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APPENDIX A

BORING LOGS INSTALLED DURING THE SOURCE AREA INVESTIGATION

SDMS DocID 29567

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: N0400-0221
LOGGED BY: TRACY DORGAN
TRANSCRIBED BY:
DRILLED BY (Company/Driller): LAYNE DRILLING / TONY MARTINELLI
GRD. SURFACE ELEVATION:
ELEVATION FROM:
BORING NO.: MW06
START DATE: 12-19-00
COMPLETION: DATE: 12-20-00
MON. WELL NO.: MW06
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0							GRASS SURFACE.			
	3 7	1.7 / 2.0	CM-SD-MW6-0002			BROWN TAN	S-1A=0.4' TOPSOIL, LOAMY SILT & SAND. TRACE ROOTS	SM	FAINT, LIGHT @ 1.5' BGS	
2	4 4		S-1 1255				S-1B=1.3'-ELDRED FILL, WELL LOADED F-C SAND, TRACE SILT.	SW		
	4 4	1.4 / 2.0	CM-SD-MW6-0204 DUP=1310			BROWN	GRAVELLY, F-C SAND, TRACE SILT, TR. ROOTS.	SW	FILL 3 INCH STAINING	FID-411.6
4	7 5		S-2 1300			BLACK	S-2B=0.4'-FILL, PLASTIC IN GRAVEL, TR. SAND		DUP 01 (1310)	FID-98.6
	5 4	1.0 / 2.0	-0406				BRICK FRAGS, SILT, SAND & GRAVEL. FILL	FILL	MS/MSD SATURATED	FID 3396
6	1 1		S-3 1324	FILL						FID-159
	3 13	1.1 / 2.0	-0608				SIMILAR TO ABOVE			FID-2,159
8	16 20		S-4 1350							FID-149
	20 27	1.3 / 2.0	-0810	SAND & GRAVEL		GRAY-BROWN	GRAVEL & SAND, F-C SAND & F-C ROUNDED GRAVEL	SW/GW		FID-166.4
10	25 30		S-5 1400				2-2" MED. SAND SEAM IN NOSE.			FID-1.5
	18 21	0.9' / 2.0	-1012				SAND, GRAVEL. MOSTLY COARSE ROUND GRAVEL, SOME F-C SAND, TR. SILT	GP	SLIGHT STAINING ON GRAVELS	FID-911.0
12	34 15		S-6 1416							FID-22.0
	6 5	1.0 / 2.0	-1214	SILT		TAN	SILT. MOSTLY SILT. FINELY BEDDED. TRACE FINE SAND.	ML		FID-0.0
14	6 17		S-7 1445			GRAVEL				FID-6.0
	15 11	0.7 / 2.0	-1416	SAND & GRAVEL		BROWN	SILTY, SANDY, GRAVEL. MOSTLY 2" DIAM. ROUNDED GRAVEL, SOME F-M SAND, FEW SILT.	SM		FID-9.6
16	20 22		S-8 1010							FID-28.9

TYPE OF DRILLING RIG: D-50 TRUCK MOUNTED
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS: DRILLERS & DELIVERY & US TO LOAD & DUG TO LOW REMARKS IN BORING NO.:

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PAGE: 1 OF 2

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STOP W/ CASING TO 12', SAMPLED TO 14' FOR 12/19/00. (DRILLERS B.Z. SEE HIS LOG.
3/31/12 11)

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: NOH00-0221
LOGGED BY: TRACY DORSEY
DRILLED BY (Company/Driller): LAYNE DRILLING / TONY MARTINELLI
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW06
START DATE: 12-19-00
COMPLETION: DATE: 12-20-00
MON. WELL NO.: MW06
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16	31/31	1.4/	1618			BROWN	SAND + GRAVEL. F-C SAND &	GW		FID=411
	12									
18	10	2.0	S-9 1030				F-C ROUNDED GRAVEL.	GW		PID=38.4
	10/10	0.4/	-1620						LESS DENSE THAN S-9.	FID=28
20	5/6	2.0	S-10 1055							PID=28
	20/13	0.4/	-2022				ROUNDED GRAVEL. MOSTLY COARSE GRAVEL	GP		FID=6.1
22	19/14	2.0	S-11				& COBBLES, TRACE SILT & F-M SAND			PID=22
							EOB AT 22' BGS			
							CASING TO 20'.			
							STOPPED BORING DUE TO DECREASING HEAD-SPACE READINGS.			

TYPE OF DRILLING RIG: D-50 TRUCK MOUNTED
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400-0282
LOGGED BY: T. DOLGAN
DRILLED BY (Company/Driller): EDI - A. ORLICKY
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW045
START DATE: 6-15-01
COMPLETION: DATE:
MON. WELL NO.: MW045
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* - [FID, (PPM)]
0							~~GRASS SURFACE~~			
							NO SAMPLES TAKEN.			
2							DRIVE & WASH 4 IN. CASING			
							TO FT. BGS.			
4							REFER TO LOG FOR			
							MW040 FOR DETAIL.			
6										
8										
10										
12										
14										
15										

TYPE OF DRILLING RIG: MOBILE B-61 TRUCK MOUNTED.
METHOD OF ADVANCING BORING: 4 IN. CASING DRIVE & WASH.
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.: MW045

Tetra Tech NUS, Inc.

PAGE: 1 OF 1

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thabodeau
DRILLED BY (Company/Driller): EDI - A. Obbaky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW04 (D)
START DATE: 6/12/01
COMPLETION: DATE: 6/15/01
MON. WELL NO.: MW04D
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows (LB. / FOOT)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0.0	6	14"/24"	S-1 7:30AM CM-SO-MW04-0002 (1)	4SUM (0.5')	loose		S-1A: Topsoil and organic matter. (6") S-1B: Poorly graded sand (SP): moist,		Water sensitive noted @ 1.3 ft. below G.S.	No head space performed
1.0	4			Fill		6	medium to fine SAND, trace coarse sand, fine gravel, and silt,	SP		
	6						brown. (PSW) (11")	(PSW)	No chemical samples retained	0.0 ppm in open air
				(Gravel)			S-1C: Organic matter, Root &			
2.0				(2.0')		15	wood matter. (2")			
	42	3"/24"	S-2 8:30AM CM-SO-MW04-0004 (2)	Wood & Root matter (3.0')			Poor recovery. Mostly wood and root matter. Sampler was	Organic	2 VOA's VOC, D3OX3W	50 ppm open air
3.0	3					150/8" (3)	bouncing for first 6 inches of penetration. Wood noted			
							in wash water return. Possible log.		VOC, D3OX3W, metals, SVOC, Pest, PCBs	Headspace: PID: 1009 ppm PID: 9.3 ppm
4.0						10				
6/14	3	9"/24"	S-3 9:17AM CM-SO-MW04-0406 (2)	Outwash	loose		Silty sand (SM); wet, coarse to fine SAND, little silt,	SM		
5.0	5					hyd. push	reddish brown. Heavy oxidation noted in layer of sample.		Samples taken from oxidized layer.	
6/12							Driller noted chattering from 5 to 6ft. Lost approx. 30 gallons			
							of wash water. Distinct sweet			
6.0						NR	odor noted.			
6/13	18	7"/24"	S-4 1000 CM-SO-MW04-0608 (2)		Very dense		Silty sand w/gravel (SM): wet, coarse to fine SAND, little	SM	VOC, D3OX3W, Metals, SVOC, Pest, PCBs	Headspace: PID: 21.9 PID: 10.9
7.0	30					NR	to some gravel, little silt, brown. Piece of fractured cobble			
	26						noted in top of sample. Advanced 5-inch casing to 7ft. Difficult			Borehole: PID: 17.0
	26						drilling; probable cobble. Telescope 4" drill casing to 9ft Change			PID: 0.0
8.0						NR	out drill bit.			

TYPE OF DRILLING RIG: Acker AD II Truck Rig
METHOD OF ADVANCING BORING: 6-inch (SW) over 5-inch (PW) Flush Joint drill casing
METHOD OF SOIL SAMPLING: 2-inch O.D. and 3-inch O.D. split barrel samplers
METHOD OF ROCK CORING: NX
GROUNDWATER LEVELS: 6/12 5.5' ; 6/13 4.4' ; 6/14 6.5' below G.S.
OTHER OBSERVATIONS:

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BORING NO.: MW04 (D) PAGE: 1 OF 7

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(1) 3 inch O.D. split barrel sampler driven 24 inches w/ 140 lb safety hammer w/ 30" drop.
(2) 3 inch O.D. split barrel sampler driven 24 inches w/ 300 lb cathead hole hammer w/ 18" drop.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblasky
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW04(D)
START DATE: 6/12/01
COMPLETION: DATE: 6/15/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows (Cut)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD - (FID, (PPM))
8.0	17	24/24"	S-5 1105 CM-SO-MW04-0810(1)	Outwash	Very dense		Silty sand w/gravel (SM); wet, coarse to fine SAND, some fine to	SM	No chemical samples.	Headspace:
	55									FID: 18.7ppm
9.0	73					NR	coarse gravel, little silt, brown. Fractured rock noted on tip			PID: 1.4ppm
	45						of sampler. Pushing probable			
							cobble from 8.5 to 10 ft.			
10.0						NR				
	25	9"/24"	S-6 1135 CM-SO-MW04-1012(1)		Very dense		Poorly graded sand w/gravel (SP-SM); wet, coarse to fine SAND	SP-SM		Headspace:
	93									FID: 26
11.0	44					60	and GRAVEL, trace silt, gray-brown.			PID: 11.3
	19									
										Open Air:
12.0						147				FID: 0.0 PID: 0.0
	7	9"/24"	S-7 1210 CM-SO-MW04-1214(1)		Dense		Poorly graded sand w/silt & gravel (SP-SM), wet, coarse to	SP-SM		Headspace
	16									FID: 3.9
13.0	17					37	fine sand, little fine to			PID: 2.1
	16						coarse gravel, trace silt,			
							gray-brown.			Open Air:
14.0						45	Slight sheen noted on drilling			FID: 0.0 PID: 0.0
							fluid in mud tub.			
	8	6"/24"	S-8 1230 CM-SO-MW04-1416(1)		Medium dense		Similar to S-7 except brown.	SP-SM		Headspace FID: 9.7
	8									
15.0	10					45				PID: 2.9
	9									
										Open Air: FID: 0.9
16.0						48				PID: 0.0

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See Page 1.)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW04(D)
PAGE: 2 OF 7

(1) 2-inch O.D. split barrel sampler driven 24 inches w/ 140 lb safety hammer w/30" drop.

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thabodeau
DRILLED BY (Company/Driller): EDI - A. Obitsky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW04(D)
START DATE: 6/12/01
COMPLETION: DATE: 6/15/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows per ft. (Est.)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16.0	6	5"/24"	S-9 1335		Medium dense		Washed sample.		No chemical samples	Headspace: PID: 0.0
	6		CM-SO-MW04-1618 (1)			30				PID: 0.0
17.0	6									
	7						Loss of water noted during rotary but advancement			Open Air: PID: 0.0
18.0						36				PID: 0.0
	26	8"/24"	S-10 1400		Medium dense		Poorly graded sand w/silt formed (SP-SM); wet, coarse to fine	SP-SM		Headspace PID: 39
	15		CM-SO-MW04-1820 (1)				Sand, little fine to coarse gravel, trace silt, brown.			PID: 0.0
19.0	8					74				
	13			Cuttings			Approximately 2 inch thick clay, brown, silt, loose, wetted			Open Air PID: 0.0
20.0							by sample.			PID: 0.0
						81	Breathing Zone: 0.0 w/PID & PID			
	30	3"/24"	S-11 1455		Medium dense		Loss of water to formation noted during rotary but advancement			Headspace: PID: 0.0
	18		CM-SO-MW04-2022 (1)							
	10					37	S-11: Poor recovery. Washed sample.			PID: 0.0
21.0	9									
							Drove PW casing to 22 ft. Quit for the day. 6/13/01			Open Air: PID: 0.0
6/13/01 22.0										PID: 0.0
						48	Mix bentonite drilling mud at 20 ft. Wash to 22 ft. Cetco Super			
	22	0"/24"	S-12 820		Medium dense		Gel-X extra high yield drilling fluid.			No
	13		CM-SO-MW04-2224 (1)							
23.0	5					10	S-12: No recovery. Possible pushing cobble w/sampler.			Headspace:
	4									
										Open Air Readings
24.0						14				Recorded

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW04(D) PAGE: 3 OF 4

(1) 2-inch O.D. split barrel sampler driven 24 inches w/140 lb safety hammer w/30" drop.

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblachy
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW04 (D)
START DATE: 6/13/01
COMPLETION: DATE: 6/15/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows (Type)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD - [FID, (PPM)]
24.0	8	3"/24"	S-13 0845 CM-SO-MW04-2426 (1)		Medium dense		Poorly graded sand w/ silt & gravel (SP-SM); wet, coarse to fine	SP-SM	No chemical samples	Headspace PID: 0.3
	7									PID: 7.3
25.0	11					42	SAND and GRAVEL (coarse to fine), little silt, brown.			
	12						Advanced rollin bit through probable cobble from 2.5ft to 26ft, minor			
26.0						76	loss of drilling mud noted.			
	34	9"/24"	S-14 0945 CM-SO-MW04-2628 (2)		Medium dense		Well-graded gravel w/ silt & sand (GW-GM); wet, coarse	GW-GM		Headspace PID: 2.0
	14									PID: 0.0
27.0	10					36	to fine GRAVEL, some coarse to fine sand, little silt,			
	9			Outwash			brown.			Open Air: PID 0.0
										PID: 0.0
28.0						NR	May additional borehole drilling mud.			
	14	8"/24"	S-15 1030 CM-SO-MW04-2830 (2)		Medium dense		Well-graded gravel w/ silt & sand (GW-GM); wet, coarse	GW-GM		Headspace: PID: 0.0
	11									PID: 0.0
29.0	13					27	to fine GRAVEL, some coarse to fine sand, little silt,			
	23						brown.			Open Air: PID 0.0
										PID: 0.0
30.0						25				
	14	8"/24"	S-16 1045 CM-SO-MW04-3032 (2)		Dense		Well-graded gravel w/ silt & sand (GW-GM); wet, coarse	GW-GM		Headspace PID: 0.0
	15									PID: 0.0
31.0	17					46	to fine GRAVEL, little coarse to fine sand, little silt,			
	13						dark brown.			Open Air: PID: 0.0
										PID: 0.0
32.0						72				

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW04 (D) PAGE: 4 OF 7

(1) 2 inch split-barrel sampler driven 24 inches w/ 140 lb safety hammer w/ 30" drop
(2) 3 inch O.D. split-barrel sampler driven 24 inches w/ 300 lb cathead hole hammer w/ 18" drop

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblasky
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW04 (D)
START DATE: 6/2/01
COMPLETION: DATE: 6/15/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows (per ft)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
32.0	28	0"/24"	S-17 1125 CM-SO-MW04-3234(2)	Auger	Dense		Approximate 3.5 inch diameter cobble lodged in sampler.		No chemical samples	No headspace or open due readings recorded
	22									
	28									
33.0	17					29	Sample damaged. Top of sample left in borehole.			
34.0						25	Advance roller bit from 32 to 36 feet to "push" steel out of the way. (open hole) Slight loss of mud noted.			
35.0						70	Advance PW drive casing to 36 ft.			
36.0					Very Dense	77				
	54	0"/24"	S-18 1430 CS-SO-MW04-3636(2)				No recovery. May have pushed cobble w/ sampler			Not recorded
	33									
	24									
37.0	37					21				
38.0						35				
6/13/01										
	24	1"/24"	S-19 1511 CM-SO-MW04-3840(2)		Medium dense		Poor recovery. Washed sample			Headspace PID: 0.0
	15									
	14									
39.0	14					35	Quit for the day. 6/13/01 Casing at 38 ft.			PID: 0.0
40.0						49				

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING: (See page 1)
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW04 (D)
PAGE: 5 OF 7

(1) 2 inch O.D split-barrel sampler driven 24 inches w/ a 140 lb safety hammer free falling 30" Tinus Form 0018
(2) 3-inch O.D. split-barrel sampler driven 24 inches w/ a 300 lb cathead hole hammer w/ 18" drop.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblisky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW04 (D)
START DATE: 6/13/01
COMPLETION: DATE: 6/15/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CASING Blows PER (feet)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
40.0	16 11 7 14	6"/24"	S-20 0745 CM-SO-MW04-4043 (1)		Medium dense	48	Well-graded gravel w/ silt & sand (GW-GM); wet, coarse to fine GRAVEL, some fine to coarse sand, little silt, brown.	GW-GM	No Chemical Samples	Headspace F1D: 0.0 P1D: 0.0
41.0							Approximately 6" of cuttings noted on top of sample. No steel noted on cuttings or sample.			
43.0						55				
	18 7 6 6	4"/24"	S-21 0800 CM-SO-MW04-4044 (1)	Outwash	Medium dense	57	Poorly graded sand w/ silt & gravel (SP-SM); wet, coarse to fine SAND, some gravel, little silt, brown. No steel noted on sample or cuttings.	SP-SM		Headspace F1D: 0.0 P1D: 0.0
44.0						66	Difficult drilling from 43-44 ft. Probable cobbles and coarse gravel.	-		
	8 4 6 10	12"/24"	S-22 0831 CM-SO-MW04-4046 (1)		Loose		Minor loss of drilling fluid noted.	SP-SM		Headspace F1D: 11.1
45.0						36	S-22: Poorly graded sand w/ silt & gravel (SP-SM); wet, medium to fine SAND, little coarse sand, some gravel (mostly fine), trace silt, brown. No steel noted in sample or cuttings.			P1D: 4.2
46.0						58				Open Air: F1D: 4.1 P1D: 1.3
	24 43 75 50/1"	12"/19"	S-23 0854 CM-SO-MW04-4048 (1)	(46.5') Weathered Bedrock		150	S-23A: Same as S-22. (0") S-23B: Weathered bedrock. (12")	SW5		Headspace F1D: 0.6 P1D: 1.0
47.0							Advance AW drill casing to 47 ft. Advance roller bit to 48 ft.			
48.0						114/10"	Advance AW drill casing to 48.4 ft.			

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW04 (D) PAGE: 6 OF 7

(1) 2-inch O.D. split barrel sample driven 24 inches w/a 140 lb safety hammer w/ 30" drop.

Titus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Obusky
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW04 (D)
START DATE: 6/12/01
COMPLETION: DATE: 6/19/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = (FID, (PPM))
48.0				Estimated competent bedrock			Estimated top of competent bedrock at 35 ft.	SCHIST	No chemical samples	
49.0							Advance 3¾" bullnose bit to 49.5 ft. to create socket for NW casing			
							Telescope NW drive casing to 49.5 ft.			
50.0		R1 (Begin)	49.5 - 50.5 (3.5 min)				Begin NX rock core at 49.5 ft. R1: 49.5' - 54.5'			
							Wash water return color: greenish grey.			
51.0			50.5 - 51.5 (3 min)				Slightly weathered to fresh, soft to medium hard, greenish grey, aphanitic SCHIST with			
			51.5 - 52.5 (3 min)				moderately dipping, close to moderately spaced, smooth to rough, planar, slightly discolored, open joints. Approx. 35-45°			
53.0			52.5 - 53.5 (3 min)				to horizontal. Rock core: RQD = 65% (fair)			
							49.5' - 50.7': Fractured zone. Weathered and friable.			
54.0			53.5 - 54.5 (3.5 min)				52.5' & 54' dipping noted; moderately weathered.			
55.0							Bottom of exploration at 54.5 ft. Boring terminated in bedrock. Install deep overburden monitoring well in completed borehole.			
56.0										

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See Page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: N0400-0221
LOGGED BY: TRACY DORSAW
TRANSCRIBED BY:
DRILLED BY (Company/Driller): HUILD DRILLING / TONY MARTINELLI
GRD. SURFACE ELEVATION:
ELEVATION FROM:

BORING NO.: MW03 ~~SB-1~~
START DATE: 12-27-00
COMPLETION: DATE: 12-27-00
MON. WELL NO.: MW03 ~~NO WELL~~
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MATL CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0							PAVEMENT / GRASS SURFACE			
	1 3 1	0.2 / 2.0	CM-SO-SB1-0002 S-1 0855			BROWN	TOP 2" = FROZEN. SILTY, FINE SAND TRACE ROOTS	SP	NO SAMPLE COLLECTED. POOR RECV.	No SAMPLE, POOR RECOVERY
2	1 1						F-C SAND, TRACE SILT, TRACE FIB (PLASTIC) IN NOSE OF SPOON	SW		
	1 WOH 1	0.0 / 2.0	-0204 S-2 0900				NO RECOVERY	NO DESC.	DRILLER NOTED PAVEMENT BRICK IN PUSH TO 4 bgs	
4										
	5 7 8	0.5 / 2.0	-0406 S-3 0915	FILL		BLACK	SAND, MOSTLY F-C WITH GRAVEL SAND, TRACE SILT, FILL INC.	SW	FILL SATURATED VERY LOOSE.	FID-285.9 FID-0.0
6	7						WOOD, BRICK, ASPHALT? LIKE SURFACE IN OILY SHEEN (GRAB SAMPLE)			
	7 26 20	1.2 / 2.0	-0608 S-4 0930				- INC. TRACE GRAVEL - TRACE WOODY/ROOT FIBERS		FILL - BRICK & WOOD INC. SHEEN (PETROLEUM) TRACE METAL WIRE	FID=838.1 PID=1.5
	13 27 22	1.0 / 2.0	-0610 S-5 0950	SAND & GRAVEL		OLIVE-GRAY	SAND & GRAVEL. SAND IS F-C WELL GRADED. GRAVEL IS F-C ROUNDED & DECOMPOSED (SAPROLITIC)	SW/GW	NO STRUCTURE NOTED	FID=251.5 PID=0.0
10	24 20									
	19 17 12	1.2 / 2.0	-1012 S-6 1025			LT. GRAY	SIMILAR TO ABOVE. (S-5)	SW/GW		FID=515.2 PID=16.2
12	18									
	16 16 21	1.1 / 2.0	-1214 S-7 1032			DK. GRAY LT. GRAY	V S-7B = 0.6' - SILTY, SAND & GRAVEL TRACE DK. BROWN & ORANGE NODULES. - NO ODOR	V SM	S-7B = MORE DENSE THAN ABOVE. (TILL)	FID=651.5 PID=5.7
14	21									
	10 16 9	0.8 / 2.0	-1416 S-8			MOTTLED GRAY	SIMILAR TO S-7B V	SM		FID=7.6 PID=7.3
16	13									

TYPE OF DRILLING RIG: TRUCK MOUNTED D-50.
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING.
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS: APPROX. 8 FT. BGS
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

PAGE: 1 OF 2

TtNUS Form 0018

DRILLERS RECOVERY FROM ~0950 -> 1015 ?

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: N0400-0221
LOGGED BY: TRACY DORGAN
DRILLED BY (Company/Driller): HOLLOD DRILLING / T. MARTINELLI
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: SB-10 @ MW03
START DATE: 12/27/00
COMPLETION: DATE: 12/27/00
MON. WELL NO.: MW03S
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = (FID, (PPM))
16	26 15 15 11	1.5 / 2.0	-1618 S-9 1115	GRADE		TAN/ BROWN	SANDY GRAVEL. MOSTLY F-C ROUND GRAVEL, SOME F-C SAND. TRACE SILT.	GW	SILT IN ~1" LAYERS NOT PURE SILT, JUST COATING PARTS IN SAMPLE. DRY.	FID=1.4 PID=4.3
20	5 5 7 21	1.6 / 2.0	-1620 S-10 1120				SIMILAR TO S-9 ABOVE.			FID=3.8 PID=15.2
							EOB @ 20' BGS CASING TO 16'.			

