part of the storm water pollution prevention plan for at least three years. The report shall be signed in accordance with Part VI.B of this permit.

5. Additional requirements for storm water discharges associated with industrial activity through municipal separate storm sewer systems serving a population of 100,000 or more.

In addition to the applicable requirements of this permit, facilities covered by this permit must comply with applicable requirements in municipal storm water management programs developed under NPDES permits issued for the discharge of the municipal separate storm sewer system that receives the facility's discharge, provided the discharger has been notified of such conditions.

6. Consistency with other plans. Storm water pollution prevention plans may reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans developed for the facility under section 311 of the Act or Best Management Practices (BMP) Programs otherwise required by a NPDES permit for the facility as long as such requirement is incorporated into the storm water pollution prevention plan.

7. Additional requirements for storm water discharges associated with industrial activity from facilities subject to SARA Title III, Section 313 requirements are not applicable to Section 313 water priority chemicals in gaseous or non-soluble liquid or solid [at atmospheric pressure and temperature] forms. In addition to the requirements of Parts IV.D.1 through 4 of this permit and other applicable conditions of this permit, storm water pollution prevention plans for facilities subject to reporting requirements under SARA Title III, Section 313 for chemicals which are classified as "Section 313 water priority chemicals" in accordance with the definition in Part VI of this permit, shall describe and ensure the implementation of practices which are necessary to provide for conformance with the following guidelines:

Part IV. STORM WATER POLLUTION PREVENTION PLANS (continued)

D. (continued)

(6) Facility site runoff other than from areas covered by (1), (2), (3) or (4). Other areas of the facility (those not addressed in paragraphs (1), (2), (3) or (4)), from which runoff which may contain Section 313 water priority chemicals or spills of Section 313 water priority chemicals could cause a discharge shall incorporate the necessary drainage or other control features to prevent discharge of spilled or improperly disposed material and ensure the mitigation of pollutants in runoff or leachate.

(7) Preventive maintenance and housekeeping. All areas of the facility shall be inspected at specific intervals for leaks or conditions that could lead to discharges of Section 313 water priority chemicals or direct contact of storm water with raw materials, intermediate materials, waste materials or products. In particular, facility piping, pumps, storage tanks and bins, pressure vessels, process and material handling equipment, and material bulk storage area shall be examined for any conditions or failures which could cause a discharge. Inspection shall include examination for leaks, wind blowing, corrosion, support or foundation failure, or other forms of deterioration or non-containment. Inspection intervals shall be specified in the plan and shall be based on design and operational experience. Different areas may require different inspection intervals. Where a leak or other condition is discovered which may result in significant releases of Section 313 water priority chemicals to the drainage system, corrective action shall be immediately taken or the unit or process shut down until corrective action can be taken. When a leak or non-containment of a Section 313 water priority chemical has occurred, contaminated soil, debris, or other material must be promptly removed and disposed in accordance with Federal, State, and local requirements and as described in the plan.

(8) Facility security. Facilities shall have the necessary security systems to prevent accidental or intentional entry which could cause a discharge. Security systems described in the plan shall address fencing, lighting, vehicular traffic control, and securing of equipment and buildings.

(9) Training. Facility employees and contractor personnel using the facility shall be trained in and informed of preventive measures at the facility. Employee training shall be conducted at intervals specified in the plan, but not less than once per year, in matters of pollution control laws and regulations, and in the storm water pollution prevention plan and the particular features of the facility and its operation which are designed to minimize discharges of Section 313 water priority chemicals. The plan shall designate a person who is accountable for spill prevention at the facility and who will set up the necessary spill emergency procedures and reporting requirements so that spills and emergency releases of Section 313 water priority chemicals can be isolated and contained before a discharge of a Section 313 water priority chemical can occur. Contractor or temporary personnel shall be informed of facility operation and design features in order to prevent discharges or spills from occurring.

8. Additional Requirements for Salt Storage. Storage piles of salt used for deicing or other commercial or industrial purposes and which generate a storm water discharge associated with industrial activity which is discharged to a waters of the United States shall be enclosed or covered to prevent exposure to precipitation, except for exposure resulting from adding or removing materials from the pile within two years of the effective date of this permit. Piles do not need to be enclosed or covered where storm water from the pile is not discharged to waters of the State.

Part V. NUMERIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Coal Pile Runoff Effluent Limitations. Any discharge of coal pile runoff is authorized to discharge as of the effective date of this permit and shall comply with the following effluent limitations as expeditiously as practicable, but no later than three years after the effective date of this permit. Coal pile runoff shall not be diluted with storm water or other flow in order to meet these limitations.

Units	Parameter	Daily Minimum	Daily Maximum
mg/l	Total Suspended Solids	-	50
S.U.	pH	6.0	9.0

Any untreated overflow from facilities designed, constructed and operated to treat the volume of coal pile runoff which is associated with a 10 year, 24-hour rainfall event shall not be subject to the limitation for total suspended solids. It is the permittee's responsibility to demonstrate to the Ohio EPA that a 10 year, 24-hour rainfall event has occurred and the volume of the overflow to which the Total Suspended Solids effluent limitation does not apply.

B. Monitoring Requirements. Only the activities described in the following matrix and associated definitions are required to conduct monitoring. The monitoring required in the following matrix shall be conducted annually. Monitoring shall be initiated within twelve months of the effective date of this permit and henceforth on an annual basis, weather conditions permitting. A permittee may, in lieu of annual monitoring, certify that industrial materials are not exposed to storm water; such certification shall be submitted to the Ohio EPA upon request of the Director.

1. MONITORING REQUIREMENTS MATRIX

Reporting Units	Parameter	INDUSTRIAL ACTIVITY CATEGORIES											
		a	b[1]	c	d	e	f	g	h	i	j	k	l
mg/l	Oil and Grease		X	X	X	X	X	X	X	X	X	X	X
mg/l	5-day Biochemical Oxygen Demand		X							X		X	
mg/l	Chemical Oxygen Demand		X	X	X	X	X		X	X			X
mg/l	Total Suspended Solids		X		X	X	X	X	X	X	X	X	X
mg/l	Total Kjeldahl Nitrogen			X								X	
mg/l	Phosphorus											X	
S.U.	pH		X	X	X	X	X	X	X	X	X	X	X
TU$_a$	Acute Toxicity												
Hours	Duration of Storm Event		X	X	X	X	X	X	X	X	X	X	X
Inches	Precipitation		X	X	X	X	X	X	X	X	X	X	X
Hours	Duration Between Storm Events*		X	X	X	X	X	X	X	X	X	X	X
Gallons	Volume (est)		X	X	X	X	X	X	X	X	X	X	X
mg/l	Nitrate-Nitrogen												
mg/l	Nitrite-Nitrogen												
µg/l	Lead, Total		X	X					X				
µg/l	Cadmium, Total		X[2]	X									
µg/l	Copper, Total		X[2]				X	X	X		X		
µg/l	Arsenic, Total		X[2]	X			X						
µg/l	Chromium, Total		X[2]	X			X						
mg/l	Ammonia												
µg/l	Magnesium, Total			X									

Part V. NUMERIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

B. (continued)

treated or surface protected wood at any wood preserving or wood surface facilities are required to monitor such storm water that is discharged from the facility.

f. Wood Treatment Using Chromium-Arsenic Formulations. Facilities with storm water discharges associated with industrial activity from areas that are used for wood treatment, wood surface application or storage of treated or surface protected wood at any wood preserving or wood surface facilities are required to monitor such storm water that is discharged from the facility.

g. Coal Pile Runoff. Facilities with storm water discharges associated with industrial activity from coal pile runoff are required to monitor such storm water that is discharged from the facility.

h. Battery Reclaimers. Facilities with storm water discharges associated with industrial activity from areas used for storage of lead acid batteries, reclamation products, or waste products, and areas used for lead acid battery reclamation (including material handling activities) at facilities that reclaim lead acid batteries are required to monitor such storm water that is discharged from the facility.

i. Airports. At airports with over 50,000 flight operations per year, facilities with storm water discharges associated with industrial activity from areas where aircraft or airport deicing operations occur (including runways, taxiways, ramps, and dedicated aircraft deicing stations) are required to monitor such storm water that is discharged from the facility.

j. Coal-fired Steam Electric Facilities. Facilities with storm water discharges associated with industrial activity from coal handling sites at coal fired steam electric power generating facilities (other than discharges in whole or in part from coal piles subject to storm water effluent guidelines at 40 CFR 423 - which are not eligible for coverage under this permit) are required to monitor such storm water that is discharged from the facility.

k. Animal Handling / Meat Packing. Facilities with storm water discharges associated with industrial activity from animal handling areas, manure management (or storage) areas, and production waste management (or storage) areas that are exposed to precipitation at meat packing plants, poultry packing plants, and facilities that manufacture animal and marine fats and oils, are required to monitor such storm water that is discharged from the facility.

l. Additional Facilities. Facilities with storm water discharges associated with industrial activity that:

(1) come in contact with storage piles for solid chemicals used as raw materials that are exposed to precipitation at facilities classified as SIC 30 (Rubber and Miscellaneous Plastics Products) or SIC 28 (Chemicals and Allied Products);

(2) are from those areas at automobile junkyards with any of the following: (A) over 250 auto/truck bodies with drivelines (engine, transmission, axles, and wheels), 250 drivelines, or any combination thereof (in whole or in parts) are exposed to storm water; (B) over 500 auto/truck units (bodies with or without drivelines in whole or in parts) are stored exposed to storm water; or (C) over 100 units per year are dismantled and drainage or storage of automotive fluids occurs in areas exposed to storm water;

(3) come into contact with lime storage piles that are exposed to storm water at lime manufacturing facilities;

(4) are from oil handling sites at oil fired steam electric power generating facilities;

(5) are from cement manufacturing facilities and cement kilns (other than discharges in whole or in part from material storage piles subject to storm water effluent guidelines at 40 CFR 411 - which are not eligible for coverage under this permit);

(6) are from ready-mixed concrete facilities; or

(7) are from ship building and repairing facilities;

are required to monitor such storm water discharged from the facility.

3. Sample Type. Take a minimum of one grab sample from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The grab sample shall be taken during the first thirty minutes of the discharge. If the collection of a grab sample during the first thirty minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first thirty minutes was impracticable.

Part V. NUMERIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

B. (continued)

Reporting Units	Parameter	INDUSTRIAL ACTIVITY CATEGORIES											
		a	b*	c	d	e	f	g	h	i	j	k	l
µg/l	Magnesium, Dissolved			X									
mg/l	Total Dissolved Solids			X									
mg/l	Total Organic Carbon			X									
µg/l	Barium, Total			X									
mg/l	Cyanide, Total			X									
µg/l	Mercury, Total			X									
µg/l	Selenium, Total			X									
µg/l	Silver, Total			X									
µg/l	Pentachlorophenol				X								
µg/l	Nickel, Total							X			X		
µg/l	Zinc, Total							X			X		
#/100ml	Fecal Coliform											X	

* Time between the storm event when sampling is being conducted and the last storm event producing rainfall greater than 0.1 inches.

(1) and any pollutant limited in an effluent guideline or categorical pretreatment standard which the facility is subject.

(2) and the primary ingredient used in the deicing materials used at the site (e.g., ethylene glycol, urea, etc.).

(3) Facilities that are classified as SIC 33 only because they manufacture pure silicon and/or semiconductor grade silicon are not required to monitor for this parameter.

2. Industrial Activity Categories Definitions

a. Section 313 of SARA Title III Facilities. As of the effective date of this permit, facilities with storm water discharges associated with industrial activity that are subject to requirements to report releases into the environment under Section 313 of SARA Title III for chemicals which are classified as 'Section 313 water priority chemicals' are not (as they may have been in a previous permit) required to monitor storm water that is discharged from the facility unless required by paragraphs V.B.2.b through B.2.l.

b. Primary Metal Industries. Facilities with storm water discharges associated with industrial activity classified as Standard Industrial Classification (SIC) 33 (Primary Metal Industry) are required to monitor such storm water that is discharged from the facility.

c. Land Disposal Units/Incinerators/BIFs. Facilities with storm water discharges associated with industrial activity from any active or inactive landfill, land application sites or open dump without a stabilized final cover that has received any industrial wastes from a facility with a Standard Industrial Classification (SIC) of between 20-39 (manufacturing); and incinerators (including Boilers and Industrial Furnaces (BIFs)) that burn hazardous waste and operate under interim status or a permit under Subtitle C of RCRA, are required to monitor such storm water that is discharged from the facility.

d. Wood Treatment Using Chlorophenolic Formulations. Facilities with storm water discharges associated with industrial activity from areas that are used for wood treatment, wood surface application or storage of treated or surface protected wood at any wood preserving or wood surface facilities are required to monitor such storm water that is discharged from the facility.

e. Wood Treatment Using Creosote Formulations. Facilities with storm water discharges associated with industrial activity from areas that are used for wood treatment, wood surface application or storage of

Part V. NUMERIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

B. (continued)

4. Sampling Waiver. When a discharger is unable to collect samples due to adverse climatic conditions, the discharger must submit in lieu of sampling data a description of why samples could not be collected, including available documentation of the event. Adverse climatic conditions which may prohibit the collection of samples includes weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

5. Representative Discharge. When a facility has two or more outfalls that, based on a consideration of features and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may test the effluent of one of such outfalls and report that the quantitative data also applies to the substantially identical outfalls. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area (e.g. low (under 40%), medium (40% to 65%) or high (above 65%)) shall be provided.

C. **Toxicity Testing.** *Not Required.*

D. **Alternative Certification of "Not Present or No Exposure."** You are not subject to the analytical monitoring requirement of this part provided: you make a certification for a given outfall, or on a pollutant-by-pollutant basis in lieu of monitoring required under this part, that material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, industrial machinery or operations, or significant materials from past industrial activity that are located in areas of the facility within the drainage area of the outfall are not presently exposed to storm water and are not expected to be exposed to storm water for the certification period; and your certification is signed in accordance with Attachment VI.G and retained in the SWP3. If you cannot certify for an entire period, you must note the date exposure was eliminated and perform any monitoring required up until that date.

Part VI. OTHER STORM WATER REQUIREMENTS, DEFINITIONS AND AUTHORIZATION

A. **Failure to Certify.** Any facility that is unable to provide the certification required under paragraph IV.D.3.g.(1) (testing for non-storm water discharges), must notify the Director within 180 days of the effective date of this permit. Such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water discharges to the storm sewer; and why adequate tests for such storm sewers were not feasible.

B. **Signatory Requirements.** All storm water pollution prevention plans, reports, certifications or information either submitted to the Director (and/or the operator of a large or medium municipal separate storm sewer system), or that this permit requires be maintained by the permittee, shall be signed.

1. a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25,000,000 (in second-quarter 1980 dollars) if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

   c. For a municipality: State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g. Regional Administrators of EPA).

2. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to the Director.

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

   c. Changes to authorization. If an authorization under paragraph VI.B.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph VI.B.2. must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

   d. Certification. Any person signing documents under this section shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

C. **Definitions.**

"Section 313 water priority chemical" means a chemical or chemical categories which are: 1) are listed at 40 CFR 372.65 pursuant to Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986, also titled the Emergency Planning and Community Right-to-Know Act of 1986; 2) are present at or above threshold levels at a facility subject to SARA Title III, Section 313 reporting requirements; and 3) that meet at least one of the following criteria: (i) are listed in Appendix D of 40 CFR 122 on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols) or Table V (certain toxic pollutants and hazardous substances); (ii) are listed as a hazardous substance pursuant to section 311(b)(2)(A) of the Act at 40 CFR 116.4; or (iii) are pollutants for which EPA has published acute or chronic water quality criteria.

"Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

"Significant spills" includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under section 311 of the Clean Water Act (see 40 CFR 110.10 and CFR 117.21) or section 102 of CERCLA (see 40 CFR 302.4).

Part VI. OTHER STORM WATER REQUIREMENTS, DEFINITIONS AND AUTHORIZATION (continued)

C. (continued)

"Storm Water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

"Definition of Storm Water Associated with Industrial Activity" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program. For the categories of industries identified in subparagraphs (i) through (x) of this subsection, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in subparagraph (xi), the term includes only storm water discharges from all areas listed in the previous sentence (except access roads) where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally or municipally owned or operated that meet the description of the facilities listed in this paragraph (i)-(xi)) include those facilities designated under 40 CFR 122.26(a)(1)(v). The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (xi) of this paragraph);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285) 29, 311, 32 (except 323), 33, 3441, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations meeting the definition of a reclamation area under 40 CFR 434.11(l)) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator;

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;

(v) Landfills, land application sites, and open dumps that have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under Subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but not limited to those classified as Standard Industrial Classification 5015 and 5093;

(vii) Steam electric power generating facilities, including coal handling sites;

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (i)-(vii) or (ix)-(xi) of this subsection are associated with industrial activity;

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with 40 CFR 503;

(x) Construction activity - This category of industrial activity is not regulated under this permit.

Part VI. OTHER STORM WATER REQUIREMENTS, DEFINITIONS AND AUTHORIZATION (continued)

C. (continued)

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25, (and which are not otherwise included within categories (ii)-(x)).

"SWPPP" means storm water pollution prevention plan to be completed as a condition of this permit (see Part IV of this permit).

"Time-weighted composite" means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.

"Waste pile" means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

"10-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable reoccurrence interval of once in 10 years. This information is available in "Weather Bureau Technical Paper No. 40,", May 1961 and "NOAA Atlas 2," 1973 for the 11 Western States, and may be obtained from the National Climatic Center of the Environmental Data Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

"Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

EPA Region 5 Records Ctr.
349835

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State of Ohio Environmental Protection Agency

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June 12, 2003

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Mr. Gary M. Stanczuk
DaimlerChrysler Corporation
CIMS 482-00-51
800 Chrysler Drive
Auburn Hills, Michigan 48326-2757

Dear Mr. Stanczuk:

The applications submitted for an Underground Injection Control (UIC) Class V 5X26 Area Permit to Drill and UIC Class V 5X26 Area Permit to Operate have been reviewed by Ohio EPA's Division of Drinking and Ground Waters, Underground Injection Control Unit. The UIC Unit has recommended that the Director issue the above referenced Class V Permits as your proposals comply with all applicable Ohio UIC Rules.

Therefore, a Class V Area Permit to Drill, and a Class V Area Permit to Operate are issued to you today in **FINAL** form. The permits are effective on the date of issuance. Signed copies of the final permits are enclosed.

You are hereby notified that these actions of the Director are final and may be appealed to the Environmental Review Appeals Commission (Commission) pursuant to Section 3745.04 of the Ohio Revised Code. This appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. A copy of the appeal is also requested to be sent to the Office of the Attorney General, Environmental Enforcement Section. An appeal may be filed with the Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

for M.B.

Michael G. Baker, Chief
Division of Drinking and Ground Waters

CHRYSLERISSUE.ltr

Enclosure

cc: Tom Winston, Chief, SWDO (w/enclosure)
Lindsay Taliaferro III, UIC Manager
File

RECEIVED
JUN 16 2003
STATIONARY
ENVIRONMENTAL & ENERGY

OHIO ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF DRINKING AND GROUND WATERS
UNDERGROUND INJECTION CONTROL 5X26 AREA PERMIT TO DRILL AND PERMIT TO OPERATE CLASS V INJECTION WELLS

Ohio Permit Nos. UIC 05-57-10-PTD-V
UIC 05-57-10-PTO-V

OHIO E.P.A.
JUN 12 2003
ENTERED DIRECTOR'S JOURNAL

Applicant: DaimlerChrysler Corporation

Address: 1000 Chrysler Drive
Auburn Hills Michigan 48326

Telephone: (248) 576-7365

Facility Name: Dayton Thermal Products

Facility Location: 1600 Webster Street, Dayton, Ohio

Latitude 39° 46' 57.3", Longitude 84° 10' 55.6"
South Plant: Section 5, North Plant: Section 6, T1 R7

Montgomery County

Description: The purpose of the injection is to create a ground water containment system to prevent the off-site migration of chlorinated volatile organic compounds and establish hydraulic control of ground water flow at the site. In addition, the reinjected ground water will be augmented with sodium lactate to promote the reductive dechlorination of the chlorinated volatile organic compounds present in the aquifer.

Issuance Date: June 12, 2003

Effective Date: June 12, 2003

Expiration Date: June 12, 2008

I certify this to be an accurate copy of the official document on file in the offices of the Ohio Environmental Protection Agency.

By _____ Date 6/12/03

The above named applicant is hereby ISSUED a 5X26 Area Permit to Drill and a 5X26 Area Permit to Operate for the above described underground injection wells pursuant to Sections 6111.043 and 6111.044 of the Ohio Revised Code and to Chapter 3745-34 of the Ohio Administrative Code. Issuance of this 5X26 Permit to Drill and 5X26 Permit to Operate does not constitute expressed or implied approval or agreement that, if constructed and/or modified in accordance with the specifications and/or information accompanying the permit applications, the above described activity will be in compliance with applicable State and Federal laws and rules and regulations. This 5X26 Area Permit to Drill and 5X26 Area Permit to Operate is issued subject to the attached conditions which are hereby incorporated and made a part hereof.

Expiration Date: This permit shall expire at midnight on the expiration date indicated above, unless terminated or modified under Chapter 3745-34 of the Ohio Administrative Code.

Christopher Jones, Director
OHIO ENVIRONMENTAL PROTECTION AGENCY

PART I
GENERAL PERMIT COMPLIANCE

A. EFFECT OF PERMIT

The permittee is authorized to engage in the drilling and operation of 5X26 Class V underground injection wells in accordance with Chapter 3745-34 of the Ohio Administrative Code (OAC) and the conditions of these permits. Notwithstanding any other provisions of these permits, the permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of injection or formation fluids into underground sources of drinking water (USDWs) if the presence of that material may cause a violation of any primary drinking water regulation under OAC Chapter 3745-81 or may otherwise adversely affect the health of persons. Any underground injection activity not specifically authorized in these permits is prohibited. Compliance with these permits during their term constitutes compliance for purposes of enforcement, with Sections 6111.043 and 6111.044 of the Ohio Revised Code (ORC). Such compliance does not constitute a defense to any action brought under ORC Sections 6109.31, 6109.32 or 6109.33 or any other common or statutory law other than ORC Sections 6111.043 and 6111.044. Issuance of these permits does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law. Nothing in these permits shall be construed to relieve the permittee of any duties under applicable state and federal law, regulations, or permits.

B. PERMIT ACTIONS

1. Modification, Revocation, Reissuance and Termination. The Director may, for cause or upon request from the permittee, modify, revoke and reissue, or terminate these permits in accordance with OAC Rules 3745-34-07, 3745-34-23, and 3745-34-24. Also, the permits are subject to minor modifications for cause as specified in OAC Rule 3745-34-25. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes, or anticipated noncompliance on the part of the permittee does not stay the applicability or enforceability of any permit condition.

2. Transfer of Permits. These permits may be transferred to a new owner or operator only if they are modified or revoked and reissued pursuant to OAC Rule 3745-34-22(A), 3745-34-23, 3745-34-24, 3745-34-25(D) or 3745-34-26(L)(3), as applicable.

C. SEVERABILITY

The provisions of these permits are severable, and if any provision of these permits or the application of any provision of these permits to any circumstance is held invalid, the application of such provision to any other circumstances and the remainder of these permits shall not be affected thereby.

D. CONFIDENTIALITY

In accordance with OAC Rule 3745-34-03 any information submitted to the Ohio EPA pursuant to these permits may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping words "confidential business information" on each page containing such information. If no claim is made at the time of submission, the Ohio EPA may make the information available to the public without further notice. If a claim is asserted, documentation for the claim must be tendered and the validity of the claim will be assessed in accordance with the procedures in OAC Rule 3745-34-03. If the documentation for the claim of confidentiality is not received, the Ohio EPA may deny the claim without further inquiry. Claims of confidentiality for the following information will be denied:

1. The name and address of the permittee;

2. Information which deals with the existence, absence or level of contaminants in receiving water.

E. DUTIES AND REQUIREMENTS (OAC RULE 3745-34-26)

1. Duty to Comply. The permittee shall comply with all applicable UIC regulations and conditions of these permits, issued in accordance with OAC Rule 3745-34-19. Any permit noncompliance constitutes a violation of ORC Chapter 6109. or 6111. and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application. Such noncompliance also may be grounds for enforcement action under other applicable state and federal law.

2. Penalties for Violations of Permit Conditions. Any person who violates a permit requirement is subject to injunctive relief, civil penalties, fines and/or other enforcement action under ORC Chapters 6111., 6109., or 3734. Any person who knowingly or recklessly violates permit conditions may be subject to criminal prosecution.

3. Continuation of Expiring Permits.
   Duty to Reapply. If the permittee wishes to continue an activity regulated by these permits after the expiration date of these permits, the permittee shall

submit a complete application for new permits at least 180 days before expiration of these permits.

4. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense, for a permittee in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of these permits.

5. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

6. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of these permits. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of these permits.

7. Duty to Provide Information. The permittee shall furnish to the Director, within a time specified, any information which the Director may request in order to determine whether cause exists for renewing, modifying, revoking and reissuing, or terminating these permits. To determine compliance with these permits, or to issue new permits the permittee shall furnish to the Director, upon request, copies of all records required to be kept by these permits.

8. Inspection and Entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

   a. Enter permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of these permits;

   b. Have access at reasonable times to and copy any records that are kept under the conditions of these permits;

   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under these permits; and

d. Sample or monitor at reasonable times for the purposes of assuring permit compliance or as otherwise authorized by ORC Chapter 6111. and OAC Chapter 3745-34, any substances or parameters at any location.

9. Records.

a. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all reports required by these permits for a period of at least five (5) years from the date of the sample, measurement or report or for the duration of the permitted life of the wells, whichever is longer.

b. The permittee shall maintain records of all data required to complete the permit application forms for permits and any supplemental information submitted under OAC Rule 3745-34-16 for a period of at least five (5) years from the date the applications were signed. These periods may be extended by request of the Director during that period of time.

c. The permittee shall retain records concerning the nature and composition of all injected fluids for three (3) years after the project has been completed.

d. The permittee shall continue to retain such records after the retention period specified by paragraphs (a) to (c) above, unless he delivers the records to the Director or obtains written approval from the Director to discard the records.

e. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

f. Records of monitoring information shall include the following as applicable pursuant to OAC Rule 3745-34-26(J)(3):

i. The date, exact place, and time of sampling or measurements;

ii. The name(s) of the individual(s) who performed the sampling or measurements;

iii. A precise description of sampling methodology;

iv. The date(s) analyses or measurements were performed;

v. The name(s) of the individual(s) who performed the analyses or measurements and the laboratory that performed the analyses ormeasurements;

vi. The analytical techniques or methods used; and

vii. All results of such analyses.

10. Signatory Requirements. All reports or other information, required to be submitted by these permits or requested by the Director, shall be signed and certified in accordance with OAC Rule 3745-34-17.

11. Reporting Requirements.

a. Planned Changes. The permittee shall give written notice to the Director, as soon as possible, of any planned physical alterations or additions to the permitted facility. Within ten (10) days of the verbal notification, or of the commencement of construction, the permittee shall give written notice to the Director with justification of any planned physical alterations to the permitted well(s).

b. Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

c. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of these permits shall be submitted no later than thirty (30) days following each schedule date.

d. Twenty-four (24) Hour Reporting.

1. The permittee shall report to the Director any noncompliance which may endanger health or the environment. Appropriate information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which must be reported orally within 24 hours:

i. Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water.

ii. Any noncompliance with a permit condition, or malfunction of the injection system, which may cause unpermitted fluid migration into or between underground sources of drinking water.

2. A written submission also shall be provided within five (5) business days of the time the permittee becomes aware of the circumstances of such noncompliance. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, the anticipated time it is expected to continue; and if the noncompliance has or has not been corrected, and steps taken or

planned to reduce, eliminate and prevent recurrence of the noncompliance.

e. Other Noncompliance. The permittee shall report all other instances of noncompliance not otherwise reported at the time monitoring reports are submitted. The reports shall contain the information listed in permit condition 11(d)(2) above.

f. Other Information. When the permittee becomes aware of failure to submit any relevant facts in the permit applications or that incorrect information was submitted in a permit application or in any report to the Director, the permittee shall submit such facts and corrected information within ten (10) days.

g. The Director shall be notified immediately, in writing, if the person responsible for certification of documents pursuant to OAC Rule 3745-34-17 is changed.

F. PLUGGING AND ABANDONMENT

1. Plan for Plugging and Abandonment. Before any well installed pursuant to this permit is taken out of service, the permittee shall submit to the Ohio Environmental Protection Agency a plan for the plugging and abandonment of such well. The required plan shall specify procedures and contain such other provisions as are necessary to ensure that no movement of fluids into an underground source of drinking water is allowed. After review and acceptance of this plan by the Ohio Environmental Protection Agency, that plan shall automatically become a condition of this permit.

2. Abandonment Requirements. Injection wells declared as temporarily abandoned shall be maintained in strict compliance with Rule 3745-9-09 of the OAC to ensure that the well will not endanger underground sources of drinking water during the period of temporary abandonment. Injection wells declared as permanently abandoned shall be plugged in accordance with Rule 3745-9-10(C) of the OAC.

3. Plugging Report. Within 30 days after plugging the well, the permittee shall submit a plugging report to the Director. The report shall be certified as accurate by the person who performed the plugging operation and shall contain a statement defining the plugging procedure.

G. CORRECTIVE ACTION

1. Should routine monitoring or any other information indicate that primary drinking water standards as defined in Chapter 3745-81 of the OAC are, or may be, exceeded in any underground source of drinking water beyond the property boundary, or any monitored or other parameters are being significantly degraded in underground sources of drinking water not permitted for underground injection and as a consequence of the injection well operation, the permittee shall develop a corrective action plan. Such plan must include a determination of the nature, rate, and extent of the degradation. The plan may also be required to include appropriate remedial actions such as: additional chemical treatment, discontinuance of injection operations and/or others yet to be determined.