TYPE OF DRILLING RIG: TRUCK MOUNTED D-50
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS: APPROX 8 FT. BGS.
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

PAGE: 2 OF 2

TtNUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: N0400-0221
LOGGED BY: TRACY DORGAN
DRILLED BY (Company/Driller): LAYNE DRILLING / T. MARTINELLI
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW02
START DATE: 1-5-01
COMPLETION: DATE: 1-5-01
MON. WELL NO.: MW02S
CHECKED BY:

DEPTH (FEET) 0	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
	3/2	0.4/	EM-SO-AW02-0002			BROWN	RIVER CHANNEL (~0.1' BELOW SURFACE WATER) SAND. MOSTLY F-C WELL GRADED SAND, TRACE SILT, TRACE ROOT	SW	NO APPARENT ODORS	FID = 0.0
2	1/1	/2.0	S-1 1025				FIBERS		MINIMAL 2' CASING WASH FROM 1-2'	FID = 0.0
	23/22	1.0/	-0204	FILL		DK. BRN/ BLACK	SAND & GRAVEL. SAND IS F-C WELL GRADED, GRAVEL IS F-C SUBROUND	SW/ SW	NO BLACK & RED & PETROLEUM SHEEN.	FID = 52.0
4	13/6	/2.0	S-2 1055				TRACE FILL (BRICK & VITRIFIED CLAY).		FILL	PID = 46.0
	14/16	0.3/	-0406 DUP-1110			DARK BRN	SAND. MOSTLY F-C WELL GRADED SAND	SW	SLIGH. PET. ODOR	FID = NO
6	9/9	/2.0	S-3 1105				TRACE ROOTS, TRACE GLASS FINE	SW	VOA & DIOX. ONLY + DUP BOTH.	PID = SAMPLE
	4/6	0.8/	-0608			BLACK	GRAVELLY, SAND. MOSTLY F-C WELL (GRADED) SAND, SOME ROUNDED	SW	OIL ODOR FILL & STAINS	FID = 28.9
8	2/2	/2.0	S-4 1115				F-C GRAVEL, TRACE SILT FILL MAT. GLASS, WOOD & VIT. CLAY.			PID = 8.6
	7/7	1.1/	-0810			GRAY	S-5A=0.4' - SIMILAR TO S-4. S-5B=0.7' - SILTY, FINE SAND.	SM		FID = 94.5
10	5/5	/2.0	S-5 1145	SILTY SAND		LIGHT BRN	MOSTLY FINE POORLY GRADED SAND SOME SILT. FINE BEDDING NOTED.			PID = 0.0
	7/9	0.8/	-1012	SAND		BRN	SAND. MOSTLY F-C WELL GRADED SAND, TRACE FINE GRAVEL, TRACE SILT.	SW	NO STRUCTURE NOTED	FID = 18.2
12	7/7	/2.0	S-6 1340							PID = 1.5
	6/5	0.0/	-1214	X			NO RECOVERY, NO BASKET IN NOSE OF SPOON.		DRILLER DROVE SPOON W/OUT A BASKET, RE-DRIVE S-6 W/ BASKET	NO SAMPLE
14	5/5	/2.0	S-7							
	5/7	1.2/	-1416	SANDY SILT		MOT. BRN/ BROWN	S-8A=0.2' SIMILAR TO S-6. S-8B=1.0' SANDY SILT. MOSTLY SILT WITH SOME FINE SAND. FINE BEDDING NOTED.	SW/ ML		FID = 8.2
16	7/6	/2.0	S-8 1405			GRAY				PID = 0.0

TYPE OF DRILLING RIG: BOAT MOUNTED TRIPOD RIG.
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS: SURFACE WATER = 0.1' ABOVE STREAM BED/GROUND SURFACE @ DRILL LOC.
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:
PAGE: 1 OF 2

TINUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: NOH00-0221
LOGGED BY: TRACY DORSAM
DRILLED BY (Company/Driller): HUILD DRILLING
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW02
START DATE: 1-5-01
COMPLETION: DATE: 1-5-01
MON. WELL NO.: MW025
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MATL CHG / WELL PROFL	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
16	7 5 5 7	1.4 / 2.0	-1618 S-9 1430	SANDY SILT		ALT. YELLOWISH BROWN & GRAY	SIMILAR TO ABOVE.	ML	PYRITIC BEDDING. ~1/8" THICK	FID=27.1
16	10 5 7 7	1.0 / 2.0	-1620 S-10 1435	SAND			VS-10A=0.5'-SIMILAR TO ABOVE ML S-10B=0.5'-BIRNBLY SAND. MOSTLY F-M WELL SORTED SAND, SOME RANDOM GRAVEL LENS.	SW		FID=4.1 FID=0.0
20							EOB @ 20' BGS			

TYPE OF DRILLING RIG: 3CAT MOUNTED TRIPOD
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DENNIS WITH A 300 LB. HAMMER W/ 14 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:

TINUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREVALE MANOR PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - JAY GAESSER
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW02D
START DATE: 6-27-01
COMPLETION: DATE: 7-3-01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
64	8 7 / 6 7	0.9 / 2.0	-6466 S-2 1115		VERY DENSE	LIGHT-GRAY	SIMILAR TO ABOVE, INCREASED SAND, FRAGMENTS OF COBBLE 64-66	GW/SP	VOA TILL SAMPLE @ 1115. DUP COLLECTED. DUP TIME = 1200	FID: 2.1 FID: 3.6 - JUST RECALIBRATED
66	4 7 / 1 9									
	3 7 / 120/6"	0.6 / 1.0	-6667 S-3 1255						USED APPX 400 GAL. FROM 49-66'	FID = 1.2 PID = 2.5 *
68							ROLLER-BIT (4 7/8") TO 68'.		VOA FROM 67'-68'	NOT SHIPPED END
	120/5"	0.3 / 0.5	6668.5 S-4 1523				SIMILAR TO ABOVE. POOR RTN. & RECOV.		VOA COLLECTED NOT SHIPPED.	FID = 1.0 PID = 0.5
70			-7070.1							
	120/6.5"	0.0 / 0.1	S-5 0842				NO RECOVERY, GROUT REF.		HARD DRILLING, ROLLER-BIT TO 72' WHILE STAYING OPEN BEHIND CASING	
72			7272.2		SOFT,	GREEN	WASH WATER TURNING GREEN @ 71-72'			
	120/2"	0.2 / 0.2	S-6 0945				GREEN SAPROLITIC SCHIST.		ROLLER BIT TO 74'. WASH IS GREEN, STEADY DRILLING.	FID = 0.5 PID = 0.2 VOA COLLECTED & SHIPPED.
74										
			C-1 = 74.0'-79.0' REN. = 5.0' REC. = ~36 IN. HARD TO EST. DUE TO HIGHLY DEGRADED CONDITION. ROD LENGTH = 4' ROD = 11% BETH		CORE TIME 5:00		HIGHLY WEATHERED & DEFORMED SCHIST. VERY SOFT, ROCK IS VERY WEAK & EASILY BROKEN WITH FINGERS. PASTE-LIKE CONSISTENCY COMMON	VERY BROKEN	NO NOTICABLE WATER LOSS DURING CORING.	
76					2:45					
					2:30		BROKEN WHERE QUARTZ VEINING STRENGTHENS. LOW % FOLIATION.		JAMMED TWICE @ 77.2' & 78'.	
78					4:30					
			VERY BROKEN. BASED SOLELY ON 4" QUARTZ VEIN AT END OF C-1.		5:40	WHITE	BOTTOM 4 IN. IS A MILKY QUARTZ VEIN. FRESH FRACTURES LIKELY MACHINE BROKEN.			
80							LARGE CORE LOSS. EOB @ 79.0' BGS.			

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS: * TELESCOPE 4" CASING (HW) THROUGH 5" CASING (RW) @ 66'.

Tetra Tech NUS, Inc.

BORING NO.:

PAGE: 5 OF 5

TINUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rondeau
TRANSCRIBED BY:
DRILLED BY (Company/Driller): EDI - A. Dalton & T. Pelt - S. Gresser
GRD. SURFACE ELEVATION:
ELEVATION FROM:

BORING NO.: MW02(D)
START DATE: 6/29/01
COMPLETION: DATE: 7-3-01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows per (Foot)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
48.5						99	Cleaned out casing and Roller bit to approx. 55 feet.		No Chemical Samples	
49.0						92				
50.0						NR				
6/29/01 7:40										
52									DRIVING 5" CASING W/ 600 LB. HAMMER. DRILLING AHEAD OF CASING PRIOR TO DRIVING.	
54							CUTTINGS @ BOTTOM 54'-55'			
56										
58							CUTTINGS @ 58 - 60' MIXED W/ SAND IN CUTTINGS.			
60										
62									~2' RUNNING SANDS. CAUGHT WASH OUT	
2"	64 40 / 12 1/2"	0.6 / 1.2	-6263 S-1 1030			LIGHT-GRAY BROWN	SILTY, SANDY, GRAVEL. MOSTLY F-C SAND, TO SUBROUNDED F-C GRAVEL, SOME F-C SAND, LITTLE SILT.	GM	6" SLOUGH INTO SAMPLE.	FID = 6.6 PID = INOP.
64										

TYPE OF DRILLING RIG: Acker AP II Truck Rig to 6/29/01. 7/2-3/01 = Dietrich D-120 Truck Mount
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW02(D) PAGE: 4 OF

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau / C. Fouseca
DRILLED BY (Company/Driller): EDI - A Obasohy
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW12(D)
START DATE: 6/27/01
COMPLETION: DATE: 7-3-01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET) 30.0	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows (lbs/ft)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
33.0						85			No chemical samples	
34.0						81				
35.0						125				
36.0						137				
37.0			Recovered 3.5" of gravelly from core run (36.5'-39')	(37.5') Probable Boulder (39.0')		166				
38.0						131/6"	Very difficult drilling at 37.5 Ft. Casing on probable boulder. Advance hollow bit to 38.5 Ft. Slow drilling			
39.0						375				
40.0						112/6" 330	Lost approx. 600 - 650 gallons to formation.			
41.0						160	Quit for the day. 6/28/01. Casing at 37.5 Ft.			
42.0						148	Telescope NW drill casing to 38.5 Ft. Perform NX core			
43.0						143	core to 39 Ft. Purpose out of probable boulder @ 39 Ft.			
44.0						121	Advance PW drill casing to 39 Ft. Advance hollow bit to			
45.0						155	clean out casing and roll barrel to 43 feet. Loss of			
46.0						120	water noted. Advance PW drill casing to 44 feet. Max bentonite			
47.0						114	drilling mud, Cetco Super Gel X.			
48.0						94	Advance PW drill casing to 50 feet. Perform NX core			

TYPE OF DRILLING RIG: Acker AP II Truck Rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.: MW12 (D)

Tetra Tech NUS, Inc.

PAGE: 3 OF

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A Oblasky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW00 (D)
START DATE: 6/20/01
COMPLETION: DATE: 7-3-01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows (Feet)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16.0										
17.0						47	From mud tub. Switch to potable water.		No channel samples	
18.0						48	Advance PW drill casing to 30ft.			
19.0						39	Advance 5 7/8" roller bit to 30ft.			
20.0						61				
21.0						44				
22.0						53				
23.0						46				
24.0						51				
25.0						68				
26.0						55				
27.0						52				
28.0						58				
29.0						68				
30.0						46				
31.0						95	Advance PW drill casing to 38.5ft.			
32.0						80				

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See Page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

Ttnus Form 0018

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/a 140 lb safety hammer w/30" drop.
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/a 300 lb. cathead hole hammer w/18" drop.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A Oblasky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW02(D)
START DATE: 6/23/01
COMPLETION: DATE: 7-3-01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blws (ft/ft)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0.0										
1.0						14	Advance SW drill casing to 16 ft. Advance 5 7/8" roller bit to 15 ft.		NO chemical samples	
2.0						15				
3.0						20	Casing bouncing @ 2 ft. Probable geotextile/cobbles.			
4.0				Refer to borings MW02		22				
5.0						13				
6.0						47				
7.0						113				
8.0						78				
9.0						100	Wood note in wash water return @ 8 ft.			
10.0						139				
11.0						159				
12.0						104				
13.0						84				
14.0						62				
6/27 15.0						55	Quit for the day. 6/27/01. Casing @ 16 ft. Tobacco PW drill casing @ 15ft. Remove cuttings & logged			
16.0						59				

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING: 6 inch (SW); 5 inch (PW).
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW02(D) PAGE: 1 OF

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/a 140 lb safety hammer w/30" drop
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/a 300 lb casing hole hammer w/ 18" drop.

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A Oblasky
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW03(D) (M) ET
START DATE: 6/22/01
COMPLETION: DATE: 6/27/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Core Time CLR (Sec)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD - [FID, (PPM)]
63.0			R1: 63' - 65.5'			2.5	Water loss noted during drive but advancement. Switch out			
64.0				Noted		NDS	and contaminate drill fluid. Begin NX rock core at 63 ft			
				Cobble/			R1: 63 - 65.5 ft. REC = 13"/30" = 43%			
65.0				Boulder		1.5 min	Approximately 6 inch core of competent GRANITE. 6 to pieces of		Core barrel blocked at 65.5'	
						NR	fractured rock and one 3 inch long round piece of core. Probable cobble and boulder.		Terminate core run.	
66.0			R2: 65.5 - 69.5'				R2: 65.5 - 69.5'; REC = 36"/48" = 75% Approximately 36 inches of		Core barrel would core then advance rapidly then core again, etc	
						4 min	recovered material. Approximately 9 inch loss core of competent granite noted. Probable cobble/boulder. The remainder			
67.0										
						1.5 min	of recovered material consists of rock fragments of various		for the duration of the core run, water loss was noted	
68.0							type of rock including quartz. Probable cobble/boulder. Mixed			
NW						1.5 min	Water return noted during coring. Water return loss		to increase w/depth. no water return at 68 ft.	
69.0							at 68 ft. Advance 3½" by the bit to			
6/26						0.5 min	68 ft. Attempt to advance HW drill casing through boulder			
70.0		Bottom of exploration. Borehole terminated in		at 69.5 ft. cobble/boulder.			& cobble. 180 blows for 2 inches.			
							Quit for the day. Casing at 63.6 ft. 6/26/01			
71.0							6/27/01 - Borehole abandoned and backfilled w/bentonite chips to 21 ft. to install subsurface aquifer well. Will have to redrill to install			

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS: NR denotes that core time not recorded.

Tetra Tech NUS, Inc. MW03D
(M) ET
BORING NO.: MW03(D)
PAGE: 8 OF 8

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/a 140 lb safety hammer w/30" drop
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/a 300 lb center hole hammer w/18" drop.

Tetra Tech NUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: N0400-0221
LOGGED BY: TRACY DORGAN
TRANSCRIBED BY:
DRILLED BY (Company/Driller): LAYNE DRILLING / TOM MARTINELLI
GRD. SURFACE ELEVATION:
ELEVATION FROM:

BORING NO.: MW01
START DATE: 12-28-00
COMPLETION: DATE: 12-28-00
MON. WELL NO.: MW01S
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MATL CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0							GRASS/LEAF-LITTER SURFACE.			
	5 11	1.0 /	CM-SO-MW01-0002			BROWN	S-1A=1.0'-SILTY, F-MED. SAND. MOSTLY F-M POORLY GRADED SAND, SOME SILT.	SM	FILL	FID=170
2	10 10	2.0	S-1 0915			GRAY & BLACK	TRACE ROOTS. S-1B=0.6'-CONCRETE & ASPHALT FILL	FILL	-S-1B SAMPLED.	PID=0.0
	15 9	0.3 /	-0924				POOR RECOVERY, CONCRETE IN NOSE.		ODOR, SVOC, P/P & DIOX.	NO ODOR
4	7 22	2.0	S-2 0918				SIMILAR TO S-1B.		NO MET'S. FILL	H.S.
	12 26	0.9 /	-0406	FILL		BLACK	S-2A=0.4'-BRICK, CURBS, SAND (F-C)	FILL	FILL	FID=482
6	20 7	2.0	S-3 0930			BROWN	S-2B=0.5'-F-C WELL GRADED SAND. TRACE SILT	SW	SATURATED	PID=1.6
	7 7	0.8 /	-0940			BLACK	S-4=GENERALLY, F-C SAND MOSTLY F-C WELL GRADED SAND	SW	NO MMI-MMF	FID=1,048
8	9 9	2.0	S-4 0945			GRAY	LITTLE-SOME FINES ROUNDED GRAVEL.		FILL NOTED LAST SAMPLE.	PID=2.5
	4 5	0.5 /	-0950	SAND & GRAVEL		DK-LIGHT	SAND & GRAVEL. SAND IS F-C WELL GRADED, GRAVEL IS F-C ROUNDED WELL GRADED	SW/GW		FID=50.0
10	6 6	2.0	S5 1050							PID=7.9
	4 4	0.4 /	-1012							FID=106.8
12	5 6	2.0	S6 1100							PID=9.9
	5 7	1.2 /	-1214	SLIGHT ODOR?			S-7A=0.7'-SIMILAR TO ABOVE. S-7B=0.5'-SILTY, FINE SAND. MOSTLY FINE POORLY GRADED SAND, SOME SILT, TRACE GRAV.	SW	THINLY LAMINATED	FID=21.0
14	7 5	2.0	S-7 1115 SILTY LENS			YELLOW BROWN		SM		PID=5.5
	7 5	0.3 /	-1416	SAND & GRAVEL		GRAY	SAND & GRAVEL. SIMILAR TO S-5 & 6. POOR RECOVERY	SW/GW		FID=40.0
16	9 11	2.0	S-8 1110							PID=14.8

TYPE OF DRILLING RIG: TRUCK MOUNTED D-50
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS: 6'-8 IN. BGS
OTHER OBSERVATIONS:
BORING NO.:

Tetra Tech NUS, Inc.
PAGE: 1 OF 2

TtNUS Form 0018

DRILLERS BREAK 0955-1020

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: N0400-0221
LOGGED BY: TRACY DORGAN
TRANSCRIBED BY:
DRILLED BY (Company/Driller): [BUILD DRILLING / T. MAHTERSELL]
GRD. SURFACE ELEVATION:
ELEVATION FROM:

BORING NO.: MW01
START DATE: 12-28-00
COMPLETION: DATE: 12-28-00
MON. WELL NO.: ~~12015~~ MW01S
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16	4 5 6	0.7 / 2.0	-1618 S-9 1146			GRAY	GRAVELLY, COARSE SAND.	SP		FID = 0.0
18							MOSTLY COARSE SAND, POORLY GRADED SOME BOULDERS) F-C GRAVEL.			PID = 7.1 ~~WATER~~ VAPOR?
20	4 6 5 6	0.0 / 2.0	-1920 S-10 1150				NO RECOVERY		NO RECOVERY. DRILLER NOTES ALL GRAVEL IN WASH.	
22	1 3 9 11	0.0 / 2.0	-2022 S-11				EOB @ 22' BGS.			

TYPE OF DRILLING RIG: TRUCK MOUNTED D-50
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:

TINUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: N0400-0221
LOGGED BY: TRACY DORSEY
DRILLED BY (Company/Driller): HOLT DRILLING / KEN MARTINELLI
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW-09
START DATE: 12-14-06
COMPLETION: DATE: 12-16-06
MON. WELL NO.: MW-09S
CHECKED BY:

SEE #5.

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = (FID/PPM)
0							GRASS SURFACE			
	3 6 4 3	1.7/2.0	-0002 S-1 0940			BROWN TAN	TOP SOIL. SILTY, F-M SAND, TRACE GRAVEL = 0.6'-SIA	SM	COARSE MATERIAL	0.0
2							S-1B = 1.1' - F-C SAND.	SW	CLEAN SAND	
	5 6 6 5	1.5/2.0	-0004 S-2 0946				S-2A = 1.4' - SIMILAR TO ABOVE		NEAR SATURATED	0.0
4						DK. BROWN	LINER FABRIC @ 6' FROM TOP. INSIDE (SW) SAND S-2B = 0.1' - dup	SW		
	6 5 1 1	1.2/2.0	DM-SO-MW9-0406 S-3 1000			MOTTLED ORANGE & TAN & BLACK	HORIZON OF ROOTS SILTY, GRAVEL. DENSE. TRACE-F-M SAND. MOSTLY F-C SAND & GRAVEL, 2" MED. SAND LENS @ BOTTOM	SM	65 PPM @ SAND LENS = NO SAMP. DECOMPOSED ORG @ BOTTOM OF SPOON	390 PPM 2100 PPM @ DRILL FL
6										
	1 1	0.0/2.0	DM-SO-MW9-0603 S-4 1015				NO RECOVERY NO SAMPLE			NO SAMPLE
8										
	13 17 20 20	0.2/2.0	-0800 S-5 1023				TRACE AMOUNT POORLY LIMITED SAND (WASH?) 1 PIECE COARSE GRAVEL STUCK IN NOSE		SATURATED (WASHED) C. SAND & GRAVEL.	NO SAMPLE
10										
	17 17 17 12	1.7/2.0	DM-SO-MW9-1012 S-6 1032	SAND & GRAVEL		BROWN	SAND & GRAVEL, TRACE COBBLES UP TO 4" DIAM SANDS = F-C, GRAVELS ROUNDED	SW GW	COLLECTED DM-SO-MW9-1011	1.0 PPM
12										
	7 7 7 7	1.3/2.0	-1214 S-7 1035						NO ANALYTICAL COLLECTED.	99.5 PPM
14										
	18 22 17 21	0.9/2.0	-1416 S-8 1115			LT. BROWN				4.9 FID 2.5 FID
16										

TYPE OF DRILLING RIG: TRUCK MOUNTED D-50
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS: 3.5' BGS
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

PAGE: 1 OF 2

TtNUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: NOH00-0221
LOGGED BY: TRACY DORSEY
DRILLED BY (Company/Driller): HWILD DRILLING
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW-09
START DATE: 12-14-00
COMPLETION: DATE:
MON. WELL NO.: MW-09S
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
16	14 20 30 40	1.6/2.0	- 1618 S-9 1125			LT. BROWN	SAND & GRAVEL. SANDS MADE FROM F-C. TRACE SILT.	GW/SW		FID=7.2 PID=0.0
20	14 23 30	0.6/2.0	- 1820 S-10 1140							FID=0.0 PID=0.0
							END OF BORING @ 20' BGS.			

TYPE OF DRILLING RIG: TRUCK MOUNTED D-50.
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:

TtNUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: N0400-0221
LOGGED BY: TRACY DORGAN
DRILLED BY (Company/Driller): LAUID DRILLING
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW18
START DATE: 12-26-00
COMPLETION: DATE: 12-26-00
MON. WELL NO.: MW18S
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = (FID, (PPM))
0							ASPHALT PAVEMENT			
			DUP-SO-MW18-0102				0.3'-ASPHALT.			
		0.9					0.7-0.9'- ROAD-BASE SAND & GRAVEL		1' S.S. TO START	FID=813
2	10 4	/1.0	S-1 0955			BROWN BLACK	S-1A=0.7'- SIMILAR TO ROAD-BASE. S-1B=0.2'- FRI.-SILTY F. SAND. TR. WOOD	SP	FILL.	PID=254
	6 10	1.0	-0204				WHITE X-THLINE SUBSTANCE?		FILL. @4'	FID=1,328
4	5 5	/2.0	DUP-02-1006 S-2 1005	7.5' FILL			SIMILAR TO S-1B. BLACK, FINE-MED. SAND SOME SILT, FILL. TR. GLASS, ASH? TRACE ROOT FIBERS		SATURATED POSS. NAPL IN SAND	PID=127
	3 4	0.9	-0406				FILL? - SILT & FINE-MED. SAND.	SM/	@ BOTTOM OF SAMP. FILL?	FID=3,200
6	18 40	/2.0	S-3 1035			BRN/BLACK	SILT ING. WOODY DEBRIS & TRACE ROOT	ML	SATURATED	PID=4.7
	20 25	1.2	-0608	ORG. SILT/ PEAT		BROWN	SAND IS F-M POORLY GRADED.			FID=644
8	19 37	/2.0	S-4 1045				GRAVELLY SAND. SAND IS F-C WELL GRADED. GRAVEL IS ROUNDED	SW	LIGHT. LIG SHEEN.	PID=1.7
	20 12	0.1	-0810				TR. COBBLES (BROKEN) ~2" ORG. SILT/ PEAT @ ~7' BGS.	SW		
10	10 12	/2.0	S-5 1100				POOR RECOVERY, COBBLE IN NOSE OF SPOON. = ~5-6" DIAM. SUBROUNDED GRANITE.		NO RECOVERY; NO SAMPLE	NO SAMPLE
	10 6	1.0	-1012	SAND		GRAY TAN	SAND. MOSTLY F-C WELL GRADED SAND. TRACE FINE ROUNDED GRAVEL.	SW		FID=10.4
12	6 6	/2.0	S-6 1105			RUST ORANGE			HEAVY RUST ORANGE OXIDATION STAINING IN BOTTOM 4 IN.	PID=6.4
	21 10	0.5	-1214	SAND GRAVEL		TAN	SAND & GRAVEL. F-C WELL GRADED	SW/		FID=1.6
14	10 20	/2.0	S-7 1110				SAND. F-C WELL GRADED ROUNDED GRAVEL	GW		PID=3.6
	42 25	0.8	-1416	GRAVEL		TAN/ BROWN	SANDY, GRAVEL. MOSTLY F-C ROUNDED GRAVEL, LITTLE SILT/CLAY, TRACE SILT.	GW	NO STRUCTURE	FID=0.5
16	25 49	/2.0	S-8 1115							PID=4.3

TYPE OF DRILLING RIG: TRUCK MOUNTED D-50
METHOD OF ADVANCING BORING: 4 IN. I.D DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS: APPROX 3.5-4' BGS
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:

TtNUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESIDENTIAL WELLS.
PROJECT NO.: N0400-0221
LOGGED BY: TRACY DORGAN
DRILLED BY (Company/Driller): LAYNE DRILLING
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: ~~MW08~~ MW08
START DATE: 12-21-00
COMPLETION: DATE: 12-22-00
MON. WELL NO.: MW08S
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
	35	1.6	-1618			THW	S-9A = ~~SW~~ - GRAVELLY, F-C SAND.	SW		FID=10.4
16	19 / 7 / 9	/ 2.0	S-9 1125				S-9B = 0.6' - SAND & SILT. ~50% FINE MED SAND (SP) AND 50% SILT.	SP/SM		PID=15.5
	22	0.0	-1620	X		NO RECOV	NO RECOVERY. DRILLER SAID		NO RETURN	FID= \
20	21 / 13 / 10	/ 2.0	S-10 1133	X			SOME SAND BLOWED OUT WHEN HE PULLED THE SAMPLE.		HOLE CAVED TO 20'.	PID= \
	4 / 6	1.1	-2022			THW	SILTY, F-C SAND. SAND IS	SW/		FID=3.8
22	10 / 10	/ 2.0	S-11 1145				WELL GRADED. SILTY LAYERS ~ 3-4" THICK IS SAND.	SM		PID=5.4
							EOB @ 22' BGS.			