2. The plan for corrective action shall be submitted to the Director within 30 days of the date that indications of a violation of Chapter 3745-81 are noted, and are subject to approval by the Ohio EPA prior to implementation.

PART II
SPECIAL CONDITIONS

A. WELL CONSTRUCTION AND COMPLETION

All well construction and operations shall be conducted in accordance with the specifications submitted with the applications for this permit. Activities conducted under this permit include, but are not limited to, the following:

Injection Well Installation.

Up to ten (10) injection wells shall be drilled/installed to a depth of approximately 80 feet with the well screen interval extending from a depth of approximately 20 feet to 80 feet. Drilling and construction shall be supervised by a knowledgeable hydrogeologist or engineer representing the facility.

B. WELL OPERATION

1. Injection Zone. The injection zone is the Upper Great Miami Buried Valley Aquifer.

2. Injectate Quality Limits. Injectate shall be comprised of extracted ground water amended with sodium lactate. Constituents present in reinjected ground water shall not exceed the following limits:

1,1,1-Trichloroethane	0.710 mg/l
1,1-Dichloroethene	0.126 mg/l
1,2-Dichloroethane	0.114 mg/l
Carbon Tetratchloride	0.114 mg/l
Cis-1, 2-Dichloroethene	1.050 mg/l
Tetrachloroethene	1.913 mg/l
Trichloroethene	5.381 mg/l
Vinyl Chloride	0.114 mg/l

If at any time analyses indicate that the constituent limits established for reinjected ground water have been exceeded, the Director shall require that the permittee take corrective actions to bring the injected fluids back within the limits established in these permits. Further injection will be prohibited until the permittee adequately demonstrates that the exceedance has been corrected.

3. Injection Rate.

The maximum injection rate per well shall not exceed 100 gallons per minute (gpm).

C. MONITORING

1. Injected Fluids. To be monitored:

   a. Daily for average rate and injection volume; reported monthly;

   b. Monthly for 1,1,1-Trichloroethane; 1,1-Dichloroethene; 1,2-Dichloroethane; Carbon Tetratchloride; Cis-1, 2-Dichloroethene; Tetrachloroethene; Trichloroethene; and Vinyl Chloride; reported monthly;

   c. Quarterly for 1,2-Dichloropropane and 1,1,2-Trichloroethane; reported quarterly.

   d. Annually for Antimony; Arsenic; Barium; Cadmium; Chromium; Cyanide; Lead; Mercury; and Selenium; reported annually.

D. REPORTING

The permittee shall submit monitoring reports to the Ohio EPA, Division of Drinking and Ground Waters, Underground Injection Control Unit by the 15th day of the month following each month that monitoring results are required in accordance with schedules described in Part II(B) of this permit at the following address:

Ohio EPA
Division of Drinking and Ground Waters
Underground Injection Control Unit
Lazarus Government Center
122 South Front Street
P.O. Box 1049
Columbus, Ohio 43216-1049

Reports shall contain information regarding types of tests and methods used to generate monitoring data, as specified in Part I(E)(~~10~~ 9) of this permit.

E. AGENCY INVOLVEMENT

Personnel from the Ohio EPA have unrestricted right of entry to the wells, as detailed in Part I (E)(8) of this permit.

F. GENERAL

The wells shall be constructed in such a manner that prevents the movement of the injectate of any fluid into any underground source of drinking water if the injectate or fluid may cause of violation of any primary drinking water rule under Chapter 3745-81 of the Ohio Administrative Code not included in this permitted remediation project or may otherwise adversely affect the health of persons.

Issuance of these permits presumes compliance on the part of the permittee with all applicable sections of OAC Rules 3745-34-26, 3745-34-27, all parts of OAC Rule 3745-34-20, effect of a Permit, and Chapter 6111. of the Ohio Revised Code.

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

EPA Region 5 Records Ctr.
349836

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

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** PZ-7I **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 55.4 to 53.4 feet below grade
DATE COMPLETED: November 11-12, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 53.4 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 Quartz Sand **SETTING:** 55 to 46.3 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 46.3 to 41.3 feet below grade
OBSERVER: Dave Strand	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade
ELEVATION OF RP: 750.12	**STATIC WATER LEVEL:** 25.7 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
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 **SETTING:** 65.6 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand **SETTING:** 89 to 65 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 65 to 64 feet below grade
OBSERVER: Mark Hemstreet	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade.
ELEVATION OF RP: 751.19	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 750.82	**DURATION:** ~60 minutes **VOLUME:** ~100 gallons
REMARKS: PZ-9D is located in the south parking lot along the south property line south of Building 40B by existing well MWA-4.	

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

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

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

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

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** MW-11S **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 29.1 to 19.1 feet below grade
DATE COMPLETED: November 24, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 19.1 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	***SAND PACK SIZE & TYPE:*** *Global #5 and #7 Quartz Sand* **SETTING:** 28 to 16 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 16 to 15 feet below grade
OBSERVER: Mark Hemstreet	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite to grade
ELEVATION OF RP: 751.84	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump
ELEVATION OF TOP OF PVC CASING: 751.50	**DURATION:** ~60 minutes **VOLUME:** ~100 gallons
REMARKS: MW-11S is located near the southeast corner of Building 3A and in the southeast corner of the property near existing wells MWB-3 and MWC-3.	

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

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

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

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO:** PZ-15I **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO:** 10 **SETTING:** 50.1 to 48.1 feet below grade
DATE COMPLETED: November 22, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **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 FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	10	Augered; 0.8 foot brown topsoil then Sand and gravel, fine to coarse; some cobbles.	
10	12	Sand and gravel, fine to very coarse; trace cobbles; brown; dry.	3.1
20	22	Gravel, fine to very coarse; some fine to very coarse sand; trace cobbles; trace clay and silt; brown; saturated at 20 feet.	1.8
30	32	As above to 31 feet; then Sand, fine; little medium sand; little silt; trace clay; brown; saturated.	3.9
40	42	Gravel, very coarse; some fine to coarse gravel; trace coarse sand; brown; saturated.	3.1
50	52	Sand fine to coarse; little silt; brown; saturated. Bottom 4-inches are Silt; trace clay; brown; moist.	1.6
		End of boring. Total depth augered = 50 feet. Total depth split spooned = 52 feet.	

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

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

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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 **SETTING:** 19.6 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand **SETTING:** 30 to 17.7 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade. **SETTING:** 17.7 to 0 feet below grade
OBSERVER: Dave Strand	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 751.92	**STATIC WATER LEVEL:** 23.5 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump **DURATION:** ~60 minutes **YIELD:** ~100 gallons
ELEVATION OF TOP OF PVC CASING: 751.57	
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 **SETTING:** 60.2 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:** 62 to 58.3 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:** 58.3 to 56.3 feet below grade
OBSERVER: Mark Hemstreet	
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 FEET FROM	TO	DESCRIPTION	PID READINGS (ppm)
0	5	Augered.	
5	7	Sand, medium to coarse; some gravel; unsorted; brown; dry.	0.0
10	12	Sand and gravel; unsorted; trace clay; brown.	0.0
20	22	Sand, medium to coarse, and gravel; unsorted; brown; saturated.	0.0
30	32	Sand, medium to coarse; some gravel; unsorted; brown; saturated.	0.0
40	42	Sand, medium, grading to coarse sand; brown; saturated.	1.0
50	52	Sand, medium; little coarse sand; trace gravel; brown; saturated.	1.1
60	62	Sand, fine to medium; trace coarse sand; trace clay; brown; moist.	0.0
		End of boring. Total depth augered = 60 feet. Total depth split spooned = 62 feet.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** MW-20S **PAGE:** 1 **OF** 1 **PAGES**
SITE LOCATION: Dayton Thermal Products Plant 1600 Webster Street Dayton, Ohio 45404	**SCREEN SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SLOT NO.:** 10 **SETTING:** 27.8 to 17.8 feet below grade
DATE COMPLETED: November 12, 1997	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 17.8 to 0 feet below grade
DRILLING COMPANY: Moody's of Dayton, Inc. P.O. Drawer 509 Miamisburg, Ohio 45343-0509	**SAND PACK SIZE & TYPE:** Global #5 Quartz Sand **SETTING:** 27 to 16 feet below grade
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Split Spoon (2-foot X 2-inch)	**SEAL TYPE:** 1/4-inch Pel Plug coated bentonite pellets **SETTING:** 16 to 12 feet below grade
OBSERVER: Dave Strand	
REFERENCE POINT (RP): Grade	**BACKFILL TYPE:** Quick Grout granular bentonite and 3/8-inch bentonite chips to grade.
ELEVATION OF RP: 748.59	**STATIC WATER LEVEL:** 21.7 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** surge and pump **DURATION:** 30 minutes **VOLUME:** 30 gallons
ELEVATION OF TOP OF PVC CASING: 748.24	
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 FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	27	Augered; see geologic log for MW-20S for geology description to 27 feet below grade.	
30	32	Sand, medium to coarse; little fine sand; brown; saturated.	
40	42	Sand and gravel; some cobbles; brown; saturated.	1.0
50	52	As above with layers of sand, medium; some fine to coarse sand; brown; saturated.	2.3
60	62	Sand, and gravel; trace cobbles; trace silt; brown; saturated.	5.8
65	67	As above.	2.4
70	72	As above.	2.1
80	82	As above.	1.1
86	87	Till; clay; little silt, sand, and gravel dispersed unevenly in clay matrix; gray; damp.	2.4
		End of boring. Total depth augered = 86 feet. Total depth split spooned = 87 feet.	

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

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

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

Estimated

Digital photo: MVC-0355

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

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

OVM 580B

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 1600 WEBSTER STREET, DAYTON, OHIO Distribution	SCREEN: 2" Sched 40 PVC DIAMETER: Deep: 88-86 Intermediate: 52-50 SLOT NO. 10
DATE COMPLETED: 3/26/01, 3/27/01	SETTING: Shallow: 33.5-18.5
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK: #6 Silica sand
Dave = driller, Don & Nick helpers	SETTING: Deep: 89-84; Inter: 52.5-48, Shallow: 34-16.5
DRILLING METHOD: ROTO SONIC	CASING 2" Sched 40 PVC
SAMPLING METHOD: Roto sonic; continuous 4" core x10'	SETTING: Deep: 86-grade; Inter: 50-grade; Shallow: 18.5-grade
OBSERVER: ~~DVS~~ MCP	SEAL TYPE: Medium Bentonite chips
REFERENCE POINT: grade	SETTING: Back plugs 99-89, 84-52.5, 48-34, 16.5-2.5
REFERENCE POINT ELEVATION: DP019=751.9 DP021=751.2 > Average = ~751.5	DEVELOPMENT: pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs/Nest
SURFACE COMPLETION: FLUSH GRADE	WATER LEVEL: ~725.0 from 3/24/01 onsite fluid levels; ~26.5' below grade
REMARKS: dry-bor-MW0255-d MW0265-C	YIELD:
Digital photos MVC-0295 + MVC-0305	

Estimated

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION (751.5 − 733 = 18.5; 751.5 − 718 = 33.5)	OVM 5808 PID READING (ppm) feet	ppm
		0-3 feet Fill, no recovery. 0-0.3 Asphalt		
3.0	4.0	Sand + gravel; f-m; ——; grey; dry	1	8
4.0	9.0	Sand + gravel; f-f; tr. m gvl; brown; dry	3	4
9.0	10.0	Sluff of 3-4'	5	2
10.0	15.0	Sand + gravel, f-f; tr. m. gvl; tr. crs gvl; dry; brown	10	4
15.0	19.0	Sand + gvl; f-f, tr. m gvl; dry grey	14	16
19.0	20.0	same as 15-19; saturated from drilling	18	11
20.0	20.5	Sand + gvl, m-f; tr. m gvl; brown; saturated from drilling	22	1
20.5	27.0	Sand + gvl; vf-f; tr. m. gvl; 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	

18.5

33.5

50

52

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

DEPTH IN FEET		GEOLOGIC DESCRIPTION	PID READING	
FROM	TO		feet	ppm
55.0	55.5	silty SAND; vf; grey, sat	58	3
55.5	55.8	CLAY, firm, grey, moist	62	0
55.8	56.3	silty SAND, vf; grey, sat	65	0
56.3	58.3	CLAY, firm, grey, moist	68	0
58.3	58.6	CLAY, firm, brown, moist	72	1
58.6	59.0	Sand + gravel; m-f, tr. m gvl, tr crs gvl, brn, sat.	75	1
59.0	66.0	Sand + gravel; m-f; tr. m gvl; tr. crs gvl; tr. cob, brn sat	78	0
66.0	69.0	Sand + gravel; m-f; tr. m gvl; tr. cob; brown, sat.	82	0
69.0	79.0	same as 66-69'	85	0
79.0	87.0	Sand + gravel, m-f; tr. m gvl; brown; sat; 1-inch	88	0
		oxidized layer at 84.5 and 85.5 feet bgl.	92	0
87.0	89.0	SAND; crs-vcrs; tr f gvl; grey; sat; trace amounts of	95	0
		clay on tip of drill bit. May be top of till.		
89.0	99.0	TILL, with f-m gvl; grey hard, moist		
	99.0	EOB		

Proposed well screen depths — Measured TD's

Shallow: 18.5-33.5 — 33.00'

Intermediate: 50-52 — 51.85'

Deep: 86-88 — 87.45'

Backplug bentonite: 99-89 feet

No soil samples collected due to low PID readings below the water table.