TYPE OF DRILLING RIG: TRUCK MOUNTED D-50
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:

TtNUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: NOH00-0221
LOGGED BY: TRACY DORGAN
DRILLED BY (Company/Driller): HWILD DRILLING
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: SB02
START DATE: 1/3/01
COMPLETION: DATE: 1/3/01
MON. WELL NO.: ~~SB02~~ NO WELL
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MATL CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0							ICE SURFACE OVER OPEN CHAMBER			
	1 / 1 / 1 / 1	0.2 /	CH-SB-SB02-0001			BLACK	FROZEN LEAVES & TWIGS.		POOR RECOVERY	NO SAMPLE
2		/ 2.0	S-1 1015				TRACE SILT.		NO SAMPLES TAKEN	
	5 / 10	0.9 /	-0204			BLACK	S-2A = 0.6' - LOOSE, WET/SATURATED, SILT TRACE LEAVES & TWIGS.	SM	S-2A = LIGHT SHEEN.	FID = 530
4	10 / 12	/ 2.0	S-2 DUP-1025 1025	PUMP + SAND PIP		BROWN	S-2B = 0.5' - ~~BROWN SILT~~.	SW/GW	SATURATED.	PID = 4.8
	2 / 2	0.4 /	-0406				NOTE - ~6" SLOUGH SIM. TO S-2A.			FID = 150
6	3 / 10	/ 2.0	S-3 1110				S-3 = WELL GRADED F-C SAND, TRACE FINE ROUNDED GRAVEL.	SW		PID = 6.8
	4 / 9	0.8 /	-0608						SLOUGH SIMILAR TO S-2A NEAR SAMPLE.	FID = 280
8	9 / 15	/ 2.0	S-4 1125							PID = 8.0
	10 / 10	0.0 /	-0810	X			NO RECOVERY		NO RECOVERY, DRILLER NOTES FINE SAND IN WASH.	X
10	11 / 7	/ 2.0	S-5 1135							
	5 / 7	0.0 /	-1012	X						X
12	7 / 5	/ 2.0	S-6 1140							
	2 / 2	0.3 /	-1214			GRAY	GRAVELLY, SAND. MOSTLY F-C WELL GRADED SAND. SOME FINE ROUNDED GRAVEL. TRACE SILT.	SW	POOR RECOVERY SOME OF SAMPLE WASHED OUT OF SPOON	FID = 10.0
14	3 / 7	/ 2.0	S-7 1330							PID = 9.1
	2 / 4	1.0 /	-1416				SAND. MOSTLY F-C WELL GRADED SAND. TRACE SILT, TRACE FINE GRAVEL.	SW		FID = 24.0
16	8 / 7	/ 2.0	S-8 1345			YELLOW-BROWN				PID = 2.0

TYPE OF DRILLING RIG: BOAT MOUNTED TRIPOD.
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:
BORING NO.:

Tetra Tech NUS, Inc.

PAGE: 1 OF 2

TINUS Form 0018

START @ 1000.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: N0400-0221
LOGGED BY: TRACY DORSEY
DRILLED BY (Company/Driller): HUILD DRILLING
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: SB02
START DATE: 11/3/01
COMPLETION: DATE: 11/3/01
MON. WELL NO.: ~~S~~ NONE
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
16	2 2 3 3	1.4 / 2.0	-1618 S-9 1415			GRAY	S-9A=1.0'- SIMILAR TO S-8 ABOVE. S-9B=0.4'- SILT & SAND. SAND IS	SW		FID=28.0
						GRAY & TAN	FINE GRAINED. FINE BEDDING LAYERS NOTED.	SM		PID=2.7
20	4 2 4 3	0.2 / 2.0	-1420 S-10 1422			GRAY	POOR RECOVERY. POSS. WASH. F-C WELL GRADED SAND.	SW		
							EOB @ 20' BGS.			

TYPE OF DRILLING RIG: BOAT MOUNTED TRIPOD
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:

TtNUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: N0400-0221
LOGGED BY: [illegible] DOUGLAS JESSICA DAWLEY
DRILLED BY (Company/Driller): HAND DRILLED
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: SB03
START DATE: 1/9/01
COMPLETION: DATE: 1/9/01
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = (FID, (PPM))
0										FID= PID=
	2 Blows for 20"	0.3 / 2.0	0002 CM-SO-SB3-0002 S-1 No sample 0842		Loose	Black	Muck - Highly Organic. SILT trace Sand	OL	Saturated	FID=32 PID=1.8 Bz=0
2	6 7	0.7 / 2.0	0204 CM-SO-SB3-0204 S-2 0900		Loose	Black	SAB (0-3ft)	OL	Saturated Sheen noted only 0.7ft recovery - boulder ?	FID=0.5 PID=1.5 Bz=0
4	Lost Lost					Dk. Brown	S2B (0.4ft) F-C SAND, minor Silt & gravels	SW		
	45 47	1.4 / 2.0	Dup05-0406 CM-SO-SB3-0406 S-3 0935		Dense	Light Gray	F-C Silty, Gravelly, SAND (pieces of 0.1ft cobble)	SW/GW	Saturated	FID=1.4 PID=2.0 Bz=0.0
6	46 40									
	40 42	0.7 / 2.0	0808 CM-SO-SB3-0808 S-4 1200				S-4A - F Sandy SILT (0-3ft) S-4B - F-C Silty Gravelly SAND (pieces of cobble)	ML SM/GW	Saturated	FID=0.0 PID=0.0
8	41 15									
	37 32	0.7 / 2.0	0810 CM-SO-SB3-0810 S-5 No Sample						Saturated	FID=20.5 PID=49 Bz=0.0
10	15 16									
	11 12	1.1 / 2.0	1012 CM-SO-SB3-1012 S-6 No sample						Saturated	FID=1.7 PID=0.3
12	12 10						increase in Fines			
	6 6	1.3 / 2.0	1214 CM-SO-SB3-1214 S-7 No Sample		Dense	Light Gray	S7A (0.7ft) Silty SAND minor Gravels	SM	Saturated	FID=0.0 PID=0.8
14	9 6						S7B (0.6ft) F-C SAND w/ Gravels & SILT	SW/GW		
	17 13	1.1 / 2.0	1416 CM-SO-SB3-1416 S-8 No Sample		Dense				Saturated	FID=0.0 PID=0.6
16	19 19									

TYPE OF DRILLING RIG: [illegible] TRIPOD
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER w/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS: Wat Surface - boring ~5 inch of Standing water
OTHER OBSERVATIONS: Bz = breathing zone

Tetra Tech NUS, Inc.

BORING NO.: SB03

TtNUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION POST.
PROJECT NO.: N0400-0221
LOGGED BY: ~~TRACY DORSAM~~ JESSICA DENNEY
DRILLED BY (Company/Driller): HUILD DRILLING
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: SB03
START DATE: 1/9/01
COMPLETION: DATE: 1/9/01
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16	12 12	1.1 / 2.0	1615 dm-SO-SB3-1615 SG no Sample 1820		Dense	Light Gray	F-C Gravelly, Silty, SAND	SW/SW	Saturated	FID=0.0 PID
18	14 16				↓					PID=0.7
	5 8	1.0 / 2.0	dm-SO-SB3-1820 S-10 1345		Dense		S10A - Silty SAND minor gravel	SM	Saturated	FID=0.0
20	11 12				↓	V	S10B - F-C Gravelly, Silty SAND	SW		PID=0.0
							EOBO 20 ft BGS			

TYPE OF DRILLING RIG: BOAT MOUNTED TRIPOD.
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS: @ at Surface - Boring ~5 inch of standing water
OTHER OBSERVATIONS: BZ = Breathing zone

Tetra Tech NUS, Inc.

BORING NO.: SB03
PAGE: 2 OF 2

TINUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: COVENTRY MANOR PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DORAN
DRILLED BY (Company/Driller): EDI / JAY GRASSER
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: ~~MW10~~ MW10
START DATE: 6-26-01
COMPLETION: DATE:
MON. WELL NO.: MW10B
CHECKED BY:

ST. FOR SILT

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16	13 13	0.7 / 2.0	-1618 S-9 0944			BROWN/GRAY	SIMILAR TO S-8 ABOVE.	GW	UNSORTED & DENSE. POSS. TILL?	FID=38.4 PID=1.4
18	14 17									
20	26 25 21 20	0.6 / 2.0	-1820 S-10 1015				↓	↓	POSS. TILL?	FID=43.0 PID=3.1
22	14 15 13 12	0.7 / 2.0	-2022 S-11 1030				GRAVELLY, SAND. MOSTLY F-C WELL GRADED SAND, SOME F-C SUBANG. - SUBROUNDED GRAVEL, TRACE SILT.	SW		FID=38 PID=1.0
24	15 10 11 8	0.5 / 2.0	-2224 S-12 1054				S-12A=0.1' SIMILAR TO ABOVE. S-12B=0.4' GRAVELLY, FINE SAND POORLY GRADED, SOME FINE ROUNDED GRAVEL, TRACE SILT.	↓ SP	NO BEDDING OR STRUCTURE NOTED.	FID=38.4 PID=1.0
26	5 2 3 4	0.1 / 2.0	-2426 S-13 1112	NO/POOR RECOVERY	X	X	POOR RECOVERY, PUSHED COARSE-GRAVEL OR COBBLE. ONLY 1 PIECE ROUNDED GRAVEL ENTERED SPOON. TRACE SILT & V.F. SAND ON GRAVEL.	X	POOR/NO RECOVERY, RIG GRINDING & HOPPING	X
28	4 4 5 6	0.0 / 2.0	-2628 S-14 1130	"	X	X	GRAVEL SLOUGH ONLY	X	NO RECOVERY GO TO 3" SPLIT-SPOON	X
30	6 7 9 8	0.1 / 2.0	-2830 S-15 1150	GRAVEL ? COBBLES? GRAVEL?		GRAY	GRAVEL. POOR RECOVERY, ALL COARSE ROUNDED GRAVEL RECOVERED.	GP?	POOR RECOVERY	X
32	7 9 9 9	0.0 / 2.0	-3032 S-16 1215		X	X	NO RECOVERY	X	NO RECOVERY, DRILLER SAYS IT'S VERY LOOSE, EASY DRILLING	X

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: 2" & 3" SPLIT BARRELS DRIVEN BY 140 LB. HAMMER & 30" DROP.
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

TtNUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTERDALE MANOR PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T-DORAN
DRILLED BY (Company/Driller): LEDI - JAY GRASSER
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW10
START DATE: 6-26-01
COMPLETION: DATE: 7-05-01
MON. WELL NO.: MW10B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
32										
2"	6 5 7	0.0 / 2.0	-3234 S-17 1308		X	X	COARSE SAND & GRAVEL SLOUGH ONLY, NO SAMPLE RECOVERY		0.2' SLOUGH. F-MED. SAND IN WASH WATER FLOW 30-32.	X
34										
2"	4 4 6 6	0.4 / 2.0	3436 S-18 1325			YELLOW-BROWN	SAND, MOSTLY F-C WELL GRADED SAND, TRACE GRAVEL, TRACE SLT.	SW	SLOUGH = COARSE SAND & GRAVEL. POSS. PUSHED COBBLE W/ SPOON.	FID=0.3 PID=1.0
36										
2"	4 3 8 16	0.5 / 2.0	3636 S-19 1350			LT. GRAY	GRAVELLY SAND. MOSTLY F-C WELL GRADED SAND, SOME F-C WELL GRADED SUBANG.-SUBRNDED GRAVEL, TRACE SILT.	SW	ADDED MORE F-MED SAND IN WASH WATER	FID=0.0 PID=1.1
38										
2"	7 11 8 6	0.4 / 2.0	3840 S-20 1410				INC. GRAVEL (SUBRNDED)		LOST ~300 GALLONS WATER	FID=1.9 PID=1.4
40										
2"	11 12 13 11	0.4 / 2.0	4042 S-21 1445				SANDY, GRAVEL. MOSTLY F-C SUBANG.-SUBRND GRAVEL SOME F-C SAND, TRACE SILT.	GW	THROUGHOUT DAY'S DRILLING.	FID=15.1 PID=2.8
42										
2"	20 16 24 15	0.3 / 2.0	-4244 S-22 0800				POOR RECOVERY. PUSHING C-GRAVEL OR COBBLE?		PUSHING COBBLE?	FID=0.0 PID=0.0
44										
2"	19 22 22 24	0.5 / 2.0	-4446 S-23 0828			MOTTLED GREEN, BROWN & TAN	COBBLE APPROX 0.4'-WEATHERED SCHIST GRAVEL BELOW IS FINE SUBRNDED.	GP/ COBBLE	MAY HAVE TO ED TO MUD TO WASH CASING. DRILLER TAKES LITTLE TO WASH OUT.	FID=2.0 PID=1.0
46										
2"	33 77 50 24	0.10 / 2.0	-4648 S-24 0905			GRAY	SILTY, SANDY GRAVEL - F-C SAND AND F-C SUBANG.-SUBRNDED GRAVEL, LITTLE-SOME SILT- COARSE GRAVEL IN NOSE, STOPPED BELOW.	GW	POSS. TILL @ 46	FID=3.1 PID=1.6
48										

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:

TtNUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - JAY GRASSER
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW10
START DATE: 6-26-01
COMPLETION: DATE: 7-05-01
MON. WELL NO.: MW10B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROFL	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
46	76/98	0.9/1.8'	-4850 S-25 0945		CORE TIME	LIGHT-GRAY	SIMILAR TO S-24 ABOVE. UNSORTED MIX (DENSE) OF SILTY, SAND (F-C) AND F-C SUBANGULAR - SUBROUNDED GRAVEL. GRANITE IN NOSE.	SW/GW	TILL? COBBLES? GRINDING & HOPPING TO 50'	FID=7.9 PID=1.4
50	108/110/4"									
52	110/120/5"	0.4/0.4	S-26 0957 1240			GRAY	GRANITIC COARSE GRAVEL IN A SILTY, F-C SAND MATRIX. METAL FLAKES IN SAMPLE.		LOST ~ 100 GALLONS @ 48-50'. TELESCOPE 4", THROUGH 5" @ 49.8 RUNNING SAND. POOR RECOVERY	PID=1.1
54	22/29/120/1"	0.1/1.1	-5253 S-27 0817			GRAY & WHITE	CRUSHED COBBLE & SLIGHT-SAND & GRAVEL DRIVE CASING TO 52.9' REFUSAL ROLLER-BIT DRIVE		USED ~ 400 GALLONS DRILLING 52-54'	PID=0.5 PID=0.0
				LT. GRAY-WHITE QTZ		LT. GRAY-WHITE	QUARTZ CUTTINGS, POSS. BEDROCK.			
56			Begin C-1 @ 55.5' Pen: 5.0' Rec: 4.9' %Rec = 98% RQD length = 52" RQD % = 88%	Top of Bedrock @ 54'		DK. GRAY	SCHIST ROLLER-BIT CUTTINGS. POSS. BEDROCK.			
58		C1			4:00	DARK GRAY	SCHIST BECOMING MORE GNEISSIC.	BL		
60					4:45		MOD. HARD TO HARD, ALL PIECES CORE ARE FRESH SURFACES LITTLE EVIDENCE OF OXIDATION OR STAINING, NO LOOSE FOLIATION, GRADES INTO GRANITIC GNEISS FROM ~ 59' DOWN, POSS. CONTACT METAMORPHISM?		LOW ∠ FRAC. PARALLEL TO FOLIATION @ ~ 57.0'; 57.5'; & 57.8' BLS SHOWED FRESH FRACTURE LOW ∠ AT APPEAR. 58.2'.	
				End C-1 @ 60.5'	7:00					
62	2:04		Begin C-2 @ 60.5' Pen:		6:00					
	2:03	C2			5:00					
64	2:08		Rec.: %RQD(in.): 39" RQD(ft.): 0.65'			GRAY	Hard, gray, medium - coarse grained, granitic, slightly weathered, slight evidence of oxidation, low angle foliation Rough fractures			
	1:32									

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:
PAGE: 4 OF 6

TINUS Form 0018 (1) 5" CASING TO 49.8'. TELESCOPED 4" TO APPROX. SAME DEPTH. 5" & 4" ROLLER BIT'S TO 50'. COLLECTED S-26, POSS. TILL, POSS. WEATHERED BEDROCK. ATTEMPT TO DRIVE 4" CASING TO 51 FT. BUT DRILLER BELIEVES 5" SHOE BURST & 4" CASING AND GETTING THROUGH. DO NOT HAVE GPM. LOOSE ABUNDANT WATER. FINER CUTTINGS. PID. 4" TO INCREASE

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rousseau
DRILLED BY (Company/Driller): EDI -
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW10
START DATE: 7/05/01
COMPLETION: DATE: 7/05/01
MON. WELL NO.: MW10B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6" / Time/Ft.	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = (FID, (PPM))
65	1:44	C3		end of C3 @ 65'		Gray	Hard, gray, medium-coarse grained granite, evidence of oxidation, low-foliation schistose appearance, rough fractures parallel to bedding		& foliation, fractures @ 66' through 67' very weathered. Fracture again @ 69'	
66	1:40	C3	Begin C3 @ 65' Pen: 60" Rec: 54" RQD(in) 36.5" RQD(%) 60.8%							
	2:03									
68	1:59	C3								
	2:06									
70	2:15			end of C3 @ 70'						
	1:44	C4	Begin C4 @ 70' Pen: 60" Rec: 59" RQD(in) 46" RQD(%) 76.6%			Gray	Hard, medium-coarse grained gray granite, slight evidence of oxidation,		Fractures rough occuring @ 72' for 4" then @ 73' and 74.5', evidence of oxidation	
72		C4								
74		C4								
				end of C4 @ 75'						
76		C5	Begin C5 @ 75' Pen: Rec: RQD(in) 57" RQD(%) 93.3%			Gray	Hard, medium-coarse grained gray granite, slight evidence of oxidation, ~~Low-f~~		Fractured @ 76'; 76'2", 77'5", 78'5", 79' rough fractures	
78		C5								
80				end of C5 @ 80'						

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rousseau
DRILLED BY (Company/Driller): EDI -
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW10
START DATE: 7/05/01
COMPLETION: DATE: 7/05/01
MON. WELL NO.: MW10B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6" / TIME/FT	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
82		C6	Begin C6 @ 80' Pen: 60" Rec: 60" RQD(in) 58" RQD(%) 96.67	end of C6 @ 85'		Gray/Blue	Hard, medium - coarse grained granite/granite, slight evidence of oxidation;		Fractured @ 81.5', 82'7", 83'10", 84'3"	
84										
							C. Rousseau 7/5/01			

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rossean
DRILLED BY (Company/Driller): EDI -
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW-10(D)
START DATE: 7/11/01
COMPLETION: DATE: 7/12/01
MON. WELL NO.: MW-10(D)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0							Soil/Fill Surface			
				Fill		Brown	Brown fine-coarse SAND and gravel. Glass, paper plastic debris on surface soil around MW-10(m)		5" Casing driven 15' w/300lb hammer. Roller bit to flush out SAND & gravel debris. Roller bit to 20 feet	
2										
		5" (casing)								
4										
6										
8		5" (casing								
10										
12						Gray	Gray fine-coarse SAND and gravel. Observed color change in wash water (return water) had gray tint.			
		5" (casing)							End of 5" Casing @ 15' Beginning of 4" Casing.	
14										
									Drove 4" Casing w/600lb hammer	
16										

End of 5" Casing 15' -- Beginning of 4" Casing

TYPE OF DRILLING RIG: Acker Truck Mounted Rig #1
METHOD OF ADVANCING BORING: 5 in. & 4 in. D&W Casing Driven w/300lb & 600lb hammer
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW-10(D)
PAGE: 1 OF 3

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* Note: Driller chose to telescope 4" casing beginning @ 15', felt confident they will be able to reach the desired depth @ 46'
v. Refer to MW-10(B) for further description.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rossow
DRILLED BY (Company/Driller): EDI -
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW10(D) ~~MW10~~
START DATE: 7/11/01
COMPLETION: DATE:
MON. WELL NO.: MW10(D) Tool
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16				Fill 2'		GRAY	Fine-coarse grained SAND and gravel possibly Fill		advanced 4" casing to 20' w/300lb hammer. Rollee bit and wash to 25' then advance 4" casing	
18		4" casing								
20										
22						GRAY	Fine-coarse grained SAND and Gravel		Advanced 4" casing w/300lb hammer to 25 feet	
24		4" casing								
26									Roller bit & wash to 30 feet.	
28		4" casing					Drill Rods bound in 4" casing spinning rods spun 4" casing 4" casing was removed to assure 4" casing was not unscrewing in sections. Casing was fine 4" advanced to 30 feet		Advance the 4" casing to 30' w/300lb hammer	
@1400 → 30										
32									4" casing advanced to 30' w/300lb hammer	

TYPE OF DRILLING RIG: Acker Truck Mounted Rig
METHOD OF ADVANCING BORING: D & W Casing Driven w/300lb & 600lb hammer.
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW10(M)

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rousseau
DRILLED BY (Company/Driller): EDI -
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW-10(D)
START DATE: 7/14/01
COMPLETION: DATE:
MON. WELL NO.: MW-10(D)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* - [FID, (PPM)]
32		4" casing				Brown	~~Very coarse~~ Fine - coarse grained SAND and gravel some large size gravel		4" casing advanced to 35' w/ 300lb hammer.	
34										
		35'								
36										
38		4" casing								
@1430 → 40										
						Brown	Fine - coarse grained SAND and gravel, some larger piece of gravel			
42		4" casing								
44										
Bottom of MW-10(D) 46										
48										

TYPE OF DRILLING RIG: Acker Truck Mounted Rig #1
METHOD OF ADVANCING BORING: 5 and 4 inch Dual Casing Driven w/300lb & 600lb hammer
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW-10(D)
PAGE: 3 OF 4

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: TRACY DORGAN
DRILLED BY (Company/Driller): EDI - DAVE ERICSON
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW11B (M) (ET)
START DATE: 7-10-01
COMPLETION: DATE: 7/17/01
MON. WELL NO.: MW11(M)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0							ASPHALT SURFACE			
	5 5 7	0.7 / 2.0	-0002 S-1 0745			LIGHT BROWN	0.2' ASPHALT FILL. ROAD BASE. GRAVELLY, SAND MOSTLY F-C GRAINED SAND, SOME F-C GRAVEL.	SW	ROAD-BASE	FID = 0.0 PID = 0.0
2	7					↓	↓	↓		
	8 10 5	1.1 / 2.0	-0704 S-2 0750			↓	↓	↓	HAND AUG. PROB. DRIVING 5" CASING VERY. EASY DRILLING DUE TO COBBLES & BOULDERS IN SHALLOW FILL. DRIVE CASING TO 8' BEFORE WASHING OUT DUE TO LOOSE FILL, VOIDS OPEN UP DURING DRIVE, FILL W/ FILTER-PACK & BENT. CHIPS TO SUPPORT CASING.	FID = 0.0 PID = 0.0
4	10									
	13 8 10		NO SAMPLES				NO SAMPLES			
6										
8										
	13 8 10	0.3 / 2.0	-0810 S-3 0938			DARK BROWN	SAND. MOSTLY F-C SAND, WELL GRADED, FEW FINE GRAVEL ROUNDED, TRACE SILT.	SW	LOOSE WET WATER (NO RETURN) @ 7.5 BGS.	FID = 0.0 PID = 0.0
10	10					↓	↓	↓		
	25 13 15	0.4 / 2.0	-1012 S-4 0955			↓	↓	↓	DAMP - WET	FID = 0.0 PID = 0.0
12	15					↓	↓	↓		
	33 28	0.2 / 2.0	-1214 S-5 1025			GRAY-BROWN	SANDY, GRAVEL. POOR RECOVERY ONLY 1 HARD ROCK LARGE GRAVEL IN F-C SAND MATRIX.	GP		FID = 0.0 PID = 0.0
14	32 52					↓	↓	↓		
	60 44 44 32	0.4 / 2.0	-1416 S-6 1050			BROWN	SILTY, SANDY, GRAVEL. MOSTLY F-C SUBROUNDED GRAVEL, FEW F-C SAND, TRACE SILT (M) FEW SIZE	GM	DAMP - WET	FID = PID =
16										

TYPE OF DRILLING RIG: DIEDRICH D-120 TRUCK MOUNTED RIG.
METHOD OF ADVANCING BORING: 5" DIA CASING DRIVEN W/ 600 LB. HAMMER TO —.
METHOD OF SOIL SAMPLING: 2" SPLIT-BARREL DRIVEN BY 140 LB. HAMMER W/ 30 IN. DROP.
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW11(B) MW11(M) (ET)
PAGE: 1 OF 3

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - DAVE ERICSON
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: ~~MW11B~~ MW11(M) (E7)
START DATE: 7-10-01
COMPLETION: DATE: 7/17/01
MON. WELL NO.: MW11 (M)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16	20 30 38 49	0.9 / 2.0	-1614 S-7 1115		VERY DENSE	LIGHT GRAY	GRAVEL & SAND. GRAVEL IS F-C SW/SW SUBROUNDED AND ROUNDED; SAND IS F-C WELL GRADED.	SW	SATURATED.	FID=0.0 PID=0.0
20	34 44 40 45	1.2 / 2.0	-1620 S-8 1205						LOOSING A STEADY FLOW OF WATER TO FM.	FID=0.0 PID=0.2
22	4 19 26 24	0.5 / 2.0	-2022 S-9 1310		DENSE				DURING WASH, NOT A LARGE QTY, JUST 10-20 GAL / 2' WASH	FID=1.1 PID=0.4
24	30 34 45 47	0.9 / 2.0	-2224 S-10 1355	▽ 7/17/01 = 23.2	VERY DENSE		INC. TRACE SILT.			FID=0.8 PID=0.1
26	27 24 27 38	1.0 / 2.0	-2426 S-11 1423			DK. BROWN				FID=0.0 PID=0.0
28	25 33 35 26	0.8 / 2.0	-2628 S-12 0830			LIGHT BROWN TO LIGHT GRAY	INC. SAPROLITIC, VERY WEATHERED COBBLE.			FID=3.9 PID=0.0
30	21 55 27 28	0.6 / 2.0	-2830 S-13 0905							FID=2.4 PID=0.0 STOP D TO T- STORM
32	22 32 24 25	0.4 / 2.0	-3032 S-14 1130							FID=1.7 PID=0.0

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: ~~MW11(B)~~ MW11(M) (E7)
PAGE: 2 OF 5

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CONTEDUKE MARINA PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DURGAN
DRILLED BY (Company/Driller): EDJE - MIKE ERICSON
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW11B MW11(M) (ET)
START DATE: 7-10-01
COMPLETION: DATE: 7/17/01
MON. WELL NO.: MW11(M)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
32	15/24 34/34	0.7/2.0	-3234 S-15 1210		VERY DENSE	LT-BROWN TO LT-GRAY	GRAVELLY, SAND. MOSTLY F-C WELL GRADED SAND, SOME F-C ROUNDED GRAVEL, TRACE SILT	SW		FID=1.3 PID=0.0 CHECK PID W/ SHARPIE SCREENS
34	20/31 59/34	1.0/2.0	-3436 S-16 1315						MINOR OXIDATION PUNGENT ODOR NOTED.	FID=4.3 PID=0.0
36	120/5" 0.0/0.5		-3640 S-17 1345				NO RECOVERY, SPOON REFUSAL.		NO RECOVERY; SPOON BOUNCING. LIGHT SHEEN ON WASH WATER.	
38							D&W TO 38'. LOST ~100 GAL. WHILE WASHING HEAD OF CASING.			TOP OF
40	16/14 14/15	0.0/2.0	-3840 S-17 0816		MED. DENSE		NO RECOVERY, ONLY SLOUGH		NO RECOV.	
42	14/15 17/19	0.5/2.0	-4042 S-18 0835		DENSE	LT-GRAY	SANDY, GRAVEL. MOSTLY F-C WELL GRADED ROUNDED GRAVEL, TRACE SOME F-C SAND, TRACE COBBLE (BROKEN)	GW	COBBLES	FID=1.0 PID=0.0
44	23/17 19/23	0.9/2.0	-4244 S-19 0910	FINE SAND, SOME SILT	DENSE	LT-GRAY	S-19A=0.3' - SIMILAR TO S-18. S-19B=0.6' - SILTY, FINE SAND. MOSTLY FINE POORLY GRADED SAND, SOME SILT, TRACE CLAY.	SM/SC	SHARP CONTACT BETWEEN A & B. THIN-MICRO LAMINATED RHYTHMIC BEDDING.	FID=0.4 PID=0. BOWS.
46	14/15 15/15	1.1/2.0	-4446 S-20 0938							FID=0.9 PID=0.0
48	20/21 33/30	/2.0	-4648 S-21 0956							FID=0.0 PID=0.0

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS: WATER @ 23.2' BGS W/ CASING @ 36' @ 0745 ON 7/12/01
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW11(B) MW11(M) (ET)
PAGE: 3 OF 5

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTERDALE MANOR - PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - DALE ERICSON
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: ~~MW11B~~ MW11(M) (ET)
START DATE: 7-10-01
COMPLETION: DATE: 7/13/01
MON. WELL NO.: MW11(M)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
48	15 16 17 19	0.9 / 2.0	4650 S-22 1030		DENSE	LIGHT GRAY	SIMILAR TO S-21. SILTY, FINE SAND, MOSTLY FINE POORLY GRADED SAND, SOME SILT, TRACE CLAY	SM	NO BEDDING OBSERVED.	FID=0.0 PID=0.0
50	12 14 16 22	1.0 / 2.0	5052 S-23 1100				DECREASED SILT. SAND. MOSTLY FINE POORLY GRADED SAND, TRACE-FEW SILT.	SP		FID=1.2 PID=0.0
52	15 18 25 31	1.0 / 2.0	5254 S-24 1130			LIGHT BROWN	Mostly fine poorly graded SAND, TRACE FEW SILT	SP	Bedding observed, light gray	FID=2.0 PID=0.0
54	38 46 26 32	1.0 / 2.0	5456 S-25 1190	Poss. Till?	VERY DENSE	LIGHT BROWN	Angular gravel, weathered gravel Mostly coarse fine SAND, gravelly sand. TRACE SILT.	SW	No Bedding Observed Poss. TILL	FID=1.5 PID=0.0
56	24 74 50/3"	0.0 / 1.25	5658 S-26 1345	Cl begins @ 59	VERY DENSE	X	NO RECOVERY, SPOON REFUSAL @ 57.25'	X	NO RECOV. DRIVE 5" CASING TO 56.5', ROLLER BIT TO 58'. Poss BOULDER	TO Poss. BEDROCK.
58 end 7-12-01									DRIVE 4" CASING TO 59', roller bit 59', Poss. bedrock, wash casing begin	
60	NR		Cl - 59'-63' Rec - 45" RQD - 36" RQD% - 72%		Hard	Light Gray	Hard, fine-coarse grained, gray Granite, rough, no bedding Fractured, discoloration, weather rock 62-63'			
62	3:45 3:18 4:25	R1							slowly, wobbly, could to 63', wobbling became to much break down Rods see whats wrong	
end 7/13/01 64				end @ 64'			Switch to A. Obrecky (driller) @ 63'. Switch to E. Thalacker (rig geologist) @ 63.5'.			

TYPE OF DRILLING RIG: Acker Truck Mounted Drill Rig
METHOD OF ADVANCING BORING: 5"&4" Casing, D&W, 300lbs & 600lb hammer, Wire Line Coring
METHOD OF SOIL SAMPLING: 2" 2 foot split spoon sampling
METHOD OF ROCK CORING: Wire Line Coring 5 foot Core Barrel
GROUNDWATER LEVELS: Water @ 23.2' bgs
OTHER OBSERVATIONS: Photovac 2020 PID (A) Monitoring Equipment
Photovac MicroFID (A)

Tetra Tech NUS, Inc.

BORING NO.: ~~MW11B~~ MW11(M) (ET)

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US EPA ARCHIVE DOCUMENT

ET

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0490
LOGGED BY: C. Rousseau / E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Obteley
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW11 (B) MW11(M)
START DATE: 7/10/01
COMPLETION: DATE: 7/12/01
MON. WELL NO.: MW11(M)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* - [FID, (PPM)]
64							core run was terminated at 63 ft. Telescope 3 inch (NW) casing over wireline casing/rock system to stabilize during coring.			
66							Wireline core barrel became locked in NW casing. Removed NW drill casing & wireline system.			
68							Lost diamond core bit and reaming shell down hole. Unable to retrieve bit & shell. Abandoned boring to bedrock @ 63ft. Install			
70							Instal Monitor overburden well MW11(M).			
72										
74										
76										
78										
80										

TYPE OF DRILLING RIG: Acker Truck Mounted Rig #1
METHOD OF ADVANCING BORING: 5" & 4" D&N Casing Driven w/300lb/600lb hammer
METHOD OF SOIL SAMPLING: 2" Split Barrel Driven by 140lb hammer w/30in. Drop
METHOD OF ROCK CORING: Wireline Coring 5 Foot Barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: ~~MW11 (B)~~ MW11(M) ET
PAGE: 5 OF 5

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblitsky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW11(B)
START DATE: 7/17/01
COMPLETION: DATE:
MON. WELL NO.: MW11(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows per ft (Feet)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* - [FID, (PPM)]
0						NR	Advance 4-inch casing to 15.5ft, Advance 4¾" roller bit to 19ft.		No Chemical Samples	
2						NR	No soil samples taken. Please			
						NR	refer to boring MW11(A) for			
4						NR	soil information.			
						14				
6						84				
						156	Difficult drilling from 6 to 10ft.			
8						179	Probable cobbles / boulders.			
						239				
7/17 10						130				
						67	Quit for the day. Casing at 10.5ft. 7/17/01			
12						66				
						58				
14						60				
						90				
16						177			↓	

TYPE OF DRILLING RIG: Acker AD II Track Rig
METHOD OF ADVANCING BORING: 5-inch (AW), 4-inch (NW), 3-inch (NW) dual casing with drive w/300lb hammer
METHOD OF SOIL SAMPLING: No soil samples collected
METHOD OF ROCK CORING: 5 foot NQ wireline system
GROUNDWATER LEVELS:
OTHER OBSERVATIONS: "NR" denotes not recorded

Tetra Tech NUS, Inc.

BORING NO.: MW11(B) PAGE: 1 OF 6

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thaler
DRILLED BY (Company/Driller): EDI - A. Oblicky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW11(B)
START DATE: 7/13/01
COMPLETION: DATE:
MON. WELL NO.: MW11(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows (Feet)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = (FID, (PPM))
16						219			No chemical samples	
18						269				
						52	Advance PW drill casing to 24 ft. Advance 4 3/8" roller bit to 24 ft.			
20						198				
						170				
22						126				
						177				
24						103				
						97	Advance PW drill casing to 33 ft. Advance 4 3/8" roller bit to 33 ft.			
26						59				
						69				
28						56				
						78				
30						96				
						105				
32						70			↓	

TYPE OF DRILLING RIG: Acker AD II Truck Rig
METHOD OF ADVANCING BORING: 5-inch (AW), 4-inch (HW), 3-inch (NW) drill casing wash bore w/ 2 1/8 bit.
METHOD OF SOIL SAMPLING: No soil samples collected.
METHOD OF ROCK CORING: NQ wireline system w/ 5-foot core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblizalek
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW-11 (B)
START DATE: 7/12/01
COMPLETION: DATE:
MON. WELL NO.: MW11 (B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows per ft. (Hammer)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
30						59			No chemical samples	
						70	Advance PW 4" casing to 49 ft.			
34						65	Advance 4 7/8" roller bit to			
						45	60 ft. Probable cobble / boulder			
36						71	below casing. Lost approx.			
						100	460 gallons to formation.			
38						95				
						85				
40						77				
						140				
42						124				
						109				
44						NR				
						NR				
46						137				
						165				
48										

TYPE OF DRILLING RIG: Dakar 40 II Truck Mount
METHOD OF ADVANCING BORING: 5-inch (OD), 4-inch (ID), 3-inch (OD) drill casing w/ 20 ft. runs.
METHOD OF SOIL SAMPLING: No soil samples collected
METHOD OF ROCK CORING: 6" NQ wireline system w/ 5 ft. core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS: "NR" denotes not recorded

BORING NO.: MW-11 (B)

Tetra Tech NUS, Inc.

PAGE: 3 OF 6

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblizsky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW11(B)
START DATE: 7/17/01
COMPLETION: DATE:
MON. WELL NO.: MW11(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows per foot	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
48				(49')		192	Quit for the day. 7/19/01. Casing			
50				cobble/ boulder		NR	set at 49 ft. Proceed into probable cobble/boulder to ≈ 50 ft.			
				(50')		89	Advance NW small casing to			
52						85	advance below shallow cobble/ boulder. Telescope NW small			
						51	casing to core through cobble/boulder. Advance 3⅞"			
54						100	button bit to clean out casing. Popped out of cobble boulder.			
						NR	Approx. 8" - 12" in thickness. Remove NW small casing.			
56						NR	Advance AQ small casing to 57 ft. Difficult drilling at 57 ft. Advance 4⅜" roller		Lost approx. 400 gals. of	
				(57')		NR	bit to 58 ft. Telescope HQ		water to formation	
58				Bedrock			small casing to 58 ft. Advance 3⅞" button bit to 59.5 ft.		Top of bedrock at 57 ft.	
							Telescope NW small casing to 59.5 ft. Flush out water in casing and mud tub			
60			core Interval		core time		and continue to advance 3⅞" Assemble HQ wireline system			
		21	59.5 - 60.5		3 mins.		RQ: 59.5' - 64.5' Fresh, hard, gray to greenish gray,		Lost approx. 50 gals. during #1	
62			60.5 - 61.5		3 mins.		medium to coarse-grained GNEISS w/ low angle, very close to widely			
			61.5 - 62.5		2.5 mins.		spaced, rough, planar to undulating, slightly discolored, and open			
64			62.5 - 63.5		3 mins.		joints. Approx. 35° - 45° moderately			
			63.5 - 64.5		3 mins.		dipping foliation. REC. = 95%, RQD = 37% (good)			

TYPE OF DRILLING RIG: Acker ADII Truck Rig
METHOD OF ADVANCING BORING: 5-inch (PQ) 4-inch (HQ), 3-inch (NW) casing. Wash advance w/ 3-inch
METHOD OF SOIL SAMPLING: No soil samples collected
METHOD OF ROCK CORING: NQ wireline system w/ 5 foot core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS: "NR" denotes not recorded

Tetra Tech NUS, Inc.

BORING NO.: MW11(B)
PAGE: 4 OF 6

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibadeau
DRILLED BY (Company/Driller): EDI - A. Obrecky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW11(B)
START DATE: 7/17/01
COMPLETION: DATE:
MON. WELL NO.: MW11(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
64										
		R2	64.5' - 65.5'		7.5 mins		R2: 64.5' - 69.5' Fresh, hard, gray to greenish		Lost approx. 150 gals during R2.	
66			65.5' - 66.5'		2.5 mins		gray, medium to coarse-grained Gneiss. No natural fractures/			
			66.5' - 67.5'		2.5 mins		joints noted. Approx 30°-35° (low angle) foliation. Two mechanical breaks			
68			67.5' - 68.5'		5.5 mins.		noted. Quartz veins noted from 67.4'-68.3' REC = 90% ; RQD = 90% (good)			
4/R			68.5' - 69.5'		5.5 mins.		Quit for the day. 7/19/01, continue coring at 69.5 ft.			
		R3	69.5' - 70.6'		2.5 mins 2.6		R3: 64.5' - 74.5' Fresh, hard, gray, medium to		Lost approx. 75 gals. during R3.	
70			70.5' - 71.5'		3 mins		coarse-grained Gneiss. No natural fractures/joints noted.			
72			71.5' - 72.5'		1.5 mins		Approx. 35° (low angle) moderately dipping foliation, Weathered			
			72.6' - 73.6'		4 mins.		zone noted from 72' - 73.1'. Rock is friable and discolored. Quartz		Lifted core barrel @ 73.5'	
74			73.6' - 74.5'		3.5 mins		veins inclusions noted from 73.1' - 73.3' REC = 100% ; RQD = 77% (good)			
		R4	74.5' - 75.5'		2.5 mins		R4: 74.5' - 79.5' Fresh, hard, gray, medium to		Lost approx. 75 gals, during R4.	
76		R3	75.5' - 76.5'		3 mins.		coarse grained Gneiss. No natural fractures/joints noted. Slty			
			76.5' - 77.5'		3 mins.		mechanical breaks noted. Some core grinding noted on the			
78			77.5' - 78.5'		3.5 mins		surfaces of the breaks. Approx 35° (low angle/moderately			
			78.5' - 79.5'		3 mins		dipping foliation. REC = 100% ; RQD = 100% (excellent)			
80		R5	79.5' - 80.6'		2.5 mins.		R5: 79.5' - 84.5' Fresh, hard, gray, fine to		Lost approx. 50 gals during R5.	

TYPE OF DRILLING RIG: Acker AD II Track Rig
METHOD OF ADVANCING BORING: 5-inch (RW), 4-inch (HW), 3-inch (NW) casing. Wash & drive w/ 300 lb hammer.
METHOD OF SOIL SAMPLING: No soil samples collected.
METHOD OF ROCK CORING: NQ wireline system w/ 5 foot core barrel.
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW11(B) PAGE: 5 OF 6

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Trinkaus
DRILLED BY (Company/Driller): EDI - A. Oblazney
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW11(B)
START DATE: 7/17/01
COMPLETION: DATE:
MON. WELL NO.: MW11(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
80		RS (cont.)	80.5' - 81.5'		3.5 mins		medium-grained GNEISS with low angle to moderately dipping, very close to moderately spaced, smooth, planar, slightly discolored joints. Two sets/zone of joints noted @ 80.7' & 81.7'. Some quartz stringers noted throughout run. REC=97%, RQD=87% (good)		Light (F) Approx. 35°-40° low angle/moderate dipping foliation.	
			81.5' - 82.5'		3 mins.					
84			82.5' - 83.5'		6 mins.					
			83.5' - 84.5'		3.5 mins					
86		RC	84.5' - 85.5'		3 mins.		RC: 84.5' - 89.5' Fresh, hard, gray, fine to medium-grained GNEISS. No natural fractures/joints noted.		Lost approx. 60 gals. during RC.	
			85.5' - 86.5'		4 mins.					
88			86.5' - 87.5'		5 mins.		Six mechanical breaks noted along foliation. Approx. 30°-40° (moderately dipping) foliation. REC=100%; RQD=100% (excellent)			
			87.5' - 88.5'		4.5 mins					
90			88.5 - 89.5'		4.5 mins.		Quartz vein noted @ 89.5'. Bottom of exploration at 89.5 ft. Borings terminated in bedrock. Perform interval packer testing from Rubin to Packer test logs for more information. Install bedrock monitoring well in completed hole. It should be noted that a significant amount of rock flour and drill water circulation was encountered during coring activities. This may impact how this well is developed and sampled.			
92										
94										
96										

TYPE OF DRILLING RIG: Acker ADII Trouble Rig
METHOD OF ADVANCING BORING: 5-inch (PW), 4-inch (HW), 3-inch (NW) drill casing (w/ AP. #drive shoe) 3/2006 Hammer
METHOD OF SOIL SAMPLING: No soil samples collected
METHOD OF ROCK CORING: NQ wireline system w/ 5 foot core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW11(B)
PAGE: 6 OF 6

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rousseau
DRILLED BY (Company/Driller): EDI - A. Obitachy
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW12B
START DATE: 7/24/01
COMPLETION: DATE: 8/1/01
MON. WELL NO.: MW12B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows / CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0.0	4 8 15 20	20" / 24"	S-1 0930 CM-SO-MW12B 0002 (1)	Topsoil	loose DRY	NR / dark brown	S-1 Topsoil and trace organics 6" poorly graded dark brown medium-fine SAND, gravel	Topsoil SP	No analytical Sampling 2" Split Spoon	
1.0						M. brown			Continuous Sampling 24" Sample length	PID-0.0
2.0										FID-0.0
3.0	8 9 8 6	3" / 24"	S-2 0935 CM-SO-MW12B 0204 (2)	D. brown L. brown (2") L. brown F.-M. (1")	loose DRY	D. brown L. brown	S-2 dark brown fine-medium SAND, trace gravel (2") 1") Light brown POORLY graded SAND f.-m, trace gravel Poor RECOVERY only 3"	SP SM	No debris noted in full. To be removed, the fill appeared to be composed of reworked soils & gravel.	PID-2.0
4.0									Ground water noted @ approx. 4-4.5'	FID-0.0
5.0	5 3 3 4	14" / 24"	S-3 1015 CM-SO-MW12B 0406 (3)	Coarse SAND & gravel	loose Wet		fine-medium medium brown poorly graded SAND and gravel (8") 8-14" Coarse grained SAND and gravel, trace silt	SP- SM		
6.0				Fine SAND L. Brn.	loose-medium dense					PID-0.0 FID-0.0
7.0	8 6 9 12	12" / 24"	S-4 1040 CM-SO-MW12B 0406 (4)	Outwash 7.0 Coarse SAND/Gravel (4") Cobble (4") FILL		23 / medium to light brown	(2") coarse grained sand and gravel (4") Fine-Coarse grained SAND medium brown, wet, trace cobble (4") Fine-medium SAND, trace gravel, poorly graded, wet, light brown, trace silt	SP- SM		PID-0.0 FID-0.0
8.0										

(1) 6" casing advanced
(2) 5" casing advanced
Water level observed 8/1 @ 8.4' on 8/1 @ 8'

TYPE OF DRILLING RIG: Acker AD II Truck Rig
METHOD OF ADVANCING BORING: 6 inch (SW) and 5 inch (PW) flush joint drill casing
METHOD OF SOIL SAMPLING: 2 inch OD and 3 inch OD Split barrel Sampler
METHOD OF ROCK CORING: NX
GROUNDWATER LEVELS: 7/31/01: 11.8' BGS, water level measured from NW monitor well casing.
OTHER OBSERVATIONS: 8/1/01: 10.4' BGS, water level measured from NW direct casing.

Tetra Tech NUS, Inc.
BORING NO.: MW12B
PAGE: 1 OF 3
Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rossiau
DRILLED BY (Company/Driller): EDI - A. Oblisky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW12B
START DATE: 7/24/01
COMPLETION: DATE: 8/1/01
MON. WELL NO.: MW12B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
8.0										
	12 12 16 24	13" / 24"	S-5 1100 CM-SO-MW12B 0810 (5)	at wash	medium dense	light brown-gray	Poorly graded sand w/gravel (SP-SM), wet COARSE to fine SAND and gravel, trace silt, gray-brown	SP- SM	No Analytical Sampling	PID-0.0 FID-0.0
9.0							Rust stained cobble trapped in Split Spoon nose cone.			
10.0										
	13 21 20 19	6" / 24"	S-6 1125 CM-SO-MW12B 1012 (6)	(6)	loose-medium dense	Gray-brown	POOR RECOVERY 6" Poorly graded SAND w/gravel SP-SM, wet COARSE to fine SAND and gravel, trace silt, gray-brown, loose	SP- SM	No Analytical Sampling. Placed fill around casing, casing is not staying material stuffing creating voids.	PID-0.0 FID-0.0
11.0										
(3) 5" casing										
12.0										
118'	9 5 56 31	9" / 24"	S-7 1155 CM-SO-MW12B 1214 (7)		loose-dense	Gray-brown casing blows	POOR RECOVERY 9" Same material as encountered for S-6 10-12	SP- SM	No Analytical Sampling	PID-0.0 FID-0.1
13.0										
14.0							Boulder encountered @ 14', roller bit to get try and break through			
11:04/a	60 >20 NR 23	4" / 24"	S-8 0830 CM-SO-MW12B 1416 (8)		medium dense	GRAY-BROWN	Spoon attempted @ 14' bounced, would not advance, possible bedrock? POOR RECOVERY, Same material as S6 and S7 COARSE grained, POORLY SAND w/gravel, trace silt	SP- SM		PID-0.0 FID-0.0
(8) 5" casing										
15.0										
16.0										

TYPE OF DRILLING RIG: ACKER ADII TRUCK RIG
METHOD OF ADVANCING BORING: 6inch (SW) and 5.inch (FW) flush joint drill casing
METHOD OF SOIL SAMPLING: 2" OD and 3 inch OD Split barrel sampler
METHOD OF ROCK CORING: NX
GROUNDWATER LEVELS: 7/31/01: 11.5' BGS. Water level was measured from inside driven casing.
OTHER OBSERVATIONS: 8/1/01: 10.4' BGS. Water level was measured from ID drill casing.