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 26 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Heidelberg Distribution 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: 2" Sched 40 PVC DIAMETER: Deep: 83-81 Inter: 53-51 SLOT NO. 10 (estimated) SETTING: Shallow: 34-32
DATE COMPLETED: 3/23/01, 3/26/01	SAND PACK: #6 Silica sand
DRILLING COMPANY: MOODY'S/BOWSER MORNER Don = driller	SETTING: Deep: 85-79 Inter: 53.5-49 Shallow: 34.5-30
DRILLING METHOD: ROTO SONIC	CASING 2" sched 40 PVC
SAMPLING METHOD: Roto sonic, continuous core 4"	SETTING: Deep: 81-grade; Inter: 51-grade; Shallow: 32-grade
OBSERVER: ~~DVS~~ MCP	SEAL TYPE: Medium Bentonite chips
REFERENCE POINT: grade - same elev. at DP043	SETTING: Bach 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 screened) photos: MVC-0275 + MVC-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; 741 − 722 = 19)	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		~~Rat~~	PPM
54.5	56.0	Silty SAND, v.f., grey; sat, soft	58	0
56.0	57.0	CLAY; firm, grey, moist	60	5
57.0	57.3	Silty SAND, vf, soft; grey sat	63	3
57.3	57.6	CLAY, firm, grey, moist	67	3
57.6	58.0	Silty SAND, vf, soft, grey, sat	70	5
58.0	59.0	CLAY, firm, grey, moist; Trace silty, f-m gvl at bottom	74	9
		1-inch.	78	5
59.0	60.5	GRAVEL, f-m; with crs-vcrs snd; brown; sat	81	0
60.5	62.0	Sand + gravel; vcrs-f; tr. m gvl, brown, sat.	83	0
62.0	69.0	Sand + gravel; m-f; tr. m gvl; brown, sat.	84	0
69.0	71.5	Sand + gravel; vcrs-f; tr. m gvl, brown, sat	87	0
71.5	78.0	Sand + gravel, m-f; tr. m gvl; tr. crs gvl, brown sat		
78.0	78.5	Silty sand + gravel; f-f; tr. m gvl; brown; sat		
78.5	79.0	Sand + gravel, f-f, tr. m gvl, brown, sat		
79.0	80.0	same as 78.5-79.		
80.0	83.0	Sand + gravel, m-f; tr. m gvl; grey, sat		
83.0	84.0	SAND, f-m; tr. crs snd; grey + brown mot, sat		
84.0	85.0	Sand + gravel, m-f; tr. m. gvl. tr. crs gvl, grey, sat		
85.0	89.0	SILT; w/vf. snd; firm, grey, wet.		
	89.0	EOB		
		Proposed well screen settings:		
		Deep: 81-83		
		Inter: 51-53 (above intermediate clay)		
		Shallow: 32-34 (2' screen below shallow till)		
		Measured Total Depths		
		Shallow 34.10		
		Int 53.70		
		Deep 84.75		

81 - 83

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

Estimated

GVM

No soils for lab analysis collected

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING (ppm) feet	ppm
0	0.3	Asphalt	2	0
0.3	3.0	Clay trace silt and sand; f-m; red brown; moist; no odor	4	0
3.0	9.0	Silty s&g; vf-vc; trace cobbles to 4"; brown; saturated from clay water	6	25
9.0	14.0	as above	8	1
14	19.0	TILL: Clay w/ little s&g vf-vc disseminated throughout; gray (upper 4" = brown); damp	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 tip 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

5

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

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING feet/ppm
59	64	TILL as above	58 0
64	65	Sand f-m; trace coarse; gray; saturated	61 0
65	69	Sand f-c; some vcs & fine gravel locally; gray; saturated	64 0
69	79	as above also trace m-c gravel; locally more fine @	66 0
		73.5-74 and 76-77 (sand f-m)	68 0
		77-79 trace f gravel only	71 3
79	85	Sand f-c; trace vcs & fine gravel; gray saturated	75 1
85	89	TILL; clay; trace sand disseminated throughout; locally silty;	78 3
		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 1600 WEBSTER STREET, DAYTON, OHIO Paper	SCREEN: 2" Sched 40 PVC DIAMETER: Deep: 80.5-78.5 Inter: 57-55 SLOT NO. 10 SETTING: Shallow: 39-37
DATE COMPLETED: 3/29/01, 3/30/01	
DRILLING COMPANY: MOODY'S/BOWSER MORNER Dave = driller, Nick & Don helpers	SAND PACK: #6 Silica SETTING: 81-76, 57.5-53, 39.5-35
DRILLING METHOD: ROTO SONIC	CASING 2" Sched. 40 PVC
SAMPLING METHOD: Rotosonic continuous core, 4"x10'	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 at RIS Paper	YIELD:

Digital photos: MVC-0315 + MVC0325

Sampled soil at 41 feet. Sample ID = PZ-28I 41 feet @ 10:35 3/18/01

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

OVM

Estimated

DEPTH IN FEET FROM	DEPTH IN FEET TO	GEOLOGIC DESCRIPTION 751 733 18 751 718 33	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	—	

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; 1+1 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 back plug 89-81 feet		
		Rig was broken down all day 3/29/01. All drilling on 3/28/01		
		All wells set 3/30/01.		
		Measured Total Depths: Deep = 81.90 Int = 58.55 Shallow = 39.80		

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 29 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Kelcor Machin+Tool 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: Deep: 79-77 2" PVC DIAMETER: Inter: 50-48 SLOT NO. 10
DATE COMPLETED: 3/19/01, 3/20/01	SETTING: Shallow: 30-15
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK: 79-75: Deep #6 Silica
Dave: driller, Nick/Ron helpers.	SETTING: 50.5-46.5: Inter. Shallow: 30.5-13
DRILLING METHOD: ROTO SONIC	CASING 77-grade 2" PVC
SAMPLING METHOD: roto sonic, continuous 10' sleeves	SETTING: 48-grade 15-grade
OBSERVER: ~~DVS~~ MCP	SEAL TYPE: Medium bentonite chips
REFERENCE POINT: grade and DP-39 @ 7	SETTING: plug break: 89-79, 75-50.5, 46.5-30.5, 13-3'
REFERENCE POINT ELEVATION: ~748.5	DEVELOPMENT: pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs Nest
SURFACE COMPLETION: FLUSH GRADE	WATER LEVEL: south end of plant ~725 so it should be ~23' bgl
REMARKS: Near DP-39	YIELD: 3/20 depth to water in casing ~25'

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

Estimated

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 + multicolored 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

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
			NA
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 ~~was~~ might be	
		between 79 + 89 feet because something firm	
		gave the cobble enough resistance to get wedged	
		in the tip of the drill bit. This would make	
		sense compared to clay/till levels @ PZ-9D and	
		NEST 34. Will plug back with bentonite 89-78.5'.	
		Proposed screen settings — Measured TD's	
		Shallow: 15-30 — 29.30'	
		Intermediate: 50-48 — 48.80'	
		Deep: 76-78' — 77.90	
		14:40 Soil sample from 28-29 feet, 115 ppm.	
		Sample ID = MW-29S 28 feet	

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

Estimated

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

photos MRC-0225 + MRC-0235

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

746 − 733 = 13 ; 746 − 718 = 28

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

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

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

84-86

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 Riser (~35 east of DP038) Digital Camera Picture MVC-0385	YIELD: Filter broke off in OVM wand. Used HNU #2

Estimated

DEPTH IN FEET FROM	DEPTH IN FEET TO	GEOLOGIC DESCRIPTION	PID READING (ppm) feet/ppm
0	6.0	Grass then Clay; trace silt and sand f-c; brown; damp; no odor	2 0
6.0	9.0	Silty, Sand & gravel; vf-vc; trace cobbles to 4", brown dry no odor	4 0
9.0	17.0	as above, slight odor ~16', no cobbles	6 1
17.0	19.0	Till; trace-little s&g disseminated throuout; gray; slightly pliable damp.	8 0
19.0	29.0	as above damp-moist; pliable; gravelly in tip	12 5
29	39.0	Silty Sand, gravel vf-vf; w/ cobbles up to 5" diameter; very poorly sorted	16 14
		brown; saturated;	18 5
39.0	49.0	as above	22 1
49	51.0	as above	26 1
51.	59.0	Sand; f-vc; trace fine and med gravel; 2 cobbles (3.5" & 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. Could not hardly push the sampler down	61 1
		Cobble lodged in tip of spoon. Approx 1 foot of TILL squeezed around	65 1

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

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION feet/PID	PID READING
			68:0
79	85 cont	the cobble and into sampler. Gray Till w/ s&g	71:1
		disseminated throughout.	74:0
		Casing is run only to 79'. No need to run additional casing	77:1
		to 85' since we will run bentonite chips up to 77' (the	82:0
		suspected top of TILL.	
		Proposed Screen Settings:	
		Shallow: 29-34 = just below upper TILL	
		Intermediate: 52-54 = roughly in the middle between shallow & deep	
		Deep: 73-75 = puts us two feet above the basal TILL in	
		the event the well should drop some when pulling casing.	
		Measured Total Depths:	
		Deep = 77.45	
		Int = 55.55	
		Shallow = 34.85	

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 Dave = driller, Nick = Helper, Ron = helper, 3/15 Jarrod = helper	SAND PACK: 75.5-70.5 #6 Silica (Global) 56.5-52 SETTING: 28.5-11
DRILLING METHOD: ROTO SONIC	CASING 72.5 to grade 2" PVC 54 to grade SETTING: 13 to grade
SAMPLING METHOD: Continuous 10' sleeves 3-4" diameter	
OBSERVER: DVS	SEAL TYPE: Medium Bentonite Chips (PureGold) Plug back 79-75.5
REFERENCE POINT: Grade	SETTING: Deep 70.5-56.5, Int 52-28.5, Shallow 11-5
REFERENCE POINT ELEVATION: ~746.3 (DP028)	DEVELOPMENT: Pumped 3-5 gpm ~1.5 hrs/Nest
STICK-UP: NA	DURATION: until sediment free
SURFACE COMPLETION: FLUSH GRADE Concrete 5' on up	WATER LEVEL: S end of plant = 725.24 west to 725.09 East should be ≈ 21' based on DP elevations & grade @ 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 "WATER LEVEL" above)	8	2
23	23.5	Sand f-m; brown; saturated	10	1
23.5	27.5	Sand vf-vc and gravel; trace silt and cobbles to 3.5" brown;	14	4
27.5	28.0	Sand f-coarse; brown saturated	18	6
28.0	29.0	Sand & gravel vf-vc; trace cobbles to 3.5" ~WT	21	6
29.0	33	"	22	16
33	34	Sand; f-c; trace fine gravel; brown Saturated Lab Soil Sample *	23	16
34	39	Sand & gravel vf-vc; brown saturated	25	18
39	40.5	Sand vf-med; trace silt brown saturated	28	18
40.5	44	Gravel; f-vc; little sand vf-vc; trace cobbles to 4.5"; brown saturated	31	6
44.0	44.5	Sand f-m; trace coarse-vc; brown; saturated	34	8
44.5	45.5	Cobbles, 2 of them, one = 3.5" one = 6" w/ s&g vf-vc	38	21
45.5	49.0	Sand; coarse; little f-m-vc; trace f-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	51 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	

Bag is bursting w/ water above the silt

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

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

MVC-0125 = Drill Site

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

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

" " Nest 38 = [748] − 85 = 663

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

" " " 34 = [749.77 DP31] − 82.5 = 667

Plug back to 75.5

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

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

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 33 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS 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	SAND PACK: #6 Silica (Global)
DRILLING COMPANY: MOODY'S/BOWSER MORNER Dave / Dave driller; Nick & Pete helpers	SETTING: Deep 83-78, Int 60-55.5, Shallow 35-17.5
DRILLING METHOD: ROTO SONIC	CASING Deep 80-grade 2" PVC SETTING: Int 57.5-grade Shallow 19.5-grade
SAMPLING METHOD: Continuous 4" x 10' plastic sleeve	
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 @ DPOH	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 DTW 19' 1535 Nest static GW elevations MW-9S = 725.25, MW-10S = 725.17, MW-11S = 725.10 Pictures on disk MVC-0035 = Rig, MVC-0045 = drillcore to 79'	YIELD:

Estimated

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

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

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING feet	Pid
37	39	Sand f-vc; trace gravel f-c; gray saturated trace 2-3" cobbles		
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
Chip

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

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 34 PAGE 1 OF PAGES 2
LOCATION: ~~DAYTON THERMAL PRODUCTS~~ Claridge Park 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: Deep 81-79' DIAMETER: Intermediate 58-56 SLOT NO. 10 slot SETTING: Shallow 31-16' 2" PVC
DATE COMPLETED: 3/6/01 - 3/7/01	
DRILLING COMPANY: MOODY'S/BOWSER MORNER Dave driller; Pete Associate driller; Nick helper	SAND PACK: #6 Silica (Global) Deep 82-77 Int 58.5-54 Shallow 31.5-14 SETTING:
DRILLING METHOD: ROTO SONIC	CASING Deep 79' to grade Intermediate 56 to grade 2" PVC
SAMPLING METHOD: Continuous 40' 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: Claridge Park 3/4 block east of Lamar & Daniel Streets	YIELD: 12:35 26.4 / 749.77 - 26.4 = 723.37 3/6/01 7AM 24.0 / 749.77 - 24 = 725.77

Estimated

Digital Camera MVC-0015 = DVS & rig by KJV, Disk file MVC-0025 = 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 & drier than 9-14'	15' = 12
19	27	Sand & gravel vf-vc, trace cobbles up to 4" diameter; trace silt; brown; damp-moist (note: also adding fair amount of water to borehole while drilling)	17 = 8
			19 = 3
27	28	Clay (TILL); some s, g & c; gray; damp; hard	21 = 12
Aside	DTW =	15' but likely from water added while drilling	23: 25
28	30	Sand vf-vc; trace silt and gravel f-m; gray; saturated Lab Sample X	25 = 57
30	34	Sand; medium; little fine to coarse; trace fine gravel; gray; saturated	28: 22
		slightly finer 32-33'	30 0
34	39	Gravel; f-c; little sand coarse; trace 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; mushy & soft; no coarse material	88 0
85.5	88.7	clay (Till); trace sand & gravel disseminated throughout;	
		f-coarse; gray damp; locally moist; no odor	
88.7	89	Sand & gravel w/ little clay in very end of retrieval	
		Driller thought it was material from above & we may have	
		went thru the clay into another s & g layer	
		11:45 DTW 24.2 — Measured TDs	
		12:35 DTW 26.4 — Deep = 80.85	
15	3/7	7:00 DTW 24.0 — Int = 57.20	
		Shallow = 30.85	
30 32	End Cap	3 5/8" = 3.625"	
	2'	Screen Slotted portion = " = '	
	5'	Screen " " 51 1/2" = 4.3'	
	10'	Screen " " 112 1/2" = 9.375'	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. West 35 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Claridge Park 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: 2" Sched 40 PVC DIAMETER: Deep: 78-76 Inter: 63-61 SLOT NO. 10 SETTING: Shallow: 31-16
DATE COMPLETED: 3/20/2001 3/21/01	SAND PACK: #6 Silica sand
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SETTING: Deep: 79-73 ; Inter: 63.5-59 Shallow: 31.5-14
DRILLING METHOD: ROTO SONIC	CASING 2" Sched 40 PVC Shallow: 16 - grade
SAMPLING METHOD: Roto sonic, continuous 10' sleeves	SETTING: Deep: 76-grade, Inter: 61-grade;
OBSERVER: ~~DVB~~ 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

DEPTH IN FEET FROM	DEPTH IN FEET TO	GEOLOGIC DESCRIPTION (749 - 749; 733 - 718; 16 - 31)	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 multicolored; sat.	20	0
31.0	33.5	Sand + Gravel; fine-med; tr. m gvl; brown; sat	25	4
33.5	37.5	SAND, coarse; well sorted; tr. f gvl; brown, sat	29	1
37.5	38.0	Sand and gvl; crs-f; brn, sat	30	1
38.0	39.0	Same as 33.5-37.5'	33	2
39.0	48.5	Sand + gvl; crs-m; with cobbles; brown; sat.	36	5
48.5	49.0	SAND, m; brn, sat, tr coarse snd	39	2
49.0	58.0	SAND; m; brn, sat.	41	5
58.0	59.0	Sand + gravel, m-f; tr. cob; brn, sat	45	5
59.0	64.5	Sand + gravel, m-m; tr. cob, brn, sat	48	1
64.5	65.0	CLAY; with f. gvl; firm, brn top 3-inch, grey bottom 3-inch, wet.	51	0
65.0	68.5	Silty sand; vf-f, w/f. gvl; tr. cob; grey; sat	53 55	0 0
68.5	69.0	CLAY with silt + f. sand; soft, grey, sat.	57 59	0 0

16'

31'

61'

63'

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL MINNESOTA	OWNER: DAIMLERCHRYSLER, DAYTON THERMAL PRODUCTS WELL NO: Nest 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 snd, 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 snd; 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 snd; tr. f. gvl; tr. cob, grey moist.	89	0
	89.0	EOB		

76' - 78'

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

Proposed screen settings:

Shallow: 16-31 feet

Intermediate: 61-63 feet

Deep: 76-78 feet

Measured Total Depths

Deep = 77.30

Int. = 62.40

Shallow = 30.85

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

Estimated

DC's OVM 5608

DEPTH IN FEET FROM	TO	Digital Camera MVC-0085 = Drill core 49-89' 95 = " " 79-89' 105 = drill location — Calibrated to 100.7 ppm — 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/red 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	32.5	TILL; top 6" brown, rest is gray v hard some s, g & cobbles to 5" disseminated throughout; damp	28	100
32.5 33.5	35.5	clayey silt w/ s, g, & cobbles to 5"; very soft, locally sappy; gray	30	4
35.5	37	s & g; vf-vc; trace	33	2
37.0	38.0	Sand vf-fine; gray; saturated Raining	36	1
38	39.0	Sand & g; f-vc; gray; saturated	38	1
39	44	as above w/ little cobbles to 3.5" - becomes more sandy near bottom 1'	42	1
44	49	Gravel; m-vc; trace fine gravel & vc sand; trace cobbles up to 5" diameter in upper	45	1
		2.5'; then no cobbles; gray; saturated; very coarse material	48	1
	Aside	Quit for the day		

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

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

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

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 37 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Claridge 1600 WEBSTER STREET, DAYTON, OHIO Park	SCREEN: Deep 99-97 2" PVC DIAMETER: Int 49-47 SLOT NO. 10 SETTING: shallow 28-13
DATE COMPLETED: 3/15; 16 and 19/01	SAND PACK: Deep 99-95 #6 Silica (Global) SETTING: Int 50-45 shallow 28.5-11
DRILLING COMPANY: MOODY'S/BOWSER MORNER Dave: driller, Nick: helper Jarrod-helper (15th) Don-Helper (16th)	
DRILLING METHOD: ROTO SONIC	CASING Deep 97 to grade 2" PVC SETTING: Int 47 to grade shallow 13 to grade
SAMPLING METHOD: 10' continuous core ~3-4"	
OBSERVER: DVS	SEAL TYPE: Deep 95-50 Medium Bentonite Chips Int 45-28.5 Global Brand SETTING: shallow 11-5
REFERENCE POINT: grade	
REFERENCE POINT ELEVATION: 746.12 = DP025	DEVELOPMENT: Pumped 3-5 gpm until sediment free
STICK-UP: NA	DURATION: ~1.5 hrs/nest
SURFACE COMPLETION: FLUSH GRADE Concrete 5' on up	WATER LEVEL: ~20' based on surrounding data
REMARKS: SW Corner Claridge Park	YIELD: ~726 3/16
	Digital Camera MVC0135 = drill core 145 = drill site looking 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	70	
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 throughout; 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, Took rig to shop. Will back Monday 3/19.	
		MCP will complete supervision of installation	
		Measured Total Depths: Deep=100.90, Int=47.80, Shallow=27.80	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 38 PAGE 1 OF 2 PAGES
LOCATION: DAYTON THERMAL PRODUCTS Claridge Park 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: 81-83 2" PVC DIAMETER: 56-58 15-30 SLOT NO. 10 SETTING:
DATE COMPLETED: 3/9/01 and 3/12/01	SAND PACK: #6 Silica Deep 85-79 SETTING: Intermediate 60-54 shallow 31-13
DRILLING COMPANY: MOODY'S/BOWSER MORNER Dave Driller, Pete helper	CASING Deep 81 to grade 2" PVC SETTING: Intermediate 56 to grade shallow 15 to grade
DRILLING METHOD: ROTO SONIC	SEAL TYPE: Pure Gold Medium Bentonite chips Plugged back 89-85
SAMPLING METHOD: Continuous 4" x 10' Core	SETTING: Deep 79-60, Int. 54-31; Shallow 13-5'
OBSERVER: DVS	DEVELOPMENT: pumped 3-5 gpm until sed free
REFERENCE POINT: grade	DURATION: ~1.5 hrs/nest
REFERENCE POINT ELEVATION: ~748.0 DP-29 = 748.75 slightly higher than Nest 38	WATER LEVEL: ~23' GW elevation ~725.5 @ MW-7S
STICK-UP: NA	YIELD: 3/14/01 DTW = 21.5 Elev ~726.5
SURFACE COMPLETION: FLUSH GRADE Concrete 5' on up	
REMARKS: South side of Claridge Park between baseball diamond and Claridge Community Center, Digital Camera MVC-0055 = drill core of entire hole 6S = closeup of clay 85-89' 7S = drill location 15-17' and 21-23' soil samples from closest geoprobe hole were all ND	

Estimated

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	PID READING (ppm) Feet / PID
0	0.2	grass	2' 1.0
0.2	1.5	clay w/ organics; tr sand f-c brown; moist; no odor	5' 2.1
1.5	9.0	Silty sand and gravel; vf-vc; trace cobbles to 4". very poorly sorted	8' 3.2
		light brown; damp; no odor	11 2.0
9.0	19.0	as above w/o cobbles dry	13 5.0
19	23	as above saturated from drilling water; slightly clayey 19-20. 6" fining upwards sequence 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	Lab sample at 26 13
		the upper portion and the bottom portion was pushed into the formation	28 19
		due to the coarse material	33 2.6
		Gravel f-vc; some sand vf-vc; grayish-brown; saturated	36 3.9
39	41	7' recovery Sand; vf-vc; trace fine gravel; brown; saturated	41 5
41	49	Sand and gravel; vf-vc; trace 3" cobbles; brown saturated	43 10
49	56.5	as above; up to 5" cobbles cobbles stop @ 53'	45 16
56.5	59.0	Sand m-vc; trace fine; trace fine-med gravel; brown; saturated	47 26
59	65	Plastic bag ripped all material submerged in Mud Tub, driller said	50 10
		it was all 5 & 9 as above	52 28

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		GEOLOGIC DESCRIPTION	PID READING
FROM	TO		54 30
65	69	Gravel; vf-vc; little sand vf-vc; trace cobbles to 4" diameter	51 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 1600 WEBSTER STREET, DAYTON, OHIO Janitor	SCREEN: 18-33 2" PVC Sch 40 DIAMETER: 53-55 SLOT NO. 10 SETTING: 76-78
DATE COMPLETED: 4/4/01	SAND PACK: #6 Silica
DRILLING COMPANY: MOODY'S/BOWSER MORNER 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 SETTING: 53-0 76-0
SAMPLING METHOD: 4" x 10' Continuous cores	
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 @ 7ft then shallowest BTW @ 19.5'
REMARKS: Clean City Janitor parking lot entrance	YIELD: 19' bg = high WT
Digital Camera pictures MVC-039S, 40S, 45S thru 49S	

Estimated

580B

DEPTH IN FEET FROM	TO	GEOLOGIC DESCRIPTION	OVM PID READING (ppm) Acet	PID
0	2"	asphalt	2	0
2"	1.2'	Clay; trace silt & sand & gravel vf-c; brown; moist; no odor	4	0
1.2'	9.0	Silty sand & gravel; vf-vc; trace cobbles to 4"; brown; dry; no odor	6	1
9.0	19.0	as above	8	0
19	20.0	" "	11	20
20	24.0	Silty, sandy; vf-vc; gravelly vf-f; clay; brown; trace gray mottling;	14	21
		locally compactant & locally crumbly; very poorly sorted; saturated (drillers adding H2O)	17	36
24.0	28.0	Till; trace vf-vc s & g disseminated thruout; 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 thruout; 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 thruout; gray; near dry	
85.0	86.0	Silt; trace clay; gray; moist	
86.0	87.5	Till; little s&g thruout; gray near dry	
87.5	89.0	clayey silty f-m sand; trace f-m gravel; gray; saturated	
	89	EOB	
		~11:30 done drilling	
		Measured Total Depths	
		Deep = 81.45	
		Int = 56.25	
		Shallow = 33.60	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ~~ST. PAUL, MINNESOTA~~	OWNER: DAIMLERCHRYSLER CORPORATION BORING NO. Nest 40 PAGE OF 1 PAGES 2
LOCATION: DAYTON THERMAL PRODUCTS City of Dayton 1600 WEBSTER STREET, DAYTON, OHIO	SCREEN: 2" sch40 PVC DIAMETER: SLOT NO. 10
DATE COMPLETED: 4/5/01	SETTING: 15-30, 55-57, 83-85
DRILLING COMPANY: MOODY'S/BOWSER MORNER	SAND PACK:
Dave Driller, Nick & Don helpers	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, current ~ 748-725 = 23'
REMARKS: 6 car parking lot in front the City of Dayton 520 Kiser St. Carpenter shop Well 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 4"; orange brown (oxidized rusty appearance) satur.	22	4
25.5	26.5	Till; trace vf-vc s & g disseminated throughout; gray sat	25	2
26.5	27.0	Sand; f-m; gray; sat	28	2
27.0	29.0	Gravel f-m; trace f-vc sand; trace cobbles to 3.5"; gray; sat	31	1
29.0	37.0	Sand, Gravel & cobbles to 5"; s & g vf-vc; gray sat.	34	1
37	39.0	Sand; m-vc; trace fine trace f-vc gravel; gray; sat	38	1
39.0	9:30 AM	Casing broke off in hole, went to get fishing tool to pull out casing	41	2
	10:15	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 skg; vf-vc; gray sat	88 3
87.0	89.0	Till; trace skg disseminated throughout; gray dry	
	89.0	EOB	
		Proposed screens	
		Shallow = 15-30 = 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.

CLEAN TECH

chrya11.log

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

GEOLOGIC LOG

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

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

CLEAN TECH

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
ıcation	Dayton, Ohio	Date Started	10/28/94
.ient	Chrysler Corporation	Date Completed	10/28/94
:iller	Moody's of Dayton	Drilling Method	6.25" HSA, CME 75
.evation	749.45 MSL	Page Number	1 of 2
ıter Level & Date	24.2 ft BGS 11/18/94	Logged By	Thompson

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

EAN TECH

chrysa21.log

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

GEOLOGIC LOG

:oject	Chrysler Dayton Thermal Products	Boring Number	MWA2
›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

:AN TECH

chrysa22.log

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

GEOLOGIC LOG

:oject Chrysler Dayton Thermal Products
ıcation Dayton, Ohio
.ient Chrysler Corporation
:iller Moody's of Dayton
evation 752.19 MSL
ter Level & Date 26.8 ft BGS 11/18/94

Boring Number MWA3
Date Started 11/11/94
Date Completed 11/11/94
Drilling Method 4.25" HSA, CME 75
Page Number 1 of 2
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.
:0	29-31	S6	1.8	27-22 33-40 (55)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, BG, 70 ppm Dye Test - Neg.
5	34-36	S7	1.9	35-30 28-35 (58)	Same as S6; Orange Staining	BG, BG, 70 ppm Dye Test - Neg.

AN TECH

chrysa31.log

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

GEOLOGIC LOG

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

epth BGS (ft)	Sample Int-erval	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

AN TECH

chrysa32.log

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

GEOLOGIC LOG

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

Depth BGS (ft)	Sample 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	0.8	8-13 10-12 (23)	Well Graded Sand with Gravel and Silt (SW-SM); Light Brownish Gray (5YR6/1); Dry; Medium Dense	_ BG, BG, BG Dye Test - Neg.
_ 10	9-11	S2	1.3	12-14 30-33 (44)	Same as S1; Dense; Larger Grains	_ BG, BG, 1.5 ppm Dye Test - Neg.
_ 15	14-16	S3	1.5	18-18 15-15 (33)	Well Graded Gravel with Sand (GW); Brownish Gray (5YR4/1); Dry; Dense	_ BG, BG, 0.5 ppm Dye Test - Neg.
_ 20	19-21	S4	1.7	45-90 60-90 (150)	Well Graded Gravel with Sand and Clay (GW-GC); Light Brownish Gray (5YR6/1); Dry; Very Dense	_ BG, BG, 50 ppm Dye Test - Neg.
_ 25	24-26	S5	1.9	14-16 21-25 (37)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Moist; Dense	_ BG, 8, 75 ppm Dye Test - Pos.
_ 30	29-31	S6	2.0	13-10 25-29 (35)	Poorly Graded Sand with Gravel (SP); Brownish Black (5YR2/1); Wet; Dense	_ BG, 13, 80 ppm Dye Test - Neg.
_ 35	34-36	S7	2.0	22-23 30-30 (53)	Same as S6; Very Dense	_ BG, 40, 80 ppm Dye Test - Neg.

LEAN TECH

chrya41.log

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

GEOLOGIC LOG

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

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

CLEAN TECH

chrya42.log

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

GEOLOGIC LOG

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

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

CLEAN TECH

chrya511.log

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

GEOLOGIC LOG

ct	Chrysler Dayton Thermal Products	Boring Number	MWA5
ion	Dayton, Ohio	Date Started	11/15/94
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	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
)	39-41	S8	2.0	25-19 40-7 (59)	Top foot same as S7; Bottom foot Poorly Sorted Sand (SP); Dark Yellowish Brown (10YR4/2); Dense; Wet	BG, BG, 6 ppm Dye Test - Neg.
						Well Construction Total Depth 39 Screen 29-39 Sand 27-39 Bent. 24.5-27 Grout 0-24.5 Riser 0-29 Screen is 10 Slot Screen & Riser 2" PVC

AN TECH

chrya52.log

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

GEOLOGIC LOG

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

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

CLEAN TECH

chrya61.log

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

GEOLOGIC LOG

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

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

EAN TECH

chrya62.log

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

GEOLOGIC LOG

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

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

.EAN TECH

chrybll.log

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

GEOLOGIC LOG

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

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

N TECH

chrybl2.log

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

GEOLOGIC LOG

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

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

AN TECH

chryb13.log

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

GEOLOGIC LOG

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

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

LEAN TECH

chryb21.log

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

GEOLOGIC LOG

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

Depth BGS (ft)	Sample 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	20-21 18-25 (39)	Top 1.5 ft same as S7; Bottom 0.5 ft Well Graded Gravel with Sand and Clay (GW-GC); Pale Yellowish Brown (10YR6/2); Wet; Dense	BG, 2 ppm, BG Dye Test - Neg.
45	44-46	S9	2.0	25-25 30-33 (55)	Same as bottom 0.5 foot of S8	BG, BG, BG Dye Test - Neg.
50	49-51	S10	2.0	25-27 30-30 (57)	Same as S9	BG, BG, BG Dye Test - Neg.
55	54-56	S11	2.0	25-28 25-30 (53)	Well Graded Sand with Gravel (SW); Brownish Gray (5YR4/1); Wet; Very Dense	BG, BG, BG Dye Test - Neg.
60	59-61	S12	2.0	30-32 40-75 (72)	Poorly Graded Sand (SP); Brownish Black (5YR2/1); Wet; Very Dense	BG, BG, BG Dye Test - Neg.
65	64-66	S13	2.0	35-45 32-40 (77)	Well Graded Gravel with Sand and Some Clay (SW); Brownish Black (5YR 2/1); Wet; Very Dense	BG, BG, BG Dye Test - Pos.
70	69-71	S14	2.0	35-34 40-44 (74)	Same as S13	BG, BG, BG Dye Test - Pos.