Tetra Tech NUS, Inc.
BORING NO.: MW12B
PAGE: 2 OF 13

Ttnus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rossear
DRILLED BY (Company/Driller): EDI - A. Gblack
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW12B
START DATE: 7/25/01
COMPLETION: DATE: 8/1/01
MON. WELL NO.: MW12B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16.0	47 28 27 15	2" / 24"	S-9 0930 CM-SO-MW12B 1618 (9)		Medium dense	183 (15-20')	Poorly graded Sand with fine grained gravel, silt, wet (SP-SM)	SP- SM	No analytical Sampling	PID 0.0 FID-0.0
17.0										
18.0 (2) 5" casing										
19.0	9 6 4 5	NR / 24"	S-10 0945 CM-SO-MW12B 1620 (10)		Loose		No recovery, trace of poorly graded sand with silt and gravel observed approx. 1/8 inch. Appears to be same material as S-9	SP?		PID - NA FID - NA
20.0										
21.0	6 7 7 8	6" / 24"	S-11 1005 CM-SO-MW12B 2022 (11)		Loose	58 (20-25')	Poorly graded sand with fine grained gravel, silt, wet, gray to light brown.	SP- SM		PID-0.0 FID-0.0
22.0										
(2) 5" Casing	13 12 10 19	12" / 24"	S-12 1035 CM-SO-MW12B 2224 (12)		Loose-Medium dense		Poorly ~~well~~ graded, f - ~~medium~~ coarse SAND, w/ gravel and silt, wet, peppered color brown	SP- SM		PID-0.0 FID-0.0
23.0										
24.0										

TYPE OF DRILLING RIG: Acker Truck Mounted Drill Rig (Rig #1)
METHOD OF ADVANCING BORING: 6 inch and 5 inch flush joint drill casing
METHOD OF SOIL SAMPLING: 2 inch OD and 3 inch OD Split barrel Sampler
METHOD OF ROCK CORING: NA
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

Ttnus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rousseau
DRILLED BY (Company/Driller): EDI - A. Oblinsky/S. Culp
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW12B
START DATE: 7/25/01
COMPLETION: DATE: 8/1/01
MON. WELL NO.: MW12B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
24.0										
	51	4"/6"	S-13 1115 CM-SO-MW12B 24245 (15)		medium dense	Gray	Fine-medium grained SAND w/silt, Silty Sand, moist to wet, very dense.	SM	advanced 6" then met refusal	PID-0.0
25.0						300				FID-0.0
						(@ 30')				
26.0										
					26-29 feet Encountered a boulder field		roller bit			
(3) 5" casing 27.0										
28.0										
29.0										
	9	10½"/24"	S-14 1215 CM-SO-MW12B 2931 (14)		Loose		Fine-medium grained SAND Silty Sand, moist to wet, loose	SM-		PID-0.0
	8									
30.0	7						trace gravel (2")	SP		FID-0.0
	8									
31.0		↓	↓							
	18	17"/24"	S-15 1415 CM-SO-MW12B 3133 (16)		Loose-medium dense		Same material as S-14 29-31 feet w/gravel	SM-		PID-
(4) 5" Casing	9									
	13									
32.0	45							SP		FID-

TYPE OF DRILLING RIG: Acker Truck Mounted Drill Rig (Rig #1)
METHOD OF ADVANCING BORING: 6 inch and 5 inch flush joint drill casing
METHOD OF SOIL SAMPLING: 2 inch ID and 3 inch OD Split barrel Sampler
METHOD OF ROCK CORING: NX
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.: MW12B

Tetra Tech NUS, Inc.

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rossley
DRILLED BY (Company/Driller): EDI - A. Chlucky
GRD. SURFACE ELEVATION: S. Culp
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW12B
START DATE: 7/25/01
COMPLETION: DATE: 8/1/01
MON. WELL NO.: MW12B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
32.0										
		17"/24"	S-15 1415 CM-SO-MW12B 3133 (15)		Loose-medium dense	Gray-Brown	(Refer to pg. 4)	SM-SP	No analytical Sampling	- -
33.0										
	16 10 28 40	16"/24"	S-16 1435 CM-SO-MW12B 3335 (16)		Loose-medium dense	Gray brown	Poorly graded fine-coarse sand, with gravel, silt, moist to wet, gray-brown.	SM-SP		PID-0.0 FID-0.0
34.0										
	- - - -	↓	↓							
35.0										
	17 15 46 -	11"/15" 24"	S-17 CM-SO-MW12B 3537 (17)		Loose-medium dense		S-17a Poorly graded sand, w/gravel and silt, f-coarse, wet (2") gray	SP-	refusal @ 36.0' Quartz frag-ments	PID-0.0
36.0							S-17b Poorly graded sand w/gravel silt, f-coarse, moist, (6") brown			FID 0.0
		↓	↓				S-17c Silty sand, w/cobbles f-medium sand, wet, light brown	SM		
(5) 5" casing 7/25/01 (37') 37.0										
				Boulder 2 foot thick			5" casing @ 37 feet boulder preventing advancement, 3" button bit grinding way through @ 38.5 feet 0.5 feet into boulder			
38.0										
							Punched through boulder @ 39 feet			
39.0										
6 7 7 8	6 7 7 8	7"/24"	S-18 1430 CM-SO-MW12B 3941 (18)		Loose		Poorly graded fine-coarse sand w/gravel, silt, moist-wet, gray-light brown	SP-SM		PID-0.0 FID-0.5
40.0										

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.: MW12B

Tetra Tech NUS, Inc.

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rossean
DRILLED BY (Company/Driller): EDI - A. Jblacky
GRD. SURFACE ELEVATION: S. Culp
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW12B
START DATE: 7/25/01
COMPLETION: DATE: 8/1/01
MON. WELL NO.: MW12B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
40.0	~~50~~		~~S-19 1515 (?) CM-SO-MW12B~~							
41.0										
42.0	8 11 12 16	13½" / 24"	S-19 1515 CM-SO-MW12B 4143 (19)		Loose	light brown	S-19a Poorly graded fine - coarse Sand w/gravel, silt, wet, light brown (6½")	SP		PID-0.0
										FID 0.0
					medium dense		S-19b well graded silty sand, fine grained, ~~wet~~ moist light brown, no visible bedding (7.5')	SM		PID-0.0
43.0										FID-0.0
44.0	13 13 24 29	13" / 24"	S-20 0750 CM-SO-MW12B 4345 (20)		medium dense	light brown	S-20a (4") Fine grained, moist sand, light brown, silty, no bedding S-20b (8") Fine - coarse sand w/gravel, little silt, moist light - medium brown	SM	Piece of drilling shoe noted.	PID-0.0
								SP - SM		FID-0.0
45.0										
46.0	17 18 15 15	9" / 24"	S-21 0830 CM-SO-MW12B 4547 (21)	Schist	medium dense	~~Light~~ Brown	S-21a (2½") Fine - coarse Sand w/gravel, silt, moist, extremely weathered rock, schist, green S-21b (7½") Fine (c)	SM	More piece of shoe noted.	PID-0.0
										FID-0.0
47.0										
48.0	41 35 42 40	21" / 24"	S-22 0930 CM-SO-MW12B 4749 (22)	SAND, gravel, silt, schist	Dense	Brown	S-22 Fine - coarse Sand and gravel w/silt, moist to wet, green schist fragments	SM	No pieces of 4" shoe observed 3" spoon to try and find more of shoe	PID-0.0
										FID 0.0

4" casing
7/26/01 (43')
4" casing

TYPE OF DRILLING RIG: Acker Truck Mounted Drill Rig (Right)
METHOD OF ADVANCING BORING: 6 inch and 5 inch flush joint drill casing
METHOD OF SOIL SAMPLING: 2 inch OD and 3 inch OD Split barrel Samplee
METHOD OF ROCK CORING: NA
GROUNDWATER LEVELS: -
OTHER OBSERVATIONS: Metal piece of 4" casing shoe in split barrel S-20 and S-21.

Tetra Tech NUS, Inc.

BORING NO.: MW12B
PAGE: 6 OF 13

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rossear / E. Thaboden
DRILLED BY (Company/Driller): EDI - A. Oblieckx
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW12B
START DATE: 7/25/01
COMPLETION: DATE: 8/1/01
MON. WELL NO.: MW12B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
48.0										
49.0										
	8 60 39	6" / 18"	1040 CM-SO-MW12B 4951 (23)		dense	Gray	S-23a (4") Fine-coarse sand and gravel w/silt, moist, Grey-brown.	SM	Alluvial @ 50.5'	PID-0.0
50.0							S-23b (2") Fine silty sand, fine grained, w/gravel, moist to wet, fragments of schist			FID-0.0
		Spin 4" casing to 51 feet to seal					Roller bit to 51 feet, flushing out green schist, metal shavings, believe to be on bedrock			
51.0										
52.0										
53.0		R1	52.5' - 53.5'		4 min.		Quit for the day, 7/26/01, Boring @ 52.5 ft. Telescope NW drill casing to 50.5 ft. Advance NX wireline coring system to 65.5 ft. Begin NX coring at 52.5 ft.		Switch to E. Thaboden @ 52.5 ft.	
54.0			53.5' - 54.5'		3 min.		R1: 52.5' - 57.5' Fresh, medium hard, greenish gray, fine to medium grained SCHIST. Approx. 35° to 40° (moderately dipping) foliation. Foliation not		Lost approx. 50 gallons of water after 2nd R1.	
55.0			54.5' - 55.5'		2 min.					
56.0			55.5' - 66.5'		2.5 min.		55.6', REC = 78%; RQD = 68% (fair) A total of twelve mechanical breaks noted. Some core grinding		Lifted core barrel @ 56.6'.	

4" casing
Bedrock (soft)
5' socket
7.5 ft 7/25/01

TYPE OF DRILLING RIG: Acker Teuk Mounted Drill Rig (Rig #1)
METHOD OF ADVANCING BORING: 6 inch and 5 inch flush joint drill casing
METHOD OF SOIL SAMPLING: 2 inch OD and 3 inch OD Split barrel sampler
METHOD OF ROCK CORING: NX 60 NQ wireline system w/ 5' core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.: MW12B

Tetra Tech NUS, Inc.

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Mathews
DRILLED BY (Company/Driller): EDI - A. Oblasley
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW12(B)
START DATE: 3/29/01
COMPLETION: DATE: 4/1/01
MON. WELL NO.: MW12(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
56.0										
		R1 (cuttings)	56.5' - 57.5'				Used OB on steel surfaces. Broken fine cuttings from 52.5 to 53.0'.			
57.0					2.5 min.		at start of core run. Probably fractured while seating new casing.			
							One piece of the steel lodged in the bit face, from the split shoe.			
58.0		R2	57.6' - 58.5'		2 min.	green gray	R2: 57.5' - 62.5' Fresh, solid to medium hard,	SH/BT	Lost approx 50 gallons of water during R2.	
							greenish gray, fine to medium-grained SCHIST. Appears to be			
59.0			58.5' - 59.5'		2 min.		one natural fracture w/ iron-oxide stain at 60.6', 30° to			
							core foliation, smooth, planar, slightly discolored, and			
60.0			59.6' - 60.5'		2.5 min.		open. Approx. 35° (low angle)			
							mechanical chipping) fig. Approx. REC = 85%, RQD = 80% (good)			
61.0			60.5' - 61.5'		2 min.		A total of eleven mechanical			
							breaks noted. Breaks are primarily along foliations. Some core			
62.0			61.5' - 62.5'		3 min.		groundworked on break surfaces. One broken zone, noted from		Minor core run 2 ch.s'.	
							60.1' to 60.3'. Breaks were interpreted as mechanical.			
63.0		R3	62.5' - 63.5'		2 min.	green gray	R3: 62.5' - 67.5' Fresh, medium to moderately	SH/BT	Lost approx 60 gallons of water during R3. Water returns noted below	
							hard, greenish gray, fine to medium-grained SCHIST. No natural			
64.0			63.5' - 64.5'		2.5 min.		fractures/joints noted. Approx.		the 4" & 3" shoe	ca 52 ppm.

Seal on 3" casing compromised.

TYPE OF DRILLING RIG: Acker AD II Track Mounted
METHOD OF ADVANCING BORING: 5-inch (RW), 4-inch (HW), and 3-inch (NW) flush joint steel casings, WSD
METHOD OF SOIL SAMPLING: 2-inch & 3-inch O.D. Split barrel samplers
METHOD OF ROCK CORING: NQ wireline system w/ 5' core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblinsky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW12(B)
START DATE: 7/25/01
COMPLETION: DATE: 8/1/01
MON. WELL NO.: MW12(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = (FID, (PPM))
64.0							35° (low angle/moderately dipping) foliation. REC = 96%; RQD = 95%			
65.0		R3 (cont.)	64.5'-65.5'		3 mins		(competent). A total of two mechanical breaks noted.			
66.0			65.5'-66.5'		3.5 mins.				water ponds elevated on core	
									barrel w/ soil/rock flow @ 65.9'. Rinse core barrel and clear ponds.	
67.0			66.5'-67.5'		2.5 mins.					
									Continue R3.	
68.0		R4	67.5'-68.5'		1.5 mins	grades to gray	R4: 67.5'-70.5' Fresh, medium hard, greenish	Solid	Lost approx. 50 gallons of	
							gray, fine to medium-grained SCHIST. No natural fracture/		water during R4	
69.0			68.5'-69.5'		3.5 mins.		joints noted. Approx 35° (low angle/moderately dipping) foliation. Difficult to distinguish			
			69.5'-70.5'							
70.0			68.5'-69.5' (DUP)		3 mins.		foliation from 69.7' to 71.5'. REC = 90%; RQD = 90% (good/		Initial core barrel @ 70 ft.	
							general cut). Soiled/slightly weathered			
71.0			70.5'-71.5'		3 mins		zone noted from 67.5-67.7'. A total of eleven mechanical			
							breaks noted. Some core grinds			
72.0			71.5'-72.5'		3.5 mins		noted on break surfaces.		Pause, curing @ 71.5'	

TYPE OF DRILLING RIG: Acker ADI Truck Mount
METHOD OF ADVANCING BORING: 6-inch (PW) 4-inch (HW), 3 inch (NW) Flush joint drill casings, W&D.
METHOD OF SOIL SAMPLING: 2 inch & 3 inch O.D. split barrel sampling
METHOD OF ROCK CORING: NQ wire line system w/ 5' core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW12(B) PAGE: 9 OF 13

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Obinsky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW12(B)
START DATE: 7/25/01
COMPLETION: DATE: 8/1/01
MON. WELL NO.: MW12(B)
CHECKED BY:

DEPTH (FEET) 79.0	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
73.0		RS	72.5'-73.5'		2 mins	Greenish gray	RS', 73.5'-77.5' Fresh, medium hard, greenish	SCHIST	Lost approx. 100 gallons of	
74.0			73.5'-74.5'		3.5 mins		gray, fine to medium-grained SCHIST. No natural fractures/joints noted. Difficult to distinguish foliation. Rec=97%; RQD=97%		water during RS.	
75.0			74.5'-75.5'		3.5 mins		(excellent) A total of ten mechanical breaks noted.			
76.0			75.5'-76.5'		4 mins.		Some core grinding noted on surfaces of breaks.			
77.0			76.5'-77.5'		4 mins.				Power casing @ 76.5'.	
78.0		RG	77.5'-78.5'		2.5 mins	Greenish gray	RG', 77.5'-80.5' Fresh, soft to medium hard,	SCHIST	Lost approx. 75 gallons of water	
79.0			78.5'-79.5'		3 mins.		greenish gray, fine to medium-grained SCHIST. No natural fractures/joints noted. Approx.		during RG.	
80.0			79.5'-80.5'		4 mins.		35° (moderate/moderately dipping) foliation. Foliation difficult to distinguish from 79.5' to 81'. Rec=100%; RQD=100% (excellent)			

TYPE OF DRILLING RIG: Acker ADII Truck mount
METHOD OF ADVANCING BORING: 5-inch (RW), 4 inch (RW), 3 inch (NW) flush joint dual casings. w/ CD
METHOD OF SOIL SAMPLING: 2 in. & 3 inch O.D. split barrel samples.
METHOD OF ROCK CORING: NQ wireline system w/ 5' core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.: MW12(B)

Tetra Tech NUS, Inc.

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thalheim
DRILLED BY (Company/Driller): EDI - A. Oldacky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW10(B)
START DATE: 7/25/01
COMPLETION: DATE: 8/1/01
MON. WELL NO.: MW10(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
80.0										
		RC (cont.)	80.5' - 81.5'				A total of eight mechanical breaks noted. Some gouging noted on			
81.0					3.5 min		break surfaces.			
							Perform a total of four packer tests from 82.5' to 87.5'. Very little		Packer covers @ 81.5'.	
82.0			81.5' - 82.5'		2.5 min.		water taken by formation. Please refer to packer test logs for more		Quit for the day. 1700H. Bottom of	
							details. Based on test results, core		boring @ 80.5'	
83.0		R7	82.5' - 83.5'		1.5 min.	green gray	few more feet of bedrock. R7: 82.5' - 87.5' Fresh, soft to medium hard	SCHIST	Lost approx. 40 gallons of	
							greenish gray, fine grained SCHIST. No distinct foliations noted.		water during R7.	
84.0			83.5' - 84.5'		2 min		Slightly weathered & brittle zone noted from 82.9 to 83.7'. Zone			
							appears to be slightly softer than other rock. A total of			
85.0			84.5' - 86.5'		1.5 min		eight extremely close to closely spaced fractures were noted			
							in this zone of which may be mechanical. Difficult to			
86.0			86.5' - 86.5'		2 min.		distinguish mechanical from natural. Approx 35°-40° (moderately, steeply)			
							foliation noted through zone. Breaks			
87.0			86.5' - 87.5'		2 min.		were along foliation. Break surfaces are rough & planar.		Packer covers @ 86.5	
							REC: 100%, RQD = 83% (good)			
88.0		R8	87.5' - 88.5'		2 min.	green gray	Five distinct mechanical breaks noted. R8: 87.5' - 92.5' Fresh, soft to medium hard.	SCHIST	Lost approx 40 gallons of water during R8.	

TYPE OF DRILLING RIG: Acker ADII truck mount
METHOD OF ADVANCING BORING: 5 inch (ID) 4 inch (ID) cased 3 inch (NW) flush joint dual casing. used.
METHOD OF SOIL SAMPLING: 2 inch & 3 inch O.D. split barrel samples
METHOD OF ROCK CORING: NQ wire line system w/ 5' core barrel.
GROUNDWATER LEVELS: 7/31/01 11.8' BGS. water level was measured from inside window casing.
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW10(B) PAGE: 11 OF 13

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85.5-86.5'

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thalacker
DRILLED BY (Company/Driller): EDI - A. Oblosky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW12(B)
START DATE: 7/25/01
COMPLETION: DATE: 8/1/01
MON. WELL NO.: MW12(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
88.0										
		R8 (cont.)	88.5'-89.5'		1.5 mins		greenish gray, fine to medium-grained SCHIST. No natural fracture/joints noted. Approx. 35°-40° (moderately			
89.0										
			89.5'-90.5'				dipping foliation. REC=100%; RQD=100% (excellent)			
90.0					1.5 mins.		A total of thirteen mechanical			
			90.5'-91.5'				breaks noted. In general, the breaks are along the foliation.			
91.0					1.5 mins		Some core grinding noted on some of the break surfaces.			
			91.5'-92.5'				Perform a total of 3 packer tests from 79' to 89.5'. Very little		Poured core @ 91.5'	
92.0					2 mins.		water take by formation. Please refer to another test logs for more			
							details. Based on test results, core			
93.0		R9	92.5'-93.5'		2 mins.	ground gray	for more feet of bedrock. R9: 90.5-93.5 Fresh, soft to medium hard,	SCHIST	Lost approx. 20 gallons of water during R9.	
			93.5'-94.5'				greenish gray, fine to medium-grained SCHIST. No natural			
94.0					2 mins.		fractures/joints noted. Approx.			
			94.5'-95.5'				40° (moderately dipping foliation). REC=93%; RQD=92% (excellent)			
95.0					1.5 mins		Quartz intrusion/vein noted from 96.5' to 97.0'. Pitting w/ healed			
			95.5'-96.5'				joint noted @ 94.6'. A total of eleven mechanical breaks noted.			
96.0					1.5 mins		Breaks are along foliation. Some core grinding noted on			

TYPE OF DRILLING RIG: Acker AD II truck mount
METHOD OF ADVANCING BORING: 5 inch (RW), 4 inch (HW), and 3 inch (NW) flush joint steel casings (with)
METHOD OF SOIL SAMPLING: 2 inch & 3 inch O.D. split barrel sampling
METHOD OF ROCK CORING: NQ wireline system w/5' core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibeau
DRILLED BY (Company/Driller): EDI - A. Oblisky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW19 (B)
START DATE: 7/26/01
COMPLETION: DATE: 8/1/01
MON. WELL NO.: MW19(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = { FID, (PPM) }
96.0										
							break surfaces. Foliation changes from 96' to end of core run.			
97.0		R9 (cont.)	96.5'-97.5'		1.5 mins.		Difficult to distinguish foliation		Passed coring @ 96.5'	
98.0		R10	97.5'-98.5'		1.5 mins.	grey	R10: 97.5'-102.5' Fresh, soft to medium hard,	QUARTZ	Lost approx. 30 gallons of water during R10.	
							greenish-grey, fine to medium-grained SCHIST. No natural			
99.0			98.5'-99.5'		1.5 mins		fractures/joints noted. Approx.			
							40-45° moderately dipping foliation.			
100.0			99.5'-100.5'		1.5 mins.		REC = 100%, RQD = 100% (excellent) A total of eight mechanical			
							breaks noted. Breaks are along			
101.0			100.5'-101.5'		2 mins.		foliation. Some are groutings noted on surfaces of the			
							breaks.			
102.0			101.5'-102.5'		2 mins.				Passed coring @ 101.5'	
103.0							Bottom of exploration @ 102.5'. Boring terminated in bedrock. Perform			
(87)							two packer tests from 99' to 99.5'ft.			
104.0							Install bedrock monitoring well in completed boring.			