LEAN TECH

chryb22.log

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

GEOLOGIC LOG

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

pth GS ft)	Sample Interval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Relative Density or Consistency	Remarks Air Monitor Data Dye Test, WellCon
75	74-76	S15	2.0	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
Location: Dayton, Ohio
Client: Chrysler Corporation
Driller: Moody's of Dayton
Elevation: 752.13 ft MSL
Water Level & Date: 26.8 ft BGS 11/19/94

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

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

CLEAN TECH

chryb31.log

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

GEOLOGIC LOG

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

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

Well Construction

Total Depth	60
Screen	46-56
Sand	43-60
Bent.	38-43
Grout	0-38
Riser	0-46

Screen is 10 Slot Screen & Riser 2"PVC

EAN 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
ient	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 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

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

pth 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.

TECH

chryb42.log

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

GEOLOGIC LOG

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

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

AN TECH

chryb43.log

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

GEOLOGIC LOG

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

pth 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 "
-r Monitoring Data Shown as PID Readings in Breathing Zone, Borehole,
id Split Spoon Sample Respectively.

GEOLOGIC LOG

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

›pth BGS (ft)	Sample Int-erval	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.

LEAN TECH

chryb52.log

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

GEOLOGIC LOG

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

›pth ›GS :ft)	Sample Int-erval	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

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 (S 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
	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

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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	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

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chryb62.log

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

GEOLOGIC LOG

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

th S t)	Sample 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
.0		NA	NA	NA	Well Graded Gravel and Medium to Coarse Grain Sand (GW-SW); Trace fine sand, silt, and clay. No Odor or Sheen.	_ BG, BG, BG
:0		NA	NA	NA	Same as above	_ BG, BG, BG
:0		NA	NA	NA	Same as above	_ BG, BG, BG
,0		NA	NA	NA	Same as above	_ BG, BG, BG
,0		NA	NA	NA	Same as above	_ BG, BG, BG
;0		NA	NA	NA	Same as above	_ BG, BG, BG
0		NA	NA	NA	Same as above	_ BG, BG, BG
6					Soft to Firm Gray Silt and Clay with Medium to Fine Grain Sand, Trace Gravel (CL); No Odor or Sheen.	Soft Clay 76 ft Firm Clay 79 ft

AN TECH

chrycl1.log

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

GEOLOGIC LOG

ɔject	Chrysler Dayton Thermal Products	Boring Number	MWC1
ɔation	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

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chryc12.log

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

GEOLOGIC LOG

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

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

-EAN TECH

chryc21.log

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

GEOLOGIC LOG

ɔject	Chrysler Dayton Thermal Products	Boring Number	MWC2
ɛation	Dayton, Ohio	Date Started	10/18/94
ient	Chrysler Corporation	Date Completed	10/25/94
ɛller	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.

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

GEOLOGIC LOG

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

›pth BGS (ft)	Sample Int-erval	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

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

GEOLOGIC LOG

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

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

Well Construction

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

Screen is 10 Slot Screen & Riser 2" PVC

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

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** SVE-1S/SVE-1D **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:** 3-13 and 16.4 -26.4 feet below grade
DATE COMPLETED: March 5, 1998	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 3 to 0 and 16.4 to 0 feet below grade
DRILLING COMPANY: Carlo Environmental Technology 44907 Trinity Drive Clinton Township Michigan, 48038	**SAND PACK SIZE & TYPE:** Global #5 and #7 Quartz Sand **SETTING:** 1.0 foot above screens (0.5 feet of each sand type)
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	
SAMPLING METHOD: Auger Cuttings	**SEAL TYPE:** 1.5 foot of $^3/_4$-inch Cetco bentonite chips above lower screen
OBSERVER: Kai Hansen	
REFERENCE POINT (RP): Floor Surface	**BACKFILL TYPE:** 1 foot of Global #5 Quartz Sand
ELEVATION OF RP:	**STATIC WATER LEVEL:** 24 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** NA
ELEVATION OF TOP OF PVC CASING:	**DURATION:** **VOLUME:**
REMARKS: Approximately 180 feet south and 10 feet west of northeast corner of Building 40B.	

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DEPTH FEET FROM	TO	DESCRIPTION	PID READINGS (ppm)
2	4	Silty clay, brown; little ash, black.	67
4	6	Silty clay; brown; little gravel; trace sand.	30
6	8	As above.	14
8	10	Silty sand, medium with little gravel; brown.	4.3
10	12	As above.	6.2
12	14	As above.	9.2
14	16	Sand, medium to coarse with little gravel; brown.	18
16	18	As above.	8
18	20	As above.	4.3
20	22	As above.	6.1
22	24	Sand and gravel, brown.	7.2
24	26	As above.	1.5
26	27.5	As above. End of boring at 27.5	1.5

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** SVE-2S/SVE-2D **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:** 2-12 and 15-25 feet below grade
DATE COMPLETED: June 2, 1998	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Carlo Environmental Technology 44907 Trinity Drive Clinton Township Michigan, 48038	**SETTING:** 2 to 0 and 15 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 0.5 foot above screens
SAMPLING METHOD: Auger Cuttings	**SEAL TYPE:** 0.5 foot of $^3/_4$-inch Cetco bentonite chips and 1.5 feet of Pure Gold grout above lower screen, and 0.5 foot of $^3/_4$-inch Cetco bentonite chips above upper screen
OBSERVER: Kai Hansen	
REFERENCE POINT (RP): Floor Surface	**BACKFILL TYPE:** 1 foot of Global #5 Quartz Sand
ELEVATION OF RP:	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** NA
ELEVATION OF TOP OF PVC CASING:	**DURATION:** **VOLUME:**
REMARKS: Approximately 45 feet south and 120 feet west of northeast corner of Building 40B.	

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DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	0.6	Concrete.	--
0.6	10	Sand, with silt and gravel; brown.	15.2
10	25.5	Sand and gravel, tan.	4.8
	25.5	End of boring.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** SVE-3S/SVE-3D **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:** 2-12 and 15-25 feet below grade
DATE COMPLETED: June 2, 1998	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Carlo Environmental Technology 44907 Trinity Drive Clinton Township Michigan, 48038	**SETTING:** 2 to 0 and 15 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 0.5 foot above screens
SAMPLING METHOD: Auger Cuttings	**SEAL TYPE:** 0.5 foot of 3/4-inch Cetco bentonite chips and 1.5 feet of Pure Gold grout above lower screen, and 0.5 foot of 3/4-inch Cetco bentonite chips above upper screen
OBSERVER: Kai Hansen	
REFERENCE POINT (RP): Floor Surface	**BACKFILL TYPE:** 1 foot of Global #5 Quartz Sand
ELEVATION OF RP:	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** NA
ELEVATION OF TOP OF PVC CASING:	**DURATION:** **VOLUME:**
REMARKS: Approximately 125 feet south and 120 feet west of northeast corner of Building 40B.	

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DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	0.6	Concrete.	--
0.6	10	Silty sand; little clay with gravel; brown.	6.2
10	25.5	Sand and gravel.	16
	25.5	End of boring.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** SVE-4S/SVE-4D **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:** 2-12 and 15-25 feet below grade
DATE COMPLETED: June 2, 1998	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 2 to 0 and 15 to 0 feet below grade
DRILLING COMPANY: Carlo Environmental Technology 44907 Trinity Drive Clinton Township Michigan, 48038	**SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 0.5 foot above screens
SAMPLING METHOD: Auger Cuttings	**SEAL TYPE:** 0.5 foot of $^3/_4$-inch Cetco bentonite chips and 1.5 feet of Pure Gold grout above lower screen, and 0.5 foot of $^3/_4$-inch Cetco bentonite chips above upper screen
OBSERVER: Kai Hansen	
REFERENCE POINT (RP): Floor Surface	**BACKFILL TYPE:** 1 foot of Global #5 Quartz Sand
ELEVATION OF RP:	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** NA
ELEVATION OF TOP OF PVC CASING:	**DURATION:** **VOLUME:**
REMARKS: Approximately 85 feet south and 60 feet west of northeast corner of Building 40B.	

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DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	0.6	Concrete.	--
0.6	4	Silty clay with sand; little gravel; brown.	15.4
4	10	Sandy silt; little gravel; brown.	15.0
10	25.5	Sand and gravel.	8.7
	25.5	End of boring.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** SVE-5S/SVE-5D **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:** 2-12 and 15-25 feet below grade
DATE COMPLETED: June 2, 1998	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Carlo Environmental Technology 44907 Trinity Drive Clinton Township Michigan, 48038	**SETTING:** 2 to 0 and 15 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 0.5 foot above screens
SAMPLING METHOD: Auger Cuttings	**SEAL TYPE:** 0.5 foot of $^3/_4$-inch Cetco bentonite chips and 1.5 feet of Pure Gold grout above lower screen, and 0.5 foot of $^3/_4$-inch Cetco bentonite chips above upper screen
OBSERVER: Kai Hansen	
REFERENCE POINT (RP): Floor Surface	**BACKFILL TYPE:** 1 foot of Global #5 Quartz Sand
ELEVATION OF RP:	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** NA
ELEVATION OF TOP OF PVC CASING:	**DURATION:** **VOLUME:**
REMARKS: Approximately 125 feet south and 60 feet west of northeast corner of Building 40B.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\SVE5GEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	0.6	Concrete.	--
0.6	5	Silty sand, clayey silt and gravel.	13
5	12	Sand and gravel.	8.6
12	25.5	Gravel, various sizes.	12.4
	25.5	End of boring.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** SVE-6S/SVE-6D **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:** 2-12 and 15-25 feet below grade
DATE COMPLETED: June 3, 1998	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Carlo Environmental Technology 44907 Trinity Drive Clinton Township Michigan, 48038	**SETTING:** 2 to 0 and 15 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 0.5 foot above screens
SAMPLING METHOD: Auger Cuttings	**SEAL TYPE:** 0.5 foot of $^3/_4$-inch Cetco bentonite chips and 1.5 feet of Pure Gold grout above lower screen, and 0.5 foot of $^3/_4$-inch Cetco bentonite chips above upper screen
OBSERVER: Kai Hansen	
REFERENCE POINT (RP): Floor Surface	**BACKFILL TYPE:** 1 foot of Global #5 Quartz Sand
ELEVATION OF RP:	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** NA
ELEVATION OF TOP OF PVC CASING:	**DURATION:** **VOLUME:**
REMARKS: Approximately 165 feet south and 60 feet west of northeast corner of Building 40B.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\SVE6GEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	0.6	Concrete.	--
0.6	4	Black silt; coal ash?; black.	38.9
4	10	Sand, silt and gravel; black to tan.	16
10	25.5	Gravel, M to L.	12
	25.5	End of boring.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** SVE-7S/SVE-7D **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:** 2-12 and 15-25 feet below grade
DATE COMPLETED: June 3, 1998	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Carlo Environmental Technology 44907 Trinity Drive Clinton Township Michigan, 48038	**SETTING:** 2 to 0 and 15 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 0.5 foot above screens
SAMPLING METHOD: Auger Cuttings	**SEAL TYPE:** 0.5 foot of $^3/_4$-inch Cetco bentonite chips and 1.5 feet of Pure Gold grout above lower screen, and 0.5 foot of $^3/_4$-inch Cetco bentonite chips above upper screen
OBSERVER: Kai Hansen	
REFERENCE POINT (RP): Floor Surface	**BACKFILL TYPE:** 1 foot of Global #5 Quartz Sand
ELEVATION OF RP:	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** NA
ELEVATION OF TOP OF PVC CASING:	**DURATION:** **VOLUME:**
REMARKS: Approximately 120 feet south and 5 feet west of northeast corner of Building 40B.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\SVE7GEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	0.6	Concrete.	--
0.6	3	Silty topsoil; black.	30
3	6	Silty clay; brown to tan.	12
6	25.5	Gravel, various sizes	8
	25.5	End of boring.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** SVE-8S/SVE-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:** 2-12 and 15-25 feet below grade
DATE COMPLETED: June 3, 1998	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Carlo Environmental Technology 44907 Trinity Drive Clinton Township Michigan, 48038	**SETTING:** 2 to 0 and 15 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 0.5 foot above screens
SAMPLING METHOD: Auger Cuttings	**SEAL TYPE:** 0.5 foot of $^3/_4$-inch Cetco bentonite chips and 1.5 feet of Pure Gold grout above lower screen, and 0.5 foot of $^3/_4$-inch Cetco bentonite chips above upper screen
OBSERVER: Kai Hansen	
REFERENCE POINT (RP): Floor Surface	**BACKFILL TYPE:** 1 foot of Global #5 Quartz Sand
ELEVATION OF RP:	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** NA
ELEVATION OF TOP OF PVC CASING:	**DURATION:** **VOLUME:**
REMARKS: Approximately 240 feet south and 120 feet west of northeast corner of Building 40B.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\SVE8GEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	0.6	Concrete.	--
0.6	6	Silty clay; black to brown.	72
6	12	Sand and gravel; tan.	63
12	25.5	Gravel, various sizes.	16
	25.5	End of boring.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** SVE-9S/SVE-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:** 2-12 and 15-25 feet below grade
DATE COMPLETED: June 4, 1998	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Carlo Environmental Technology 44907 Trinity Drive Clinton Township Michigan, 48038	**SETTING:** 2 to 0 and 15 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 0.5 foot above screens
SAMPLING METHOD: Auger Cuttings	**SEAL TYPE:** 0.5 foot of $^3/_4$-inch Cetco bentonite chips and 1.5 feet of Pure Gold grout above lower screen, and 0.5 foot of $^3/_4$-inch Cetco bentonite chips above upper screen
OBSERVER: Kai Hansen	
REFERENCE POINT (RP): Floor Surface	**BACKFILL TYPE:** 1 foot of Global #5 Quartz Sand
ELEVATION OF RP:	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** NA
ELEVATION OF TOP OF PVC CASING:	**DURATION:** **VOLUME:**
REMARKS: Approximately 275 feet south and 10 feet west of northeast corner of Building 40B.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\SVE9GEO.LOG

DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	0.6	Concrete.	--
0.6	8	Silty clay; brown.	28
8	12	Clay and gravel; brown.	2.8
12	25.5	Gravel, various sizes.	6.2
	25.5	End of boring.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** SVE-10S/SVE-10D **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:** 2-12 and 15-25 feet below grade
DATE COMPLETED: June 3, 1998	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Carlo Environmental Technology 44907 Trinity Drive Clinton Township Michigan, 48038	**SETTING:** 2 to 0 and 15 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 0.5 foot above screens
SAMPLING METHOD: Auger Cuttings	**SEAL TYPE:** 0.5 foot of 3/4-inch Cetco bentonite chips and 1.5 feet of Pure Gold grout above lower screen, and 0.5 foot of 3/4-inch Cetco bentonite chips above upper screen
OBSERVER: Kai Hansen	
REFERENCE POINT (RP): Floor Surface	**BACKFILL TYPE:** 1 foot of Global #5 Quartz Sand
ELEVATION OF RP:	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** NA
ELEVATION OF TOP OF PVC CASING:	**DURATION:** **VOLUME:**
REMARKS: Approximately 245 feet south and 60 feet west of northeast corner of Building 40B.	