TYPE OF DRILLING RIG: Acker ADII truck mount
METHOD OF ADVANCING BORING: 5 inch (PW); 4 inch (HW); 3 inch (NW) flush joint dual casing system
METHOD OF SOIL SAMPLING: 2 inch & 3 inch split barrel samplers
METHOD OF ROCK CORING: NX wireline system 5' core barrel.
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW19 (B)
PAGE: 13 OF 13

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - JAY BRASSER
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW13B
START DATE: 6-25-01
COMPLETION: DATE:
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* - [FID, (PPM)]
0							GRASS SURFACE			
	2 2 2 4	1.0 / 2.0	-0002 S-1 0800			BROWN	TOPSOIL. SILTY, F-MED. POORLY GRADED SAND.	SP/SM	DAMP -	FID = 0.0
2							PUSHED COARSE GRAVEL IN NOSE FLASHLIGHTS IN END OF SAMPLE			PID = 0.0 *
									SAND & GRAVEL IN WASH. ROLLER-BIT CAUGHT ON CASING TEMP.	
4										
	2 1	0.4 / 2.0	-0456 S-2 0850			DK. BROWN TO DK. GRAY	SILT. MOSTLY SILT, FEW ROUNDED FINE GRAINED TRACE SAND, TRACE ORGANIC FIBERS (ROOTS)	ML	LOOSE, SOFT & WET. NO ODOR	FID = 0.0 PID = 0.0
6	2 2									
									SAND & GRAVEL IN WASH FROM 6-8' DRILLING @ 8'	*
8										
10	20 20	0.7 / 2.0	-0911 S-3 0915			YELLOW-BROWN	SANDY, GRAVEL. MOSTLY F-C SUBANG. LIKE GRAVEL, LITTLE F-C SAND. TRACE SILT.	SW		FID = 0.0 PID = 2.6
	14 15									
12										*
	37 45	0.6 / 2.0	-1214 S-4 0954			LIGHT-MED. BROWN	SIMILAR TO S-3 ABOVE, MORE ~~GRAVEL~~ COMPACTED (CEMENTED GRAVEL (SUBANGULAR) IN FINES.		POSS. TILL LOST ~ 40-50 GAL WASH WATER FROM 12-14 FT.	FID = 2.5 PID = 4.5 *
14	31 35									
	33 17	0.6 / 2.0	-1416 S-5 1024			LT. BROWN TO LT. GRAY	SANDY, GRAVEL. SIMILAR TO ABOVE INC. SAND. GRAVEL IS F-C SUBRND TO SUBANG. SAND IS F-C WELL GRADED, TRACE SILT.	GW/SW	POSS. TILL	FID = 0.0 PID = 1.9
16	25 25									

TYPE OF DRILLING RIG: DEIDRICH D-120 TRUCK MOUNTED
METHOD OF ADVANCING BORING: 5" & 4" D&W CASING.
METHOD OF SOIL SAMPLING: 2 IN. SPLIT-BARREL DRIVEN WITH A 140 LB. HAMMER & 30" FALL.
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS: FID & PID "B"

Tetra Tech NUS, Inc.
BORING NO.:
PAGE: 1 OF
Tmus Form 0018

* PID & FID = 0.0 IN BREATHING ZONE (DRILLERS) & @ DRILL HEAD.

TAIRCOF 11" [illegible]

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DURHAM
DRILLED BY (Company/Driller): EDI - JAY BRASSER
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW13
START DATE: 6-25-01
COMPLETION: DATE:
MON. WELL NO.: MW-13B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
16	18 18	0.6 / 2.0	-1618 S-6 1105			LT. GRAY	SIMILAR TO ABOVE. SANDY, GRAVEL MOSTLY F-C SURROUNDED GRAVEL	GW/ SW	PK. TILL? NO STRUCTURE NOTED.	FID = 0.0
18	12 16						SOME F-C WELL GRADED SAND. TRACE SILT.			PID = 1.9
	10 5	0.6 / 2.0	-1820 S-7 1118				GRAVEL. MOSTLY F-C GRAVEL	GW	COARSER THAN ABOVE. GRAVEL = GRANITE.	FID = 0.0
20	7 7						FEW F-C SAND, TRACE SILT			PID = 0.5
	10 6	0.0 / 2.0	-2022 S-8 1137	X	X	X	NO RECOVERY	X	GRAVEL SLOUGH ONLY CASING DRIVING	X
22	7 8									X
	10 17	0.4 / 2.0	-2224 S-9 1155			LT. GRAY	GRAVEL SIMILAR TO S-7	GW	EASY. BROKE SPLIT-BARREL @ SUB.	FID = 0.7
24	20 25									PID = 0.7
	25 23	0.2 / 2.0	-2426 S-10 1210				- SLIGHT INC. IN F-C SAND DIFFICULT TO LOG W/ SMALL RECOVERY.		APPROX. 50 GAL. WATER LOST TO FM. @ 22-24'	FID = 9.7
26	29 17									PID = 1.0
	47 45	0.3 / 2.0	-2628 S-11 1230				POOR RECOV.		POOR RECOVERY	NOT MEAS.
28	27 25									
	20 12	0.1 / 2.0	-2836 S-12 1535				POOR RECOVERY GRAVEL CUTTINGS		GRAVEL SLOUGH GRANITE.	
30	12 6									
	16 17	0.1 / 2.0	-3032 S-13 1350				POOR RECOVERY GRAVEL CUTTINGS			
32	19 18									

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - JAY GRASSER
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW13
START DATE: 6-25-01
COMPLETION: DATE:
MON. WELL NO.: MW-13B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD - [FID, (PPM)]
32	10 10 9 7	0.3 / 2.0	-3234 S-14 1406		MED-DENSE	LT. GRAY	QUARTZITE GRAVEL & COBBLES & GRANITE.	GW	3"+ GRAVEL IN NOSE.	FID=0.0 PID=NOT.
34	9 5 4 9	0.8 / 2.0	-3436 S-15 1421		MED-DENSE		SAND & GRAVEL. SAND IS F-C GRAVEL IS FINE SUBRND. TRACE SILT.	SW/GW	NO STRUCTURE NOTED.	FID=0.0 PID=NOT.
36	9 13 21 20	0.6 / 2.0	-3638 S-16 1440		DENSE		GRAVEL. MOSTLY F-C WELL GRADED GRAVEL, TRACE-FINE F-C SAND.	GW	GRAVEL UP TO 3" DIAM.	FID=1.0 PID=NOT.
40	10 11 10 11	0.7 / 2.0	-3640 S-17 0755		MED-DENSE		GRAVELLY SAND. MOSTLY F-C WELL GRADED SAND, SOME F-C SUBROUNDED GRAVEL - TRACE SILT	SW		FID=0.5 PID=0.5
42	17 20 14 14	1.1 / 2.0	-4042 S-18 0810		DENSE		↓	↓	UNSORTED MIX OF GRAIN SIZES, POSS. TILL.	FID=3.2 PID=1.3
44	13 15 25 27	1.0 / 2.0	-4244 S-19 0835		DENSE		SAND - MOSTLY F-C WELL GRADED SAND, TRACE SUBROUNDED GRVL (FINE) LITHOLOGY MAY BE POSSIBLY C-GRAVEL OR COBBLE. TRACE SILT.	SW	(SAME APPEARANCE AS GOOD CONCRETE MIX).	FID=2.8 PID=1.5
46	29 19 19 16	1.1 / 2.0	-4446 S-20 0850	BEDROCK @ ~46'	DENSE		GRAVELLY SAND - MOSTLY F-C WELL GRADED SAND, SOME FINE ROUNDED GRAVEL, TRACE COARSE GRAVEL PEBBLES, TRACE SILT.	SW	UNSORTED	FID=4.0 PID=4.5
46	110/2" 68 119 120/2"	0.9 / 1.6	S-21 0912	4" CASING @ 47'9"	SOFT & WEATHERED SAPROLITE	GREEN	S-21A = 0.05' - SIMILAR TO ABOVE. S-21B = SAPROLITIC SCHIST, CHLORITE, MICA SCHIST, TRACE QUARTZ VEINS, OXIDATION & HOLE NOTED.		POSS. TOP OF BEDROCK	FID=2.3 PID=1.5

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:
PAGE: 3 OF

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1440 BEGIN CLEANING UP.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CONTINENTAL MANOR PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DORIAN
DRILLED BY (Company/Driller): EDI, JIM GLASSER
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW13
START DATE: 6-25-01
COMPLETION: DATE:
MON. WELL NO.: MW-13B
CHECKED BY:

DEPTH (FEET) 48	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MATL CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
									ROLLER BIT TO 49' BGS & FLUSH CASING.	
50										
51		51"/60"	2m 31s (one/ft.	Green Schists metamorphosed Weathered first foot		Grn.	5-2" weathered fractures parallel to bedding plane 2-8" solid Green schists bedding layered @ approx. 45°, 8-16" weathered pieces range from 1"-2" sizes, rust color on weathered surface. Natural breaks		Prior to start measured depth @ 50', advancing NW to 50 feet.	
52										
53							16"-25" Natural break @ 25" weathered fracture parallel to bedding plane.			
54							25"-51" Green schists RQD: 79.4% Good			
55			3m 55s (55-56')							
1002 56		60"/60"		Green Schists		Grn.	0-13" mechanical break - green schist, soft, slightly weathered, medium-fine grained			
57			4m 05s (56-57')				12"-37" mechanical break, green schists soft, slightly weathered, med.-fine grained			
58			3m 46s (57-58')				37-45½" Mech. break, green schist 45½-47½" mech. break - green schist			
59			4m 25s (58-59')				47½-56" Nat. break, green schist, soft, weathered, discoloration on planer surface			
1030 60			4m 03s (59-60)				med.-fine grained. RQD: 85.0% Good			
61		57"/60"	2m 27s (60-61')/1045			Grn.	RQD = 90.8% 0-13½" Nat. break, rough, soft, green schist metamorphosed.			
62			2m 19s (61-62')1047				13.5-27.5" Nat. break-rough, green schist, soft, slightly weathered.			
63			2m 20s (62-63)1050				27.5-32" Nat. break, rough, soft green schist.			
64			2m 03s (63-64)1054 3m 13s (64-65)1055				32-57" Green schist, soft, slightly weathered med.-fine grained.			

STOP @ 49' on 6-26-01

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: C. Rousseau
DRILLED BY (Company/Driller): EDI - A.
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW13
START DATE: 7.02.01
COMPLETION: DATE:
MON. WELL NO.: MW-13B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
65				Grn. Schist	Soft	Grn.				
66		60"/60"	2m14s (65-66') 1105		Soft	Grn.	Soft, slightly weathered, green, fine-grained schist, bedding, angular, smooth and parallel). RQD = 100% excellent			
67			2m32s (66-67') 1107							
68			2m17 (67-68') 1110							
69			2m40s (68-69) 1119							
70			2m16s (69-70) 1123							
71		13"/24"	2m33s (70-71) 1144	Grey Grn. Schist	Soft	Grn.	0-2" weathered, discoloration, red-orange, rough, parallel to bedding.			
72			2m05s (71-72) 1146				2-10 weathered, discoloration, mech. break 10-15 weathered discoloration. RQD = 54.1% fair			
73		22"/36"	2m46 (72-73) 1236	Grey/Grn	Soft	Grey/Grn.	0-13" Grey/Grn schist, foliation, soft, mech. break rough, parallel to bedding, fine-grained RQD = 100% excellent		72-73 drilling pause & core lifted possible mech. break Core barrel jammed @ 72'	
74			2m03s (73-74) 1240							
75			2m3s (74-75) 1243							
76		40"/60"	2m22s (75-76) 1315	Grey schist	Soft	Grey	Soft, slightly weathered, grey, fine grained, schist, angular bedding, foliation mechanical break parallel to bedding plane.			
77			2m00s (76-77) 1317							
78			2m5s (77-78)							
79			1m57s (78-79) 1320							
80			1m55s (79-80) 1320							

TYPE OF DRILLING RIG: Acker
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS: PID & FID ( )

Tetra Tech NUS, Inc.

BORING NO.:

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - DAVE ERICSON
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW13S
START DATE: 7-9-01
COMPLETION: DATE: 7-9-01
MON. WELL NO.: MW13S
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0							NO SAMPLES TAKEN,			
2							REFER TO MW13B LOG			
							FOR OVERBURDEN DETAILS.			
4							D&W 4" CASING TO 15'			
							↓		WASH WATER COLOR CHANGED @ ~ 4-6' TO ORANGE-BROWN FROM DARK BROWN.	
6										
8										
									HARDER DRIVING CASING FROM 8-12' BGS.	
10										
12										
14										
15							↓			
							EOB AT 15 FT. BGS.			

TYPE OF DRILLING RIG: DIEDRICH D-120 TRUCK MOUNTED.
METHOD OF ADVANCING BORING: 4 IN. D&W CASING.
METHOD OF SOIL SAMPLING: NONE
METHOD OF ROCK CORING: NONE
GROUNDWATER LEVELS: RAISED ROD'S AFTER WASHING OUT TO 15'. LET SIT FOR 15-20 MIN. WATER @ 4.5' BGS.
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW13S
PAGE: 1 OF 1

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US EPA ARCHIVE DOCUMENT

AAP

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: M. Healy
DRILLED BY (Company/Driller): EDI - 1 Jay
GRD. SURFACE ELEVATION: /

TRANSCRIBED BY: _____
ELEVATION FROM: _____

BORING NO.: MW-13 ~~D~~
START DATE: 7-6-01
COMPLETION: DATE:
MON. WELL NO.: MW-13 ~~D~~ AAP
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
							No Samples taken See Boring log for MW-13D for Soil Descriptions.			
							Cobble @ 32' (6-8-inch) lost 200 gals. water. Boring loosing water when drilling at Bottom of casing.			
							End of Boring 46'4"			

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

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US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CONTRADALE MANOR - PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - JAY GAESSER
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW14D
START DATE: 7-13-01
COMPLETION: DATE: 7-19-01
MON. WELL NO.: MW14M
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = (FID, (PPM))
0							ASPHALT SURFACE			
	10 12 20 26	1.5 / 2.0	CM-SO-MW14D-0002 DUP=0945 S-1 0924			ORANGE-BROWN	0.3'-ASPHALT. S-1A = 0.7'-BROWN, SAND, ROAD BASE	SW	FILL. SAMPLED 0102 & DUP 03 ALL PARAM.	FID=100 PID=1.0 VOA FROM 2'BGS.
2						BLACK	MOSTLY F-C SAND, SOME MED. GRAVEL. S-1B = 0.6'-FILL-SILTY, SAND. MOSTLY F-M	SP/SM FILL		
	18 11 9 5	1.0 / 2.0	-0204 S-2 0955	▽		↓	SAND WITH SOME SILT SIZE PARTICLES SIMILAR TO ABOVE, INCLUDES TRACE BRICK	↓	HILL A DAMP VOA FROM BTTM N 3.5-4'	FID=655 PID=0.0
4							FRAGMENTS, CHERT?, GLASS & 1 PIECE (2"x2" x1" THICK) VITRIFIED CLAY TILE			FID=5-1 IN WASH TUB, PID =0.0
	5 5 4 3	0.0 / 2.0	-0406 S-3 1021			X	NO RECOVERY.	X	NO RECOVERY NO SAMPLES!	X 0.0 BG IN B.Z.
6						X		X		
	16 44 56 42	1.2 / 2.0	-0608 S-4 1112			MOTTLED YELLOW-BROWN & LIGHT GRAY & BLACK	SAND & GRAVEL - MOSTLY F-C WELL GRADED SAND & F-C WELL GRADED SUBANG. GRAVEL	SW/GW	STEEL WASHER IN SOVENT. SATURATED. 4" COBBLE IN NOSE	FID=248 PID=0.5 VOA FROM N6.5' VOA FR 7.5'
8						↓		↓		
	21 27 30 29	1.3 / 2.0	-0810 S-5 1140			LIGHT-BROWN TO LIGHT GRAY	INC. COBBLE IN NOSE.		SATURATED.	FID=7.1 PID=0.7
10				TELESCOPE 5" MW14D 6" @ 10'		↓				
	28 21 25 21	0.7 / 2.0	-1012 S-6 1225				TRACE COBBLES			FID=6.3 PID=0.5
12						↓		↓		
	22 14 17 10	0.1 / 2.0	-1214 S-7 0805				F-C GRAVEL, RANDOM COBBLES?	GW	POOR RECOV.	N/M
14										
	15 15 11 10	0.5 / 2.0	-1416 S-8 0820				SAND & GRAVEL - SIMILAR TO S-6 ABOVE	SW/GW		FID=1.0 PID=1.3
16										

TYPE OF DRILLING RIG: DIEDRICH D-120 TRUCK MOUNTED RIG
METHOD OF ADVANCING BORING: 6" CASING, 5" CASING - DEN
METHOD OF SOIL SAMPLING: 3" SPLIT BARRELS DRIVEN W/ 300 LB. HAMMER & 18" DROP S-1->
METHOD OF ROCK CORING:
GROUNDWATER LEVELS: 4FT. BGS MEAS. INSIDE CASING ON 7/13/01.
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW14D

TINUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTERDALE MANOR - PHASE II
PROJECT NO.: 0400-0222.
LOGGED BY: TRACY DORMAN
DRILLED BY (Company/Driller): EDI - JAY GRASSER
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW14D
START DATE: 7-13-01
COMPLETION: DATE: 7-19-01
MON. WELL NO.: MW14M
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16	12 12 11 10	0.4 / 2.0	-1614 S-10 0855		MED. DENSE	LIGHT BROWN TO LIGHT GRAY	SIMILAR TO S-9 ABOVE.	SW/GW		FID=1.1
18										PID=0.8
	11 11 13 4	0.6 / 2.0	-1826 S-11 0915			ORANGE			OXIDATION @ ~19.5-20'	FID=1.8
20										PID=0.5
	5 4 4 5	0.0 / 2.0	-2022 S-12 0938	X	LOOSE	NO RECOV.	NO RECOVERY	X	NO RECOVERY; SLOUGH - GRAVEL CUT.	N/M
22								X		
	4 6 7 7	0.5 / 2.0	-2224 S-13 1000		MED. DENSE	TAN	GRAVELLY, FINE-MED. POORLY GRADED SAND. SOME FINE ROUNDED GRAVEL. TRACE SILT.	SP		FID=0.0
24										PID=0.5
	4 5 6 4	0.6 / 2.0	-2426 S-14 1030			LIGHT GRAY	GRAVELLY, F-COARSE GRADED SAND. SOME ROUNDED FINE GRAVEL	SW		FID=1.0
26										PID=0.8
	6 7 7 4	0.4 / 2.0	-2628 S-15 1050				↓ ?	SW		FID=0.2
28										PID=0.4
	5 7 7 9	0.0 / 2.0	~~-2820~~ -2830 S-16 1120	X			NO RECOVERY, PUSHING C-GRAVEL OR COBBLE.	X	NOTHING ENTERED SPLIT-SPOON.	N/M
30								X		
	5 7 9 12	0.5 / 2.0	-3032 S-17 1135			LIGHT GRAY	GRAVELLY, F-M POORLY GRADED SAND.	SP		FID=7.0
32										PID=6.8

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

TtNUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: TRACY DORMAN
DRILLED BY (Company/Driller): EDI - JAY GRASSER
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW14D
START DATE: 7-13-01
COMPLETION: DATE: 7-19-01
MON. WELL NO.: MW14M
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
32	4 4 8 7	0.5 / 2.0	3234 S-18 1240		MED. DENSE	LIGHT GRAY	SAND & GRAVEL - F-C WELL GRADED	SW		FID = 0.0
34							SAND. F-C ROUNDED WELL GRADED GRAVEL.	/GW		PID = 0.0
36	6 5 10 7	0.0 / 2.0	- 3436 S-19 1300		MED. DENSE	X	NO RECOVERY	X	ONLY F-GRAVEL SLOUGH NO RECOVERY	X
38	4 8 8 7	1.0 / 2.0	- 3638 S-20 1315	START CONTACT S-20A & B		LIGHT GRAY	~~SILTY SAND~~ S-20A = 0.3' SIMILAR TO S-18, S-20B = 0.7' ~~SILTY SAND~~ SILTY SAND - FINING DOWNWARD S. UPPER = F-MED SAND, TRACE SILT. BOTTOM = SILTY, FINE SAND.	SW/GW SP/ SM	FINING DOWN - HARD SEQUENCE GRADATIONAL S-20B	FID = 0.1 PID = 0.2
40	4 5 7 7	1.1 / 2.0	- 3840 S-21 1333				SAND - MOSTLY F-MED. POORLY GRADED SAND, TRACE SILT.	SP		FID = 0.0
						LIGHT BROWN	2-1 INCH MED. - COARSE SAND LENS @ 39-40'	SP		PID = 0.1
42	4 5 10 7	1.2 / 2.0	- 4042 S-22 1400				SAND. MOSTLY FINE POORLY GRADED SAND. TRACE - FINE SILT INC. - SILT W/ DEPTH.	SP/ SM	THINLY LAMINATED BEDDING 41-42' X-BEDDING ?	FID = 0.0 PID = 0.0
44	6 24/4 4 16	1.4 / 2.0	- 4244 S-23 1425	TOP OF ROCK @ 44.5'	LOOSE	DARK BROWN	SILTY FINE SAND - MOSTLY FINE POORLY GRADED SAND, SOME SILT. S-23B = 0.2' - SAPROLITIC GNEISS. VERY DECAYED & WEATHERED SCHIST.	SM	THINLY LAMINATED BEDDING DROP-STONE @ ~42.5'	FID = 0.0 PID = 0.0
46	15 120/3"	0.8 / 0.75	- 4445 S-24 1450	5" CASING @ 45.9'	45'		S-24A = 0.2' - SIMILAR TO S-23B. S-24B = 0.2' - TILL - DENSE SILTY, GRAVELLY, SAND. S-24C = 0-4' - SAPROLITIC SCHIST.		TILL - VOA SAMPLE COLLECTED END 5" CASING @ 45.9' 4" ROLLER BIT TO 47.0'	FID = 4.8 PID = 1.2
48							UNIFORM BLACK & WHITE (GRANITE?) ROCK CUTTINGS		LIGHT SHEEN ON WASH WATER	

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CONTRADACE MANOR - PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - JAY GRASSER
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW14D
START DATE: 7-13-01
COMPLETION: DATE: 7-19-01
MON. WELL NO.: MW14M
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROP'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
48				4" STL CASING	CORE TIME		NOTE #2 7/18/01 - ADVANCED 6" CASING TO 10', FLUSH OUT, CHANGED MATRIX & CLEANED TUB. ADVANCED 5" CASING (W/600 LB. HAMMER) TO 44' BGS. ROLLER BIT TO 50.5' THEN TELESCOPED 4" CASING. 4" HUNG UP @ 46', HIT W/600 LB. HAMMER, NO ADVANCE, OVAL SHOE CHANGED TO ECCUT-SPIN SHOE & SPUN 4" CASING	4" ROLLER BIT TO 49'.	
50			C-1-49-52' REC. LENGTH =		1:15					
			11 in.		0:30				STOP C-1, CUTTING RATE & COLOR Δ. POPPED THROUGH BOULDER, SAND IN WASH.	
52					0:25					
	40 17/0/3	0.6 / 0.75	525275 5-25 1316		VERY DENSE	MOTTLED LIGHT GRAY & BROWN	TILL. SILTY, GRAVELLY, SAND. MOSTLY FINE - MED. SAND, POORLY GRADED, SOME SUBANG. FINE GRAVEL, (SOME SLIGHTLY FEW)	SM	REFER TO NOTE (1) FID = 5.0 PID = 0.1 DENSE. TILL. LOA COLLECTED.	
54				EST. TOP OF BEDROCK @ 53'						
							INITIAL IN WASH, 4 in. ROLLER BIT (STEEL) DESTROYED WHILE ROLLING TO 52.5. DRILLER THINKS CARBIDE BUTTON ROLLER FROM 5" BIT IS IN THE WAY. COLLECT 3" SPLIT-SPOON IN ATTEMPT TO CAPTURE ROLLER. NO LUCK.			
56			C-2 = 55.0-60.0' REC. LENGTH = 4.9' or % REC. = 98% RQD LENGTH = 51" RQD = 86.7%		2:10	WHITE DARK GRAY				
					2:45	LIGHT GRAY WHITE	BEDROCK. SCHIST, PINSTRIPE		FOLIATION = 40° FROM VERT. (CORE AXIS)	
58					3:30	MILKY QUARTZ VEINS	APPEARANCE. MICA INCLUDES BIOTITE MUSCOVITE & POSS. PHLOGOPITE. ABUNDANT		55.25' = 70° HIGHLY FRAC. WITH MINOR OXIDATION.	
					3:00	WHITE QUARTZ	QUARTZ VEINING. MILKY QUARTZ FROM 56.5-57.3 & AGAIN FROM		UPPER BARREL @ 57' 57.5 → 57.8' = 4 LOW ANGLE FRACTURES & SLIGHT PITTING - SLIGHT - OXIDATION	
60					4:50	↓	58.5 → EOB.			
							EOB @ 60' BGS.			