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DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	0.6	Concrete.	--
0.6	4.5	Silty clay; black.	8.4
4.5	9	Sand, medium with gravel; tan to brown.	2.6
9	13.5	Sand, fine to medium; brown.	3.2
13.5	25.5	Gravel, medium to coarse.	0.8
	25.5	End of boring.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** SVE-11S/SVE-11D **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:** 2-12 and 15-25 feet below grade
DATE COMPLETED: June 4, 1998	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC
DRILLING COMPANY: Carlo Environmental Technology 44907 Trinity Drive Clinton Township Michigan, 48038	**SETTING:** 2 to 0 and 15 to 0 feet below grade **SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 0.5 foot above screens
SAMPLING METHOD: Auger Cuttings	**SEAL TYPE:** 0.5 foot of $^3/_4$-inch Cetco bentonite chips and 1.5 feet of Pure Gold grout above lower screen, and 0.5 foot of $^3/_4$-inch Cetco bentonite chips above upper screen
OBSERVER: Kai Hansen	
REFERENCE POINT (RP): Floor Surface	**BACKFILL TYPE:** 1 foot of Global #5 Quartz Sand
ELEVATION OF RP:	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** NA
ELEVATION OF TOP OF PVC CASING:	**DURATION:** **VOLUME:**
REMARKS: Approximately 320 feet south and 100 feet west of northeast corner of Building 40B.	

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DEPTH FROM	FEET TO	DESCRIPTION	PID READINGS (ppm)
0	0.6	Concrete.	--
0.6	5	Silty sand; black to brown.	15
5	25.5	Gravel, various sizes.	8.6
	25.5	End of boring.	

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. ST. PAUL, MINNESOTA	**OWNER:** Chrysler Corporation **WELL NO.:** SVE-12S/SVE-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:** 2-12 and 15-25 feet below grade
DATE COMPLETED: June 4, 1998	**CASING SIZE & TYPE:** 2-inch diameter Schedule 40 PVC **SETTING:** 2 to 0 and 15 to 0 feet below grade
DRILLING COMPANY: Carlo Environmental Technology 44907 Trinity Drive Clinton Township Michigan, 48038	**SAND PACK SIZE & TYPE:** Global #5 Quartz Sand
DRILLING METHOD: Hollow-Stem Auger, 4 1/4-inch ID	**SETTING:** 0.5 foot above screens
SAMPLING METHOD: Auger Cuttings	**SEAL TYPE:** 0.5 foot of $^3/_4$-inch Cetco bentonite chips and 1.5 feet of Pure Gold grout above lower screen, and 0.5 foot of $^3/_4$-inch Cetco bentonite chips above upper screen
OBSERVER: Kai Hansen	
REFERENCE POINT (RP): Floor Surface	**BACKFILL TYPE:** 1 foot of Global #5 Quartz Sand
ELEVATION OF RP:	**STATIC WATER LEVEL:** 22 feet below grade
SURFACE COMPLETION: Flush grade	**DEVELOPMENT METHOD:** NA
ELEVATION OF TOP OF PVC CASING:	**DURATION:** **VOLUME:**
REMARKS: Approximately 35 feet south and 10 feet west of northeast corner of Building 40B.	

S:\TECH\3CHRY\DAYTON\HYDROGEO\SVE12GEO.LOG

DEPTH FEET FROM	TO	DESCRIPTION	PID READINGS (ppm)
0	0.6	Concrete.	--
0.6	5	Silty clay; brown.	36
5	9	Silty clay with sand; brown.	12.4
9	25.5	Gravel, various sizes	10.6
	25.5	End of boring.	

EPA Region 5 Records Ctr.
349837

Operational Summary
Initial Shake-Down Testing of the Re-Injection System
Dayton Thermal Products Site
Dayton, Ohio
September 2004

Date:		Comment
20-Sep-04		Started system using EW-1, 2, 5 and 6 set to inject to IW-1, 2, 3 and 4. EW-3 and 4 selected to discharge to the 3 air strippers. Started up System @ 14:55.
21-Sep-04		Collected Re-Injection and NPDES samples for September 2004.
22-Sep-04		Tested shut down control functions at 17:57system shut-down successfully. Tested other trip functions while system is down. After completion of testing, restarted system at 20:10. Started system using EW-1, 2, 5 and 6 set to inject to IW-1, 2, 3 and 4. EW-3 and 4 selected to discharge to the 3 air strippers.
23-Sep-04		Fault on Airstripper Number 3 shut down the system at 15:35. Investigation concludes that electrical repairs need to be completed prior to re-start of the system. Anticipate system re-start the Week of October 1, 2004

EPA Region 5 Records Ctr.
349838

July 12, 2004

Valerie Orr
Ohio Environmental Protection Agency
Division of Drinking and Ground Waters
Underground Injection Control Unit
Lazarus Government Center
122 South Front Street
Columbus, Ohio 43216-1049

Re: June 2004 Injection Monitoring Report
Dayton Thermal Products Plant
Dayton, Ohio

Dear Valerie:

In accordance with our injection permit, DaimlerChrysler has prepared the June 2004 Injection Monitoring Report for the groundwater remediation system at the Dayton Thermal Products Plant in Dayton, Ohio. During the month of June, the groundwater remediation system start-up activities were completed and the injection wells were operated on an intermittent basis.

The injection water samples were collected on June 22, 2004 (12:00) by Brian Dayton of Earth Tech at the permanent injection well sampling port located immediately down stream of the sodium lactate injection manifold. The sample was collected by opening the sample port, allowing the sample tubing to purge for several minutes and discharging the water directly in sample glassware for volatile organic compound (VOC) analysis. The sample was shipped to Lancaster Laboratories in Lancaster, Pennsylvania, for VOCs by USEPA Method 8260. The laboratory analytical results and injection well discharge rates are summarized in the attached Tables. The complete laboratory analytical results are presented in Attachment A.

"I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Very truly yours,

DaimlerChrysler

Greg Rose

Daily-Monthly Data
Monthly Re-Injection Monitoring Report
Dayton Thermal Products Site
Dayton, Ohio

Month:	Additional Information		Daily		Monthly							
June, 2004	No. Injection Wells Used	Average Injection Rate per Well	Overall Avg. Injection Rate	Total Injection Volume	1,1,1-Trichlorethane	1,1-Dicloroethene	1,2-Dichloroethane	Carbon Tetrachloride	Cis-1,2-Dichlorethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
Limits	NA	100	NA	NA	710	126	114	114	1050	1913	5381	114
Day		GPM	GPM	Gallons	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
1	0	0 0	0.0	0								
2	0	0 0	0.0	0								
3	0	0 0	0 0	0								
4	0	0 0	0 0	0								
5	0	0 0	0.0	0								
6	0	0.0	0.0	0								
7	0	0 0	0.0	0								
8	0	0 0	0 0	0								
9	0	0.0	0.0	0								
10	0	0.0	0 0	0								
11	0	0.0	0 0	0								
12	0	0 0	0.0	0								
13	0	0 0	0 0	0								
14	0	0 0	0 0	0								
15	4	5.6	22 5	32400								
16	4	15 8	63 3	91200								
17	3	16.7	50 0	72000								
18	3	8 3	25 0	36000								
19	0	0 0	0.0	0								
20	0	0 0	0 0	0								
21	0	0 0	0.0	0								
22	3	5.6	16 7	24000	<0.8	<0 8	<1.0	<1.0	4 J	<0 8	160	1 J
23	0	0 0	0.0	0								
24	0	0 0	0.0	0								
25	0	0 0	0 0	0								
26	0	0 0	0.0	0								
27	0	0 0	0 0	0								
28	0	0 0	0 0	0								
29	0	0.0	0 0	0								
30	0	0.0	0.0	0								
31												
Total				255600								

Notes The volatile organic compounds reported above were analyzed by USEPA Method 8260.
<0 8 - None detected with method detection limit.
J - Estimated Value
NA - Not Applicable.

Quarterly-Annual Data
Monthly Re-Injection Monitoring Report
Dayton Thermal Products Site
Dayton, Ohio

Frequency	Compound	Concentration	Units	Date Sampled
Quarterly	1,2-Dichoropropane	<1.0	ug/l	6/22/2004
Quarterly	1,1,2-Trichloroethane	<0.8	ug/l	6/22/2004

Notes: Above analyzed using USEPA Method 8260

Frequency	Compound	Concentration	Units	Date Sampled
Annually	Antimony	-	ug/l	NYS
Annually	Arsenic	-	ug/l	NYS
Annually	Barium	-	ug/l	NYS
Annually	Cadmium	-	ug/l	NYS
Annually	Chromium	-	ug/l	NYS
Annually	Cyanide	-	ug/l	NYS
Annually	Lead	-	ug/l	NYS
Annually	Mercury	-	ug/l	NYS
Annually	Selenium	-	ug/l	NYS

NYS - Not Yet Sampled
<1.0 - None detected and the method detection limit.
J- Estimated value

Attachment A

Laboratory Analytical Results

Lancaster Laboratories

Analysis Report

2426 New Holland Pike PO Box 12425 Lancaster, PA 17605-2425 • 717-656-2300 Fax 717-656-2681 • www.lancasterlabs.com

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 901009. Samples arrived at the laboratory on Wednesday, June 23, 2004. The PO# for this group is N99C403749-B.

Client Description	Lancaster Labs Number
Reinjection Grab Water Sample	4298115
Trip_Blank Water Sample	4298116

ELECTRONIC COPY TO	Earth Tech	Attn: Ms. Lisa Smith
ELECTRONIC COPY TO	Earth Tech	Attn: Mr. Rob Stenson
1 COPY TO	LLI	Attn: Ms. Kathy Klinefelter

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax 717-656-2681 • www.lancasterlabs.com

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

Respectfully Submitted,

Robin C. Runkle
Senior Chemist

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Lancaster Laboratories Sample No. WW 4298115

Reinjection Grab Water Sample
Site Code: SC001 RFA# ET04042
Dayton Thermal/Dayton, OH
Collected:06/22/2004 12:00 by BD

Account Number: 10160

Submitted: 06/23/2004 09:25
Reported: 06/30/2004 at 08:56
Discard: 08/30/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

RERJE SDG#: DCP95-01

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)						
05386	Vinyl Chloride	75-01-4	1.	J	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.		0.8	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	4.	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
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	160.		1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	06/26/2004 10:48	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/26/2004 10:48	Anita M Dale	n.a.

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Lancaster Laboratories Sample No. WW 4298116

Trip_Blank Water Sample
Site Code: SC001 RFA# ET04042
Dayton Thermal/Dayton, OH
Collected: n.a.

Account Number: 10160

Submitted: 06/23/2004 09:25
Reported: 06/30/2004 at 08:56
Discard: 08/30/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

TBDXY SDG#: DCP95-02TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	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
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
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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	06/26/2004 11:11	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/26/2004 11:11	Anita M Dale	n.a.

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: DaimlerChrysler Corporation
Reported: 06/30/04 at 08:57 AM

Group Number: 901009

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W041781AA	Sample number(s): 4298115-4298116							
Vinyl Chloride	N.D.	1.	ug/l	103		71-129		
1,1-Dichloroethene	N.D.	0.8	ug/l	100		79-130		
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	97		84-117		
1,1,1-Trichloroethane	N.D.	0.8	ug/l	91		83-127		
Carbon Tetrachloride	N.D.	1.	ug/l	94		77-130		
1,2-Dichloroethane	N.D.	1.	ug/l	93		77-132		
Trichloroethene	N.D.	1.	ug/l	91		87-117		
1,2-Dichloropropane	N.D.	1.	ug/l	95		80-117		
1,1,2-Trichloroethane	N.D.	0.8	ug/l	87		86-113		
Tetrachloroethene	N.D.	0.8	ug/l	91		82-126		

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: W041781AA	Sample number(s): 4298115-4298116								
Vinyl Chloride	113	110	70-151	3	30				
1,1-Dichloroethene	111	111	78-146	0	30				
cis-1,2-Dichloroethene	99	99	83-126	0	30				
1,1,1-Trichloroethane	100	101	82-135	1	30				
Carbon Tetrachloride	105	104	73-144	0	30				
1,2-Dichloroethane	97	96	73-136	1	30				
Trichloroethene	96	97	75-135	1	30				
1,2-Dichloropropane	97	99	81-121	2	30				
1,1,2-Trichloroethane	90	90	77-125	0	30				
Tetrachloroethene	93	90	75-143	2	30				

Surrogate Quality Control

Analysis Name: TCL by 8260 (water)
Batch number: W041781AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4298115	92	94	88	87
4298116	91	92	89	86
Blank	93	90	90	89
LCS	93	96	90	89

*- 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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Analysis Report

Quality Control Summary

Client Name: DaimlerChrysler Corporation Group Number: 901009
Reported: 06/30/04 at 08:57 AM

Surrogate Quality Control

MS	93	93	90	91
MSD	92	92	89	89
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.

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.

Acct 10160 Grp # 901009 4298115-16

DAIMLERCHRYSLER — Chain-of-Custody

3731 B

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601
Phone Number: (717) 656-2300
Fax Number: (717) 656-2681

Project Name: DCX Dayton
Site Location: Dayton, Ohio
Site Code:
RFA Number: ET4042
DaimlerChrysler PM: Gary Stanczuk

Consultant: Earth Tech
Address: 4135 Technology PKWY Sheboygan WI 53083
Consultant PM: Rob Branson
Phone: 920 458 8711 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	8260									Remarks
Reinject	6-22	1200	✓	GW	3	✓									
Trip blank					2	✓									

Sampler(s): Bryan Dwyer

Cooler ID #

Relinquished by: Bryan Dwyer — Date: 6-22 — Time: 1400

Relinquished by: — Date: — Time:

Is RFA sampling complete? Yes No

Samples Relinquished under Airbill No.

Received by: — Date: — Time: — Custody Seal Intact? Yes No

Received for Laboratory by: Mary Beth Stoner — Date: 06/23/01 — Time: 0925 — Custody Seal Intact? Yes No

Temperature (corrected) 2 C

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

Page ____ of ____

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Environmental Sample Administration
Receipt Documentation Log

Client/Project: DaimlerChrysler (OH)

Date of Receipt: 06/23/04

Time of Receipt: 0925

Source Code: 50

Shipping Container Sealed: (Y) / N

Custody Seal Present: (Y) / N

Custody Seal Intact: (Y) / N / NA

Package: (Chilled) / Not Chilled

Unpacker Emp. No.: 1607

Temperature of Shipping Containers	
#1	#2
Thermometer ID: HBI 20066	~~Thermometer ID:~~
Temp.: 2 °C	~~Temp.:~~
(Temp. Bottle) / Surface Temp.	~~Temp. Bottle / Surface Temp.~~
(Wet Ice) / Dry Ice / Ice Packs	~~Wet Ice / Dry Ice / Ice Packs~~
Ice Present? (Y) / N Loose / (Bagged)	~~Ice Present? Y / N Loose / Bagged~~
#3	#4
~~Thermometer ID:~~	~~Thermometer ID:~~
~~Temp.:~~	~~Temp.:~~
~~Temp. Bottle / Surface Temp.~~	~~Temp. Bottle / Surface Temp.~~
~~Wet Ice / Dry Ice / Ice Packs~~	~~Wet Ice / Dry Ice / Ice Packs~~
~~Ice Present? Y / N Loose / Bagged~~	~~Ice Present? Y / N Loose / Bagged~~

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
Mary Beth Stomer	06/23/04	1020	Unpacking
[illegible]	6-23-04	1025	(Place in Storage) or Entry
[illegible]	6-23-04	1045	Remove from Storage Entry
			Place in Storage or Entry
			Entry

EPA Region 5 Records Ctr.
349839

August 12, 2004

Valerie Orr
Ohio Environmental Protection Agency
Division of Drinking and Ground Waters
Underground Injection Control Unit
Lazarus Government Center
122 South Front Street
Columbus, Ohio 43216-1049

Re: July 2004 Injection Monitoring Report
Dayton Thermal Products Plant
Dayton, Ohio

Dear Valerie:

In accordance with our injection permit, DaimlerChrysler has prepared the July 2004 Injection Monitoring Report for the groundwater remediation system at the Dayton Thermal Products Plant in Dayton, Ohio. During the month of July, the groundwater remediation system start-up activities were ongoing and the injection wells were operated on an intermittent basis.

The injection water samples were collected on July 13, 2004 (13:20) by Steve Cervi of Earth Tech at the permanent injection well sampling port located immediately down stream of the sodium lactate injection manifold. The sample was collected by opening the sample port, allowing the sample tubing to purge for several minutes and discharging the water directly in sample glassware for monthly volatile organic compound (VOC) analysis and annual metals analysis. The samples were shipped to Lancaster Laboratories in Lancaster, Pennsylvania, for analysis. The analytical methods used are summarized below:

- VOCs - USEPA Method SW-846 8260B (Preparation SW-846 5030B)
- Mercury – USEPA Method SW-846 7470B
- Arsenic, Selenium, Antimony, Barium, Cadmium, Chromium an Lead – USEPA Method SW-846 6010B
- Total Cyanide - USEPA Method SW-846 9012A

The laboratory analytical results and injection well discharge rates are summarized in the attached Tables. The complete laboratory analytical results are presented in Attachment A.

"I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Sincerely,

Gregory M. Rose
Senior Manager
Assessment, Deactivation & Remediation

Daily-Monthly Data
Monthly Re-Injection Monitoring Report
Dayton Thermal Products Site
Dayton, Ohio
July 2004

Month:	Additional Information		Daily		Monthly							
July, 2004	No. Injection Wells Used	Average Injection Rate per Well	Overall Avg. Injection Rate	Total Injection Volume	1,1,1-Trichlorethane	1,1-Dicloroethene	1,2-Dichloroethane	Carbon Tetrachloride	Cis-1,2-Dichlorethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
Limits	NA	100	NA	NA	710	126	114	114	1050	1913	5381	114
Day		GPM	GPM	Gallons	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
1	0	0 0	0 0	0								
2	0	0 0	0 0	0								
3	0	0 0	0 0	0								
4	0	0 0	0 0	0								
5	0	0 0	0 0	0								
6	0	0 0	0 0	0								
7	0	0 0	0 0	0								
8	0	0 0	0 0	0								
9	1	2 1	2 1	3,000								
10	0	0 0	0 0	0								
11	0	0 0	0 0	0								
12	1	2 1	2 1	3,000								
13	4	48 8	195 0	280,800	56	4 J	<1	8	27	240	110	3 J
14	4	75 2	300 6	432,900								
15	4	30 5	121 9	175,500								
16	0	0 0	0 0	0								
17	0	0 0	0 0	0								
18	0	0 0	0 0	0								
19	0	0 0	0 0	0								
20	4	23 1	92 5	133,200								
21	4	65 5	262 1	377,400								
22	0	0 0	0 0	0								
23	0	0 0	0 0	0								
24	0	0 0	0 0	0								
25	0	0 0	0 0	0								
26	0	0 0	0 0	0								
27	0	0 0	0 0	0								
28	0	0 0	0 0	0								
29	0	0 0	0 0	0								
30	0	0 0	0 0	0								
31	0	0 0	0 0	0								
Total				1,405,800								

Notes The volatile organic compounds reported above were analyzed by USEPA Method 8260.
<0 8 - None detected with method detection limit
J - Estimated Value
NA - Not Applicable

Quarterly-Annual Data
Monthly Re-Injection Monitoring Report
Dayton Thermal Products Site
Dayton, Ohio
July 2004

Frequency	Compound	Concentration	Units	Date Sampled
Quarterly	1,2-Dichoropropane	<1.0	ug/l	7/13/2004
Quarterly	1,1,2-Trichloroethane	<0.8	ug/l	7/13/2004

Notes: Above analyzed using USEPA Method 8260

Frequency	Compound	Concentration	Units	Date Sampled
Annually	Antimony	<0.0092	ug/l	7/13/2004
Annually	Arsenic	<0.0047	ug/l	7/13/2004
Annually	Barium	0.133	ug/l	7/13/2004
Annually	Cadmium	<0.00076	ug/l	7/13/2004
Annually	Chromium	<0.0025	ug/l	7/13/2004
Annually	Cyanide	<0.0050	ug/l	7/13/2004
Annually	Lead	<0.0100	ug/l	7/13/2004
Annually	Mercury	<0.000028	ug/l	7/13/2004
Annually	Selenium	<0.0059	ug/l	7/13/2004

<1.0 - None detected and the method detection limit.
J- Estimated value

Attachment A

Laboratory Analytical Results

Lancaster Laboratories

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Analysis Report

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 903559. Samples arrived at the laboratory on Wednesday, July 14, 2004. The PO# for this group is N99C403749-B.

Client Description	Lancaster Labs Number
GW-071304-1-RI-0 Grab Water Sample	4310276
Trip_Blank Water Sample	4310277

ELECTRONIC COPY TO	Earth Tech	Attn: Ms. Lisa Smith
ELECTRONIC COPY TO	Earth Tech	Attn: Mr. Rob Stenson
1 COPY TO	LLI	Attn: Ms. Kathy Klinefelter

Lancaster Laboratories

Analysis Report

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

Respectfully Submitted,

Max E. Snavely

Max E. Snavely
Senior Chemist

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Lancaster Laboratories Sample No. WW 4310276

GW-071304-1-RI-0 Grab Water Sample
Site Code: SC001 RFA# ET04050
Dayton Thermal/Dayton, OH
Collected:07/13/2004 13:20 by SC

Account Number: 10160

Submitted: 07/14/2004 08:40
Reported: 07/26/2004 at 17:38
Discard: 09/25/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

GW1RI SDG#: DCQ10-01

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
00259	Mercury	7439-97-6	N.D.		0.000028	mg/l	1
07035	Arsenic	7440-38-2	N.D.		0.0047	mg/l	1
07036	Selenium	7782-49-2	N.D.		0.0059	mg/l	1
07044	Antimony	7440-36-0	N.D.		0.0092	mg/l	1
07046	Barium	7440-39-3	0.133		0.00045	mg/l	1
07049	Cadmium	7440-43-9	N.D.		0.00076	mg/l	1
07051	Chromium	7440-47-3	N.D.		0.0025	mg/l	1
07055	Lead	7439-92-1	N.D.		0.0100	mg/l	1
08255	Total Cyanide (water)	57-12-5	N.D.		0.0050	mg/l	1
06291	TCL by 8260 (water)						
05386	Vinyl Chloride	75-01-4	3.	J	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	4.	J	0.8	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	27.		0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	56.		0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	8.		1.	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.		1.	ug/l	1
05403	Trichloroethene	79-01-6	110.		1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.		1.	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	240.		2.	ug/l	2

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00259	Mercury	SW-846 7470A	1	07/16/2004 09:39	Damary Valentin	1
07035	Arsenic	SW-846 6010B	1	07/23/2004 20:55	John P Hook	1
07036	Selenium	SW-846 6010B	1	07/23/2004 20:55	John P Hook	1
07044	Antimony	SW-846 6010B	1	07/23/2004 20:55	John P Hook	1
07046	Barium	SW-846 6010B	1	07/23/2004 20:55	John P Hook	1
07049	Cadmium	SW-846 6010B	1	07/23/2004 20:55	John P Hook	1
07051	Chromium	SW-846 6010B	1	07/23/2004 20:55	John P Hook	1
07055	Lead	SW-846 6010B	1	07/26/2004 14:25	Jayme E Curet	1
08255	Total Cyanide (water)	SW-846 9012A	1	07/15/2004 17:14	Venia B McFadden	1
06291	TCL by 8260 (water)	SW-846 8260B	1	07/15/2004 15:29	Joshua P Schaeffer	1
06291	TCL by 8260 (water)	SW-846 8260B	1	07/16/2004 10:18	Joshua P Schaeffer	2
01163	GC/MS VOA Water Prep	SW-846 5030B	1	07/15/2004 15:29	Joshua P Schaeffer	n.a.

Lancaster Laboratories

Analysis Report

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Lancaster Laboratories Sample No. WW 4310276

GW-071304-1-RI-0 Grab Water Sample
Site Code: SC001 RFA# ET04050
Dayton Thermal/Dayton, OH
Collected:07/13/2004 13:20 by SC

Account Number: 10160

Submitted: 07/14/2004 08:40
Reported: 07/26/2004 at 17:38
Discard: 09/25/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

GW1RI SDG#: DCQ10-01

01163	GC/MS VOA Water Prep	SW-846 5030B	2	07/16/2004 10:18	Joshua P Schaeffer	n.a.
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	07/15/2004 20:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	07/15/2004 16:30	Nelli S Markaryan	1
08256	Cyanide Water Distillation	SW-846 9012A	1	07/15/2004 09:30	Choon Y Tian	1

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 4310277

Trip_Blank Water Sample
Site Code: SC001 RFA# ET04050
Dayton Thermal/Dayton, OH
Collected: n.a.

Account Number: 10160

Submitted: 07/14/2004 08:40
Reported: 07/26/2004 at 17:38
Discard: 09/25/2004

DaimlerChrysler Corporation
PO Box 537933
Livonia MI 48153-7933

1RITB SDG#: DCQ10-02TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06291	TCL by 8260 (water)					
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	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
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
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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06291	TCL by 8260 (water)	SW-846 8260B	1	07/15/2004 15:53	Joshua P Schaeffer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	07/15/2004 15:53	Joshua P Schaeffer	n.a.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: DaimlerChrysler Corporation
Reported: 07/26/04 at 05:38 PM

Group Number: 903559

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 04197117101A	Sample number(s): 4310276							
Total Cyanide (water)	N.D.	0.0050	mg/l	106		90-110		
Batch number: 041971848004	Sample number(s): 4310276							
Arsenic	N.D.	0.0047	mg/l	101		92-109		
Selenium	N.D.	0.0059	mg/l	98		91-111		
Antimony	N.D.	0.0092	mg/l	105		94-112		
Barium	N.D.	0.00045	mg/l	102		93-109		
Cadmium	N.D.	0.00076	mg/l	107		97-111		
Chromium	N.D.	0.0025	mg/l	105		95-112		
Lead	N.D.	0.0100	mg/l	104		93-110		
Batch number: 041975713002	Sample number(s): 4310276							
Mercury	N.D.	0.00002 8	mg/l	105		80-120		
Batch number: N041971AB	Sample number(s): 4310276-4310277							
Vinyl Chloride	N.D.	1.	ug/l	110	112	71-129	2	30
1,1-Dichloroethene	N.D.	0.8	ug/l	107	109	79-130	1	30
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	102	105	84-117	3	30
1,1,1-Trichloroethane	N.D.	0.8	ug/l	104	105	83-127	1	30
Carbon Tetrachloride	N.D.	1.	ug/l	103	105	77-130	2	30
1,2-Dichloroethane	N.D.	1.	ug/l	102	101	77-132	1	30
Trichloroethene	N.D.	1.	ug/l	105	104	87-117	0	30
1,2-Dichloropropane	N.D.	1.	ug/l	105	106	80-117	1	30
1,1,2-Trichloroethane	N.D.	0.8	ug/l	98	98	86-113	1	30
Tetrachloroethene	N.D.	0.8	ug/l	97	100	82-126	2	30
Batch number: N041971AC	Sample number(s): 4310276							
Tetrachloroethene	N.D.	0.8	ug/l	97	100	82-126	2	30

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 04197117101A	Sample number(s): 4310276								
Total Cyanide (water)	108		39-141			N.D.	N.D.	0 (1)	20
Batch number: 041971848004	Sample number(s): 4310276								
Arsenic	100	100	86-119	1	20	N.D.	N.D.	0 (1)	20
Selenium	98	98	75-125	0	20	N.D.	0.0060 J	200* (1)	20

*- 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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Analysis Report

Quality Control Summary

Client Name: DaimlerChrysler Corporation
Reported: 07/26/04 at 05:38 PM

Group Number: 903559

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Antimony	104	104	75-125	0	20	N.D.	N.D.	0 (1)	20
Barium	102	103	82-113	1	20	0.0612	0.0609	1	20
Cadmium	104	103	87-117	1	20	N.D.	N.D.	0 (1)	20
Chromium	104	103	86-118	1	20	N.D.	N.D.	0 (1)	20
Lead	101	102	87-118	1	20	N.D.	N.D.	0 (1)	20
Batch number: 041975713002	Sample number(s): 4310276								
Mercury	106	106	80-120	0	20	N.D.	0.000043 J	200* (1)	20
Batch number: N041971AB	Sample number(s): 4310276-4310277								
Vinyl Chloride	116		70-151						
1,1-Dichloroethene	113		78-146						
cis-1,2-Dichloroethene	104		83-126						
1,1,1-Trichloroethane	107		82-135						
Carbon Tetrachloride	108		73-144						
1,2-Dichloroethane	101		73-136						
Trichloroethene	109		75-135						
1,2-Dichloropropane	106		81-121						
1,1,2-Trichloroethane	99		77-125						
Tetrachloroethene	106		75-143						
Batch number: N041971AC	Sample number(s): 4310276								
Tetrachloroethene	106		75-143						

Surrogate Quality Control

Analysis Name: TCL by 8260 (water)
Batch number: N041971AB

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4310276	104	103	110	104
4310277	104	101	110	104
Blank	104	104	110	104
LCS	104	107	105	107
LCSD	104	105	106	109
MS	103	102	108	107
Limits:	81-120	82-112	85-112	83-113

Analysis Name: 8260 Master Scan (water)
Batch number: N041971AC

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	103	103	109	104
LCS	104	107	105	107
LCSD	104	105	106	109
MS	103	102	108	107
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.