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:

PAGE: 4 OF 4

Tetra Form 0018

(1) UNABLE TO ADVANCE 4" CASING OR ROLLER-BIT PAST END OF 5" DRIVE-SHOE. DRILLER THINKS IT MAY BE BENT. PULL 4" CASING, KICK IN DRIVE SHOE. ATTEMPT TO ROLLER BIT OUT. 4 7/8" ROLLER BIT PAST 5" " " NO GOOD. DRILLER PULLS 5" CASING (ALLOWING 8" HOLE TO ADVANCE. 5". 0 INSIDE 6" CASING, DRILLER PULLS ALL CASING FROM BOREHOLE. 15' 5" LOCKED INSIDE 10' OF 6" CASING. RETRIEVED TO 1' BGS. 5" DRIVE SHOE EXTREMELY DAMAGED & INSIDE CRUSHED UP BY ROLLER-BIT. 7-18-01 - DR. NOTIFIED RADIAL

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTERDALE MANOR - PHASE II
PROJECT NO.: 04100-022.2
LOGGED BY: T. DURHAM
DRILLED BY (Company/Driller): EDI / A. ORLICKY
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW15D
START DATE: 8-7-01
COMPLETION: DATE: 8-9-01
MON. WELL NO.: MW15D
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = (FID, (PPM))
0							ASPHALT SURFACE			
3"	7	1.0	CM-SO-MW15D-0002	ASPHALT	MED.	BRWN	0.3' - ASPHALT	FILL	HSA THROUGH ASPHALT; POST-HOLE DIG TO 0.5	FID=0.5
2	13 11	/1.5	S-1 1020		DENSE		FILL - ROAD BASE/ DRAINING FILL - SILTY, SAND. MOSTLY F-M SAND, TRACE GRAVEL	SP/SM	NO SAMP. SATURATED	FID=0.9 FID=0.0
5"	15 20	1.1	-0204	FILL	DENSE	GRAY & BRWN & BLACK			@ ~3' - PERCHED.	FID=156.2
4	22 19	/2.0	S-2 1025				INC. ROUNDED COARSE GRAVEL. FILL.		NO A collected @ 4' DAMP	PID=0.0
3"	16 10	1.6	-0406 DUP CA100		MED.	BLACK	FILL - SILTY, SAND. SOME COARSE-FINE	SP/SM	DAMP - MOIST. FIELD DUP COLLECTED	FID=718.6
6	11 14	/2.0	S-3 1055		DENSE	LT. BRWN	GRAVEL. FILL INC - TRACE BRICK AND WOOD FRAGMENTS. TOSS. CHARCOAL.	FILL	NO A COLLECTED @ ~5'BGS.	PID=5.3
5"	4 7	1.2	-0608				SANDY, GRAVEL. MOSTLY F-C ROUNDED	GW	NO A COLLECTED @ ~7'BGS.	FID=3939
8	14 21	/2.0	S-4 1118				GRAVEL, SOME F-C SAND, TRACE SILT, TRACE COBBLES.		WET, NOT QUITE SATURATED.	PID=0.7
2"	27 31	1.0	-0810		VERY DENSE				MINOR OXIDATION STAINS	FID=57.9
10	26 21	/2.0	S-5 1245						SATURATED.	PID=1.8
2"	28 39	0.9	-1012				SAND & GRAVEL. BOTH WELL GRADED. ROUNDED, TRACE SILT.	SW/GW	SATURATED	FID=0.0
12	41 46	/2.0	S-6 1415							PID=0.0
2"	12 26	0.6	-1214			LIGHT BRN	GRAVELLY, SAND. MOSTLY F-MED. POORLY GRADED SAND; SOME FINE SUBANG. TO SUBROUNDED GRAVEL. TRACE SILT.	SP		FID=0
14	33 40	/2.0	S-7 1450						FINING DOWN WARDS SEQUENCE.	PID=0
2"	12 16	0.6	-1416		DENSE	LIGHT OLIVE BRN	S-8A=0.6' SIMILAR TO ABOVE. DECREASING GRAVEL.			FID=6.2
16	19 20	/2.0	S-8 1522				S-8B=0.2' - SAND. MOSTLY FINE POORLY GRADED SAND, TRACE-FEW SILT.	SP		PID=0.1

FID & PID B.
0.7 PPM PID & FID C
BORE HOLE
BOTH FID & PID NOT BOTH SAMP FOR ANAL

TYPE OF DRILLING RIG: ACKER AIII TRUCK MOUNTED
METHOD OF ADVANCING BORING: TEMP. STEEL CASING D&W.
METHOD OF SOIL SAMPLING: 3" SPLIT-SPOON DRIVEN W/ 300 LB. HAMMER & 18" FALL & 2" S.S. DRIVEN W/ 140 LB. HAMMER & 30" FALL.
METHOD OF ROCK CORING: NX
GROUNDWATER LEVELS: WATER LEVEL @ 7.0' BGS MEAS. INSIDE CASING ON A.M. 8-8-01 (CASING @ 16' BGS)
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: Centredale Manor Phase II
PROJECT NO.: 0400-0222
LOGGED BY: T. Dorgan
DRILLED BY (Company/Driller): EDI - A. Orucky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW15D
START DATE: 8-7-01
COMPLETION: DATE: 8-9-01
MON. WELL NO.: MW15D
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* - [FID, (PPM)]
16	12 / 12	1.6 / 2.0	-1618 S-9 1545			LIGHT OLIVE BRN	SAND, MOSTLY FINE POORLY GRADED BEDDED SAND. TRACE - FEW SILT.	SP	THINLY LAMINATED	FID=5.0 PID=0.2
18	14 / 19						S-10A=0'-SIMILAR TO S-9. S-10B=0.2'-SAND. MOSTLY F-C WELL GRADED SAND, TRACE SILT.	SP SW		FID=0.9 PID=0.0
20	11 / 12 / 16 / 20	1.2 / 2.0	-1620 S-10 0740	OUTWASH		MED-DARK GRAY	GRAVELLY, SILTY, SAND. MOSTLY	SM		FID=0.5
22	16 / 27 / 15 / 16	0.8 / 2.0	-2022 S-11 0805			V	F-C SAND, SOME SILT, FEW-SOME SUBANG.-SUBROUNDED GRAVEL		6-8" COBBLE, 21.5-22.5'	PID=0.0
24	10 / 6 / 6 / 16	1.0 / 2.0	-2224 S-12 0845	COBBLE		LIGHT BROWN	COBBLE-21.5-22.5'. SAND - WELL GRADED F-C SAND, TRACE WELL ROUNDED FINE GRAVEL	SW	ROLLER BIT THROUGH	FID=1.8 PID=0.0
26	22 / 7 / 5 / 6	0.7 / 2.0	-2426 S-13 0910	OUTWASH		V	SAND & GRAVEL - GRAVEL IS F-C SUBROUNDED SAND IS POORLY GRADED COARSE WITH TRACE MED. SAND	SP/GP	POOR RECOVERY ABUNDANT SLOUGH, RIG NOT WASHING OUT WELL - MIXING	FID=6.2 PID=0.0
28	10 / 5 / 6 / 8	0.7 / 2.0	-2628 S-14 1010			LIGHT GRAY/ TAN	GRAVELLY, SAND. MOSTLY F-C WELL GRADED SAND, SOME FGRAVEL	SW	BENTONITE MUD TO IMPROVE WASH.	FID=12.0 PID=5.4
30	5 / 6 / 12 / 14	1.1 / 2.0	-2830 S-15 1030				SAND. MOSTLY FINE-MED POORLY GRADED SAND. TRACE SILT. BEDDED W/ 3-4" LAYERS ALTERNATING F-MED TO FINE SAND. INC. FINES W/ DEPTH	SP	BEDDING NOTED DRILLER NOTED INCREASING BLACK STAIN IN WASH WATER. HE SAID OIL LIKE APPEARANCE	FID=1.6 PID=0.3
32	7 / 5 / 7 / 7	1.0 / 2.0	-3032 S-16 1055							FID=8.5 PID=2.8

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

REFER TO P. 1

Tetra Tech NUS, Inc.

BORING NO.: MW15D
PAGE: 2 OF 5

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400-022Z
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - A. ORLICKY
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW15D
START DATE: 8-7-01
COMPLETION: DATE: 8-9-01
MON. WELL NO.: MW15D
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROP'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = (FID, (PPM))
32										
2"	6 8	0.9	-3234			LIGHT GRAY- TAN	SAND. MOSTLY F-C WELL GRADED SAND, FEW SUBRND FINE GRVL	SW		FID=4.7
34	12 14	2.0	S-17 1110				TRACE SILT.			PID=0.8
2"	12 14	0.6	-3136						VOC COLLECTED. LIGHT SHEEN ON WASH WATER/ MUD - DRILLER	FID=1.2
36	16 11	2.0	S-18 1135							PID=0.4
2"	6 8	0.5	-3638				FINE SAND. POORLY GRADED, TRACE MED. SAND.	SP	NOTED CHEM. ODOR THAT DISPUTES QUICKLY. NO READINGS > BACKGROUND OF BENZENE OR B.Z.	FID=1.5
38	6 11	2.0	S-19 1200							PID=0.9
2"	12 11	0.7	-3840				SAND. MOSTLY F-MED. POORLY GRADED SAND. TRACE SILT.	SP		FID=0.9
40	14 10	2.0	S-20 1230							PID=0.2
2"	14 14	1.0	-4042				GRAVELLY SAND. MOSTLY F-C WELL GRADED SAND, SOME FINE SUBRND SUBANG. GRAVEL, TRACE SILT.	GW	MORE DENSE & COMPACTED.	FID=7.0
42	16 14	2.0	S-21 1400			V				PID=2.6
	11 8	0.9	-4244			LIGHT BROWN			VOA COLLECTED.	FID=2.8
44	6 6	2.0	S-22 1430			TO TAN				PID=1.5
	4 4	1.1	-4446							FID=1.3
46	5 7	2.0	S-23 1458							PID=0.7
	6 6	0.6	-4648			LT. BROWN TO LT. GRAY	SAND. MOSTLY F-C WELL GRADED SAND, TRACE F. GRAVEL	SW		FID=1.2
48	6 12	2.0	S-24 1515				0.2'- POORLY GRADED FINE SAND, TRACE SILT BEDDED IN (SW).	SP SW		PID=0.6

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Refer to 7

Tetra Tech NUS, Inc.

BORING NO.: MW15D
PAGE: 3 OF 5

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400-0200
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - A. GRUCKY
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW15D
START DATE: 8-7-01
COMPLETION: DATE: 8-9-01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = (FID, (PPM))
48	12 15 21 40	0.9 / 2.0	-4850 S-25 1945	TILL		MOTTLED DARK GRAY & LIGHT GRAY	SILTY, SAND & GRAVEL, GRAVEL IS F-C SUBANGULAR SAND IS F-C WELL GRADED, TRACE - FGN SILT.	GRAVEL	TILL CASING HAMMERED DRIVEN 44'-50' NO SAMPLE COLLECTED	FID: 5.1 PID: 1.16
50	26 31 37 29	0.6 / 2.0	-5052 S-26 0830							FID = 2.1 PID = 0.0
52	10 12 21 29	0.6 / 2.0	-5254 S-27 0915			LIGHT GRAY				FID = 1.2 PID = 0.0
54	21 23 120/5"	0.8 / 1.4	-5455.4 S-28 0945	TOP OF ROCK @ 55.4			-SLIGHT INC. IN SILT.		5" CASING REFUSAL @ 55.5' ROLLER-BIT TO 57.5'	FID = 6.5 PID = 1.1
56					CORE TIME	LIGHT GREENISH-GRAY	BEDROCK @ 55.4' BGS			
58			C-1 = 57.5-62.5' REC. LENGTH = 4.6' REC. % = 92% RQD LENGTH = 30"	57.5	4:15		MIGMATITIC; CONTACT METAMORPHISM; CHLORITIC QUARTZ-RICH SEMISCHIST; ~20° FOLIATION	BR.	MODERATE WEATHERING TO 60.5'; SLIGHT WEATHERING BELOW	
60			RQD = 50%	1-2	3:45		VUGGY, & PITTED 56-60'	V. BR / BR.	MED. HARD SOFT	
62					4:00		HEAVY OXIDATION STAINING ON MOST FRACTURES, GOUGE NOTED ON SOME.		60.5. MED. HARD 60.5 -> EOB.	
64			C-2 = 62.5-66.5' SEE P. 5	2-2	4:00					
					2:44				BUBBLY LOG STARTED LATER @ 63' BGS	
					3:30		TRACE CALCITE VEINING.			

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

REFER TO P. 1 FOR DETAIL.

Tetra Tech NUS, Inc.

BORING NO.: MW15D
PAGE: 4 OF 5

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400-022.2
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - A. BRUCKY
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW15D
START DATE: 8-7-01
COMPLETION: DATE: 8-9-01
MON. WELL NO.: MW15D
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
64			REC. LENGTH = 3.9'		CORE TIME 4:15	↓		BR.	TAKING WATER STARTING @ 63	
66			REC. % = 97.5%		4:00	DARK	BANDED/ALTERNATING CONTACT @ ~53' WITH CHLORITE RICH GREENSTONE-QUARTZ			
			ROD LENGTH = 36"			GREEN	~~SHEAR~~ PINSTRIPE W/ MINOR AUGENS.	↓	PITTING & VUGS @ EOB.	
68			ROD 92.9%				PYRITE ~~FILMS~~ ON FRACTURE.			
							EOB @ 66.5'			

TYPE OF DRILLING RIG:
METHOD OF ADVANCING BORING: REFER TO P.1
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW15D
PAGE: 5 OF 5

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400-0222
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - JAY GRASSER
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: ~~SB-14~~ ~~MW-14~~ SB-14-2
START DATE: 6-21-01
COMPLETION: DATE: 6-21-01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0							GRASS/LAWN SURFACE			
	2 4	1.7	EM-SO-MW-0007			BRN.	S-1A=0.7'-TOPSOIL/LOAM. w/ ROOTS	SW		FID=135.6
2	4 6	2.0	S-1 1314			RED/BROWN	S-1B=0.4'-SILTY, F-C SAND, LITTLE GRAVEL			PID=85
	5 4	1.6	EM-SO-MW-0204			DK. BRN	S-1C=0.6'-SANDY, SILT. TR. ORG. FIBERS	SM		
4	4 5	2.0	S-2 1318	▽		BLACK	S-2A=.4' SIMILAR TO ABOVE. INC. ORG. FIBERS	↓	156 PPM IN BREATHING ZONE w/ PID. PID=TRIP BLK 0.0	
	6 8	0.8	-0406			DARK GRAY	S-2B=0.2'-SILT & F-MED. SAND	SM/SP	SAT. @ 4'	FID=0.0
6	12 13	2.0	S-3 1350			↓	S-3A=0.5' SILT, TRACE FINE SAND, TRACE ROOTED ZONE, TR. ORG. FIBERS	SC	SATURATED. FINE BOREHOLE NOTED. SHEEN? SOMEWHAT w/ S-SAMP.	FID=2104.6
	11 12	0.7	-0608			TAN/BROWN	S-3B=0.5'-F-C WELL GRADED SAND	SW		PID=1.5
8	14 17	2.0	S-4 1405			YELLOW BROWN			MINOR ODOR.	FID=0.0
	7 6	0.7	-0610				S-4A=1.5' SIMILAR TO ABOVE.			PID=1.8
10	6 7	2.0	S-5 1415				S-5B=0.2'-FINE-MED. POORLY GRADED SAND	SP		FID=21.0
3"										PID=18.5
2"	3 2	0.0	4012				NO RECOVERY		NO RECOVERY 0.0 PID & FID IN BOREHOLE	
12	2 3	2.0	S-6 1424							
	3 3	0.5	-1214			YELLOW BROWN	SAND. WELL GRADED F-C SAND TRACE SILT.	SW	NO ODOR OR STAINING.	FID=0.0
14	5 5	2.0	S-7 1431			↓	↓	↓		PID=0.0
	3 3	0.4	-1416						WOR SAMPLE ONLY	FID=0.0
16	4 4	2.0	S-8 1436			↓	EOB @ 16' BGS			PID=0.0

TYPE OF DRILLING RIG: DIEDRICH D-120 TRUCK MOUNTED RIG.
METHOD OF ADVANCING BORING: 4¼", D&W HOLLOW STEM AUGERS.
METHOD OF SOIL SAMPLING: 3" SPLIT-SPOON DRIVEN w/ 140 LB. HAMMER & 30" DROP & 2" SPOONS.
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

PAGE: | OF |

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblasky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW03 (D) (M) (ET)
START DATE: 6/22/01
COMPLETION: DATE: 6/22/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Chem Phot Ion (ppm)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0.0										
1.0			No soil samples			NR	Advance PW drill casing to		No chemical samples taken	
2.0						NR	16 ft. First attempt; drill casing refusal at ≈ 2 ft. on			
3.0						NR	probable bedrock. Relocate			
4.0				See Borings for MW03		NR	boring approx 1 ft. north.			
5.0						NR	casing bouncing off 2 ft. Auger to			
6.0						45	Advance 4 7/8" roller bit to 16 ft.			
7.0						73	Telescope PW drill casing to 20 ft.			
8.0						112	Change out drilling fluids and			
9.0						86	remove cobbles from mud tub.			
10.0						94				
11.0						60				
12.0						35				
13.0						36				
14.0						29				
15.0						49				
16.0			↓			49			↓	

TYPE OF DRILLING RIG: Acker ADT truck rig
METHOD OF ADVANCING BORING: 5 inch (PW) & 4-inch (HW) Dual wall drill casing. Wash & drive.
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING: NX rock core
GROUNDWATER LEVELS: 6/25 - 4', C/X - 5.1'
OTHER OBSERVATIONS: NE denotes "not recorded"

Tetra Tech NUS, Inc.

BORING NO.: MW03 (D) (M) (ET)
PAGE: 1 OF 8

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/ a 140 lb safety hammer w/ 30" drop.
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/ a 300 lb. cathead hammer w/ 18" drop.

Ttnus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblasky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW03 (D) (M)
START DATE: 6/20/01
COMPLETION: DATE: 6/22/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CASING Blows (Ft)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16.0							Advance 3¾" roller bit to 20ft. Wash water color & notable		No Observed Samples taken	
17.0						17/16	orange brown. Distinctly			
							orange from 16-17 ft.			
18.0						36				
19.0						38				
20.0						37				
	6 8	6"/24"	S-1 0959 CM-SO-MW03-2022 (D)		Medium Dense		Poorly graded sand w/ silt & gravel (SP-SM), wet, medium to fine SAND, trace coarse sand, little to some coarse to fine gravel, little silt, brown.	SP-SM		Headspace FID: 0.0 PID: 0.1
21.0	13 13			Outwash		26				
22.0						29				
	14 9	9"/24"	S-2 1020 CM-SO-MW03-2024 (D)		Medium Dense		Mostly roller bit cuttings. Sand to subangular fine gravel and coarse sand. Piece of coarse gravel lodged in top of sampler.			Headspace FID: 0.0 PID: 0.0
23.0	11 16					43				
24.0						29	Mix bentonite chips and Cetco Super Gel-X			

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

(M) (D)
BORING NO.: MW03 (D)

Tetra Tech NUS, Inc.

PAGE: 2 OF 8

Ttnus Form 0018

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/ a 140 lb safety hammer w/ 30" drop.
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/ a 300 lb cathead hole hammer w/ 18" drop.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblasky
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW00-(28) (17) (M)
START DATE: 6/22/01
COMPLETION: DATE: 6/22/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blow Ct/ft (Hwt)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD - [FID, (PPM)]
24.0										
	18	5" / 24"	S-3 1059 CM-SO-MW00-0400 (D)	Cuttings	Medium dense		Sandy sand w/gravel (SM); wet,	SM	No chemical samples taken	~~Headspace~~
	9					49	coarse to fine SAND; little fine to coarse gravel, little			FID: 0.0
25.0	9						Silt, dark brown. Probable lean within sand & gravel formation.			PID: 0.0
26.0						37				
	5	9" / 24"	S-4 1125 CM-SO-MW00-2628 (D)		Medium dense		Poorly graded sand w/gravel (SP); wet, coarse to fine SAND,	SP		Headspace
	10						little fine gravel, trace silt,			FID: 3.5
27.0	9					10	brown.			PID: 2.2
28.0						35				
	10	6" / 24"	S-5 1144 CM-SO-MW00-2830 (D)		Medium dense		Well-graded gravel w/sand & sand (GW-GM); wet, coarse to fine	GW-GM		Headspace
	7						gravel, little coarse to fine sand,			PID: 0.0
29.0	9					32	little silt, brown.			FID: 0.0
30.0						34				
	6	9" / 24"	S-6 1206 CM-SO-MW00-3032 (D)	(31.0) ?_? Possible bedrock	Medium dense		Poorly graded sand w/silt & gravel (SP-SM); wet, coarse to	SP-SM		Headspace
	6						fine SAND, some coarse to			PID: 0.0
31.0	7					13	fine gravel, little silt, brown.			PID: 0.0
							Approximately 3" thick moderately			
32.0						38	cemented lens of soil noted in tip of sample. Possible bedrock.			

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

(M) (17)

Tetra Tech NUS, Inc.

BORING NO.: MW00-(28)

Tinus Form 0018

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/a 140 lb safety hammer w/30" drop.
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/a 300 lb center hole hammer w/18" drop.

US EPA ARCHIVE DOCUMENT

(67)

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A Oblasky
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW03(D)(m)
START DATE: 6/22/91
COMPLETION: DATE: 6/27/91
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CASING Blows (FT)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
32.0										
	30	6"/24"	S-7 1035 CM-SO-MW03-3034 (2)		Very Dense		Silty sand w/gravel (SM); wet, coarse to fine SAND, some	SM	No chemical samples taken	Headspace:
	46									
	52									
33.0	26					17	fine to coarse gravel, little silt, moderately to strong cementation, brown. Possible glacial till, (2) jars) Angular gravel.			PID: 0.0 PID: 0.0
34.0						57				
	23	6"/24"	S-8 1053 CM-SO-MW03-3436 (2)	Possible Glacial Till	Very dense		Similar to S-7. Possible glacial till.	SM		No headspace performed
	34									
	19									
36.0	22					29				
6ppm 36.0										
						38				
	14	8"/24"	S-9 1314 CM-SO-MW03-3638 (2)		Medium Dense		Poorly graded sand w/silt & gravel (SP-SM); wet, coarse to	SP-SM		Headspace:
	11									
38.0	10					39	fine SAND, little to some fine gravel (subangular), little silt,			PID: 0.0 PID: 0.0
	24									
							weak cementation, brown. Possible glacial till.			
38.0						35	Quit for the day. 6ppm. Casing at 36 ft.			
	18	10"/24"	S-10 752 CM-SO-MW03-38-40 (2)		Medium Dense		Poorly graded sand w/silt (SP-SM);	SP-SM		Headspace:
	14									
39.0	10					51	wet, medium to fine SAND, little coarse sand, little			PID: 0.0 PID: 0.0
	37									
							silt, trace fine gravel (subangular) brown, Possible glacial till.			
40.0						60	(2) jars)			

TYPE OF DRILLING RIG: Acker ADI truck rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

(m) 67

Tetra Tech NUS, Inc.

BORING NO.: MW03(D) PAGE: 4 OF 5

Tinus Form 0018

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/a 140 lb safety hammer w/30" drop.
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/a 300 lb center hole hammer w/18" drop.

US EPA ARCHIVE DOCUMENT

(51)

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A Oblasky
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW02(D)(M)
START DATE: 6/28/91
COMPLETION: DATE: 6/29/91
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows (Type)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
40.0	17	7" / 24"	S-11 0859 (1) 0813 CM-90 MW02-4040(2)		Very dense		Poorly graded sand w/silt & gravel (SP-SM), wet, coarse	SP-SM	No chemical sample	Headspace: FID: 0.0 PID: 0.0
41.0	27					94	to fine SAND; some fine			
	32						gravel (subangular), some silt, moderate to strong cementation,			
42.0	26					128	brown. Possible glacial till.			
	23	7" / 24"	S-12 0838 CM-90-MW02-4244(2)	Possible glacial till	Dense		Poorly graded sand w/silt &	SP-SM		Headspace: FID: 0.0 PID: 0.0
43.0	22					53	gravel (SP-SM); wet, coarse to fine sand, some fine to			
	21						coarse gravel (Subangular), some silt, weak to moderate			
44.0	14					93	cementation, brown. Possible glacial till.			
	24	6" / 24"	S-13 0901 CM-90-MW02-4446(2)		Dense		Coarse gravel (subrounded) and rock fragments (Angular)			Headspace: FID: 0.0 PID: 0.0
45.0	23					58				
	25									
46.0	29					112				
	18	7" / 24"	S-14 0908 CM-90-MW02-4648(2)		Dense		Poorly graded sand w/silt & gravel (SP-SM); wet, coarse	SP-SM		Headspace: FID: 0.0 PID: 0.0
47.0	16					61	to fine SAND; some coarse to fine gravel (subrounded			
	21						to subangular, some silt, weak to moderate cementation,			
48.0	51					60	brown. Possible glacial till)			

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

(M)(51)

BORING NO.: MW02(D) PAGE: 5 OF 8

Tinus Form 0018

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/a 140 lb safety hammer w/30" drop.
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/a 300 lb cathead hole hammer w/18" drop.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thatcher
DRILLED BY (Company/Driller): EDI - A Oblasky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW02(D) (M) (47)
START DATE: 6/22/01
COMPLETION: DATE: 6/27/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows (Type)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
48.0	20 14 13 10	10" / 24"	S-15 1058 CM-SO-MW02-4850(D)		Medium dense	70	Poorly graded sand w/ silt & gravel (SP-SM). Wet, coarse to fine sand and coarse to fine gravel (subangular), white silt, brown. Weakly cemented. Possible glacial till.	SP-SM	No charcoal samples	Headspace: FID: 0.0 PID: 0.0
50.0				Possible glacial till		61				
51.0	30 80 39 50/4"	1" / 22"	S-16 1117 CM-SO-MW02-5052(D)		Very dense	25	Roller bit cuttings. Angular coarse sand & fine gravel. May have pushed cobble w/sampler.			Headspace: FID: PID: (47)
52.0						49				No headspace performed
53.0	47 20 47 51	6" / 24"	S-17 1150 CM-SO-MW02-5054(D)		Very dense	83	Well-graded gravel w/ sand & silt (GW-GM); wet, fine to coarse gravel, fine to coarse sand, white silt, brown. Angular to subangular sand & gravel. Possible glacial till.	GW-GM		Headspace: FID: 0.0 PID: 0.0
54.0				(54.0') -?-?- Possible cobble/ boulder -?-?- (55.0')		140				
55.0	100/1"	0" / 1"	S-18 1220 CM-SO-MW02-S4(D)			260	No recovery. Spoon refusal on possible bedrock. Attempt to advance drill casing to 55ft. Unable to advance.			
56.0	11 19 23 30	14" / 24"	S-19 1357 CM-SO-MW02-5557(D)		Dense	61	Advance roller bit ahead of casing. Started to log drilling mud. Advance drill casing to 55ft. Advance roller	SP		Headspace: FID: 0.0 PID: 0.0

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Teira Tech NUS, Inc.

BORING NO.: MW02(D) (M) (47)
PAGE: 6 OF 8

Tinus Form 0018

11
19
22
30

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/ a 140 lb safety hammer w/ 30" drop.
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/ a 300 lb cathead hole hammer w/ 18" drop.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblasky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW03(D)(M) (E7)
START DATE: 6/20/01
COMPLETION: DATE: 6/27/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CASING Blows PER (TYPE)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
56.0							brn to SSM. No water returns noted during advance mat.	SM		
57.0						92	S-19A: Poorly graded sand w/gravel (SP): wet, coarse to fine SAND, little fine gravel (subrounded to subangular), brown, (3") Trace silt.			
	19 / 24	9" / 24"	S-20 1426 CM-SO-MW03-5759 (D)		Very Dense			GW-GM	No samples taken	Headspace:
58.0	28 / 24					100	S-19B: Silty sand w/gravel (SM): wet, coarse to fine sand, little to fine gravel (subrounded), little silt, dark brown to brown. (7")			FID: 0.0 PID: 0.0
59.0				Some coarse gravel & cobbles		91	S-20: Wet - graded gravel w/silt & sand (GW-GM): wet, coarse to fine GRAVEL, some coarse to fine sand, little silt, brown.			
	51 / 24	6" / 24"	S-21 1501 CM-SO-MW03-5961 (D)		Very dense			GM	Drillers (Boz) jar preserved on ice for possible VOAs	Headspace:
60.0	24 / 15					114	S-21: Silty gravel w/sand (GM): wet coarse to fine GRAVEL (subrounded to subangular), some fine to coarse sand, little silt, brown.			FID: 0.0 PID: 0.0
61.0						81	Encountered primary coarse gravel & cobbles w/samples S-20 & S-21.	GW-GM		
	29 / 33	6" / 18"	S-22 1530 CM-SO-MW03-6130		Very Dense		brn - graded gravel w/silt & sand (GW-GM): wet, coarse to fine		Boz drillers jar preserved on ice for possible VOA	Headspace:
62.0	66 / 25/0"					NR	GRAVEL (subrounded to subangular), some coarse to fine sand, trace silt, brown.			FID: 0.0 PID: 0.0
				(62.5')					Sample, 2 VOA & 8 oz moisture sample taken on 6/26	
63.0				Needed Backfill (E7) Bentonite Powder			Quit for the day. Casing at 62.5 ft.			
							Advance HW drill casing to 62.5 ft. Advance roller bit to 62.5 ft. Some competent, pebble quartzite bedrock. Advance roller bit to 63 ft.		2 NIS.	
64.0										

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS: NR denotes "not recorded"

Tetra Tech NUS, Inc.

(M) (E7)

BORING NO.: MW03(D) PAGE: 2 OF 8

Tinus Form 0018

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/a 140 lb safety hammer w/30" drop.
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/a 300 lb center hole hammer w/18" drop.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblesby
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW04(B)
START DATE: 8/1/91
COMPLETION: DATE:
MON. WELL NO.: MW04(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD - [FID, (PPM)]
54.0		R2 (cont.)	54'-55'		2 mins.		A total of eight mechanical breaks noted. Some core grinding noted on broken surfaces. Distinct light green mineralization noted from 54.1' to 55'.			
55.0										
			55'-56'		2 mins.					
56.0										
		R3	56'-57'		15 mins	Greyish Grey	R3: 56'-61' Fresh, medium hard, greenish-grey, fine-grained SCHIST.	SCHIST	Apparently the three core barrel was not locked	
57.0				total core						
X			57'-58'		2 mins.		No natural joints/fractures noted. No discernable foliation. REC=50%, RQD=40%.		Both the outer barrel during R3. No recovery on	
58.0				total core						
			58'-59'		6 mins.		Distinct quartz vein noted between 49'-99' based on core tone. Three zones of core grinding noted. Core grinding was caused by the quartz. Difficult to determine exact depths and extents of core grinding. Fractured zone from 60.5 to 61.6' from auger was performed during R4.		First attempt. A total of 30" recovered during two additional attempts. ½-RQD biased low due to 50% recovery.	
59.0										
			59'-60'	core grinding	4 mins					
60.0										
			60'-61'		3 mins					
61.0										
		R4	61'-63'		3 mins for 6"	Greenish grey	R4 61'-66' Fresh, soft to medium hard, greenish-grey, fine grained SCHIST. Two natural joints	SCHIST		
63.0					1 min for 6"					

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING: 6 inch (ow), 5 inch (ow), 4 inch (ow) & 3 inch (ow) hollow auger, OD
METHOD OF SOIL SAMPLING: 2 inch O.D. split barrel samples
METHOD OF ROCK CORING: NQ wire line system w/5' core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW04(B)
PAGE: 5 OF 7

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibadeau
DRILLED BY (Company/Driller): EDI - A. Oblizlay
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW04 (B)
START DATE: 8/1/01
COMPLETION: DATE:
MON. WELL NO.: MW04 (B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = (FID, (PPM))
60.6										
		R4 (cont.)	60'-63'		1.5 mws		noted @ 61.5' & 63.2' Joints are rough, planar, slightly discolored,			
63.0							and open to tight. Joints are			
			63'-64'		2 mws.		above foliation. Approx. 350-40° Consistently dipping foliation			
64.0							from 61' to 64'. No distinct			
			64'-65'		0.5 mws.		foliation from 64' to 65'.			
65.0							REC = 100%; RQD = 100% (excellent) A total of nine mechanical			
			65-66'		2 mws.		breaks noted. Fractured Zone			
66.0							noted from 61 to 61.5 from absence of ice.			
		R5	66'-67'		2.5 mws	Greenish gray	R5: 66'-71'	SM/ML		
67.0							Fresh, medium hard, greenish-gray, fine-grained SM/ML.			
			67'-68'		0.5 mws.		One natural joint noted @ 67.9', Joint is smooth to			
68.0							rough, planar to undulating, slightly discolored and open.			
			68'-69'		3 mws		Approx. 45° foliation (moderately			
69.0							dipping) from 66' to 68.5', No distinct foliation from 68.5' to 71' ft.			
			69'-70'		3.5 mws		REC = 100%; RQD = 100% (excellent)			
70.0							A total of eight mechanical breaks noted. Core			

TYPE OF DRILLING RIG: Acker AD II truck rig
METHOD OF ADVANCING BORING: 6 inch (CSG), 5 inch (RW), 4 inch (HW), & 3 inch (NW) down casing. DW
METHOD OF SOIL SAMPLING: 2 inch OD split barrel sampler
METHOD OF ROCK CORING: NQ wireline system w/ 5' core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW04 (B)
PAGE: 6 OF 7

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thatcher
DRILLED BY (Company/Driller): EDI - A. Oblosky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW04(B)
START DATE: 8.1.01
COMPLETION: DATE:
MON. WELL NO.: MW04(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
70.0		R5 (cont.)	70'-71'		3 min.		grouting noted on some of the surface. Distinct light green mineralization from 69' to 69.5'			
71.0										
		R6	71'-73'		2.5 min.	Distinct grey	R6: 71'-76' Fresh, medium hard, greenish-grey, fine-grained SERPT. No natural fracture / joints noted.	SERPT	Lost approx. 300 gallons of water for	
73.0			73'-73'		3.5 min.		No distinct fracture. RQD= 100%; RQD= 100% (Cumulative) A total of seven mechanical		core runs R1 through R6	
74.0			73'-74'		4.5 min.		breaks noted. Some pitting/voids noted @ 71.3'. Fractured zone noted from 71 to 71.3ft. Probably mechanical. Distinct light			
75.0			74'-75'		4 min.		green mineralization noted from 73' to 74' & [illegible] (CT)			
76.0			75'-76'		4 min.		74.5 to 75.5'			
77.0							Bottom of exploration @ 76ft. Boring terminated in bedrock. Perform packer testing on bedrock and install bedrock monitoring well.			
78.0										

TYPE OF DRILLING RIG: Acker AD II truck rig
METHOD OF ADVANCING BORING: 6 3/4 inch (SW), 5 inch (AU), 4 7/8 inch (NW) & 3 7/8 inch (NW) diamond bits. DTH
METHOD OF SOIL SAMPLING: 2 inch O.D. split barrel sample
METHOD OF ROCK CORING: NX wireline system w/5' core barrel.
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW04(B) PAGE: 7 OF 7

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400-022.2
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI - JAY GRASSER
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW05
START DATE: 6-18-01
COMPLETION: DATE: 6-19-01
MON. WELL NO.: MW05S
CHECKED BY:

CASING BLOWS

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0							GRASS SURFACE/TRAFFIC ISLAND			
*	7 5	1.4	CM-SO-MW05-0002			BROWN	S-1A = 0.4' - TOPSOIL W/ GRASS.		DAMP	FID=0
2	6 6	/2.0	S-1 1315	DUP TIME 1320		TAN	S-1B = 0.8' - SAND - MOSTLY F-C WELL GRADED SAND TRACE COARSE GRAVEL. S-1C = 0.2' - FINE SAND	SP	FILL CORRECTED DUP @	PID=0
	5 5	0.6/	CM-SO-MW05-0204			↓	TRACE SILT. S-2A = 0.2' = SIMILAR TO S-1C	↓	FILL	FID=119.4
4	5 5	/2.0	S-2 1330	▽		BLACK	S-2B = 0.4' = GRAVELLY, SAND. MOSTLY F-C SAND, SOME F-C GRAVEL, TRACE SILT	SW	SATURATED SAMPLED S-2B ONLY	PID=56.8
53	8 6	0.8/	CM-SO-MW05-0406				SAND & GRAVEL FILL. SAND IS F-C	SW/GW	FILL	FID=2,458
45 53 50	7 5	/2.0	S-3 1400			↓	WELL GRADED. GRAVEL & SUBANG. COARSE TRACE SILT.	FILL	PUNGENT ODOR LNAPL NOTED ~	PID=>200
10 45 52	4 2	0.6/	CM-SO-MW05-0602	NO SAMPLE COLLECTED			SLOUGH MIXED WITH SAND & GRAVEL. SAND IS MED-COARSE.		5-6' DURING WASH ** WASHING OUTSIDE CASING STOP & CLEAN UP @ 1515 6-19-01 PUSH THROUGH & WASH THEN DRIVE 6-8	
8	4 17	/2.7	S-4 0800			BRN	GRAVEL IS FINE ROUNDED. TRACE-FINE COAL & FINES?	SP/GP		FID=1226PPM.
	18 17 20	1.1/	CM-SO-MW05-0818			BROWN MOTTLED BLACK	SANDY, GRAVEL. MOSTLY F-C SAND. GRAVEL, SOME F-C SAND.	GW	DARK STAINING ON GRAVEL.	FID=955
10	23 33	/2.0	S-5 0925	SAMPLE TIP 5"			SIMILAR TO ABOVE. GRAVEL TO 3 IN.		CHEM. STAINING ON GRAVEL.	FID=1,190
	114 9	1.2/	CM-SO-MW05-1012						TERMINATE @ 10' & DECON TUBE & RODS.	PID=1,252
12	45	/2.0	S-6 0945			↓	EOB AT 12' BGS. SET WATER TABLE WELL.	↓		

TYPE OF DRILLING RIG: DIETRICH D-120 TRUCK MOUNTED.
METHOD OF ADVANCING BORING: 6 IN. D&W CASING
METHOD OF SOIL SAMPLING: 3 IN SPLIT-SPOON DRIVEN W/ 300 LB. HAMMER & 18 IN. DROP
METHOD OF ROCK CORING:
GROUNDWATER LEVELS: 4 FT. BGS ON 6-19-01.
OTHER OBSERVATIONS: ** - DARK GREEN LNAPL ON WASH TUB FROM ~4-6' WASH. BZ = 20-30 PPM W/ BOTH PID & FID STOP & CLEAN SPARGE

BORING NO.:
PAGE: OF

Tetra Tech NUS, Inc.

Ttnus Form 0018

* S-1 - 3" SPOON DRIVEN BY 140 LB. HAMMER W/ 30" DROP. ALL OTHER 3" SAMPLERS DRIVEN W/ A 300 LB. HAMMER & 18" DROP. 2" SAMPLERS = 140 LB. HAMMER & 30" DROP.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblasky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW07(D)
START DATE: 6/18/01
COMPLETION: DATE: 6/21/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blow CLR (#)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = (FID, (PPM))
0.0										
1.0			No samples taken			NR	Advance SW drill casing to 10ft.		No chemical samples taken	
2.0						NR	Advance 5 3/8" roller bit to 10ft.			
3.0						NR	Slight sheen noted on drilling fluid in mud tub.			
4.0						NR				
5.0						NR				
6.0						50				
7.0						81				
8.0						108				
9.0						160	Boulder/cobble drilling from 8 to 10ft. Probable cobbles.			
10.0						158				
11.0						43	Change out drilling fluid at 10ft. Telescope PW casing to 10ft.			
12.0						94				
13.0						105				
14.0						100				
15.0						62				
16.0			↓			112			↓	

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING: 6-inch (SW) flush joint & 5-inch (PW) flush joint drill casings, wash & Driven w/300lb center hole hammer
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING: NR rock cores
GROUNDWATER LEVELS: NR Aquifers "not recorded"
OTHER OBSERVATIONS: 6/19 2.6'

Tetra Tech NUS, Inc.

BORING NO.: MW07(D) PAGE: 1 OF 7

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/a 140 lb safety hammer w/30" drop
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/a 300 lb center hole hammer w/18" drop.

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A Oblasky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW07(D)
START DATE: 6/14/01
COMPLETION: DATE: 6/21/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows CLR (feet)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16.0										
17.0						93			No chemical samples taken	
18.0						84				
19.0						66	Advance 3⅜" roller bit to 20 ft. Appox. 12" of cuttings in casing.			
20.0						84	Mix bentonite drainage closed. Cetco Super Gel-X			
21.0	10	10" / 24"	S-1 14:21 CM-SO-MW07-2020 (2)	Outside	Medium dense	55	Poorly graded sand w/silt & gravel (SP-SM). wet, coarse to	SP-SM		Headspace
22.0	10					72	fine SAND, some coarse to fine gravel, little silt, brown.			FID: 0.0 PID: 0.0
23.0	16	5" / 24"	S-2 14:56 CM-SO-MW07-2224 (2)		Dense	55	Similar to S-1.	SP-SM		Headspace
6/18/01 24.0	13					56				FID: 8.9 PID: 6.1
25.0	9	3" / 24"	S-3 15:00 CM-SO-MW07-2426 (2)		Medium Dense	41	Poor recovery, washed sample. Roller bit cuttings.			Headspace
26.0	8					44	6/18/01 Quit for the day. Casing @ 24 ft.			FID: 0.0 PID: 0.0
27.0	19	1" / 24"	S-4 0759 CM-SO-MW07-0638 (2)		Medium Dense	26	Poor recovery. Roller bit cuttings. Probable gravels			Headspace
28.0	11					37	Auger hammer to clothing fused.			FID: 0.0 PID: 6.0
29.0	23	6" / 24"	S-5 0835 CM-SO-MW07-2830 (1)		Dense	80	Roller bit cuttings. WASH. Probable PID mis reading on			Headspace
30.0	25					50	Headspace analysis. Checked w/ PID (B), reading = 0.2 ppm			FID: 0.0 PID: 200?
31.0	19	9" / 24"	S-6 0905 CM-SO-MW07-3032 (1)		Medium Dense	NR	Roller bit cuttings.			Headspace
32.0	10					NR	PID reading was 115 ppm probably due to water vapors			FID: 0.2 PID: 15

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS: NR denotes "not recorded"

Tetra Tech NUS, Inc.

BORING NO.: MW07(D) PAGE: 2 OF 7

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/a 140 lb safety hammer w/30" drop
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/a 300 lb center hole hammer w/18" drop.

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblizsky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW37(D)
START DATE: 6/18/01
COMPLETION: DATE: 6/21/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CASING Blow Per Foot	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD - [FID, (PPM)]
32.0	10	4"/24"	S-7 0941		Medium Dense		Well-graded gravel w/ silt & sand gravel (GW-GM), wet, coarse to	GW-GM	No chemical samples taken	Headspace
	3		CM-SO-MW37-				fine GRAVEL, some fine to coarse			FID: 0.0
33.0	5		2034 (1)			93	sand, trace to little silt, brown			PID: 10.6
							Piece of coarse gravel lodged in			
							top of sampler.			
34.0						51				
	3	3"/24"	S-8 1006		Medium Dense		Poor recovery. Angular fine gravel and			Headspace
	4		CM-SO-MW37							FID: 0.0
35.0	8		3436 (2)			37	COARSE SAND.			PID: 5.5
	22			Auger						
36.0						60				
	29	0"/24"	S-9 1036		Medium Dense		No recovery.			Headspace not performed
	8		CM-SO-MW37-							
37.0	3		3638 (2)			47				
	5									
							Sounded casing bottom w/ weighted			
38.0						82	tape prior to sampling. Tape went			
							to bottom of casing, 40.6'			
	12	2"/24"	S-10 1124		Medium Dense		Well-graded gravel w/ silt &	GW-GM		Headspace
	6		CM-SO-MW37				sand (GW-GM), wet, fine gravel,			FID: 4.5
39.0	18		3840 (2)			36	little fine to coarse sand, little,			PID: 5.6
	18						silt, brown.			
40.0						63				

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW37(D)
PAGE: 3 OF 7

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/ a 140 lb safety hammer w/ 30" drop.
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/ a 300 lb cathead hammer w/ 18" drop.

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A Oblasky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW07(D)
START DATE: 6/18/01
COMPLETION: DATE: 6/21/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CASES Blow (Feet)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
40.0										
	41	6"/24"	S-11 1157		Dense		Three pieces of fractured rock; probable cobble. Angular		No Universal sample tube	Headspace
	20		CM-SO-MW07-4043 (2)							
41.0	19					63	fine gravel.			FID: 0.0
	19									PID: 6.0
							Drilling mud specific gravity = 1.13.			
42.0						80				
	37	18"/24"	S-12 1330	Outwash	Medium dense		Poorly graded sand w/ silt & gravel (SP-SM); wet, coarse to	SP-SM		Headspace
	16		CM-SO-MW07-4044 (2)							
43.0	11					64	fine sand, some fine gravel,			FID: 1.7
	10									PID: 1.7
							loose silt, brown.			
44.0						64	Drilling mud sand content ≈ 6%. (measured)			
	19	3"/24"	S-13 1358		Medium Dense		Rotten bit cuttings. Angular coarse sand and fine			Headspace
	8		CM-SO-MW07-4446 (2)							
45.0	6					50	gravel.			FID: 0.0
	5									PID: 4.1
							Drilling mud marsh funnel viscosity = 69 seconds.			
46.0						32				
	38	5"/24"	S-14: 1436		Medium Dense		well-graded gravel w/ silt & sand (GW-GM), wet, coarse to fine	GW-GM		Headspace:
	7		CM-SO-MW07-4648 (2)							
47.0	11					32	GRAVEL, some coarse to fine sand, trace silt, brown.			FID: 0.0
	10									PID: 4.5
48.0						55				

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS: (See page 1)
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/ a 140 lb safety hammer w/ 30" drop.
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/ a 300 lb. safety hammer w/ 18" drop.

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A Oblasky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW07(D)
START DATE: 6/18/01
COMPLETION: DATE: 6/21/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows (Feet)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD - [FID, (PPM)]
48.0									No Diamond Sample Taken	
6/19/01 49.0						64	Quit for the day. Casing at 48'.			
							Advanced roller bit to 49'. Advance PW diam. casing to 49'.			
50.0				Probable Boulder (Weathered)		32	Advance 3 7/8" hollow bit to 52'. Rotary bit jammed out at 50'.			
							Probable boulder from 48 to 50'. Boulder appeared to be			
51.0						39	weathered and easily broken up. Attempt to drive PW diam casing			
							through it to 52'. Chips noted in wash water return.			
52.0				(52.0')		47	Lots of drilling mud noted during roller bit advancement.			
	6/7	13"/24"	S-15 0942 CM-SO-MW07-5054 (2)		Medium Dense		Poorly graded gravel w/ silt & sand (GP-GM); wet, brown	GP-GM		Headspace: FID: 0.0 PID: 3.7
53.0	8/11					62	Gravel, some coarse to fine sand, little coarse gravel,			
							little silt, brown.			
54.0				Obstruction		63	Having trouble removing cuttings from casing. Add additional bentonite.			
	11/12	18"/24"	S-16, 1037 CM-SO-MW07-5456 (2)		Medium Dense		Poorly graded sand w/ silt & gravel (SP-SM); wet, medium to	SP-SM		Headspace: FID: 0.0 PID: 0.0
55.0	14/15					85	fine SAND, white coarse sand, little to some fine gravel,			
							little silt, brown. Approx. 2 inch thick dark brown silt lens			
56.0						125	noted in sample.			

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING: (See page 1)
METHOD OF SOIL SAMPLING:
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW07(D) PAGE: 5 OF 7

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/ a 140 lb safety hammer w/ 30" drop.
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/ a 300 lb center hole hammer w/ 18" drop.

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblasky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: MW07 (D)
START DATE: 6/18/01
COMPLETION: DATE: 6/21/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blow Cnt. (feet)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD - [FID, (PPM)]
56.0	30 16	13" /24"	S-17 1110 cm-so-mw07- S658 (2)		Dense		Poorly graded sand w/silt & gravel (SP-SM), wet, coarse to fine	SP-SM	No chemical samples taken	Headspace: FID: 0.0 PID: 0.5
57.0	15 17					128	sand, some fine gravel, trace to little silty fines.			
58.0						102				
	29 30/5"	5/8"	S-RB 1152 cm-so-mw07- S660 (2)	Cuttings	—		Poorly graded sand w/silt & gravel (SP-SM); wet, coarse to fine sand,	SP-SM		Headspace: PID: 0.0 PID: 3.5
59.0				(59.0')		60	little fine gravel, trace to little silt, brown.			
							Advance PW-drill casing to 59.5'. Advance 3½" bottom hole to 60.5'.	Quartzite		
60.0				Bedrock		Core	Greenish-gray calcareous weathered rock return; Probable bedrock.			
						Time (min.)	Telsmith air drill open to 60.5'. Begin NX rock core @ 60.5'.			
61.0							RUN: 60.5' - 65.5' Fresh to slightly weathered,			
						6 mins	hard, fine-grained, light gray QUARTZITE with moderately			
62.0				Weathering			closely spaced, rough,			
						3.5 mins.	planar to undulating, discolored tight joints. REC = 93%;			
63.0							RQD = 86% (good)			
						5.5 mins	61.1 to 62.0: Pale & very fine grained carbonate veined, weathering and			
64.0							discoloration also noted. This zone not included in RQD calculation.		↓	

TYPE OF DRILLING RIG: Acker ADI truck rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (See page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW07 (D)
PAGE: 6 OF 7

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/a 140 lb safety hammer w/30" drop.
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/a 300 lb cathead hole hammer w/18" drop.

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A Oblasky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW07 (P)
START DATE: 6/19/01
COMPLETION: DATE: 6/21/01
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
64.0										
					6.5 min.		61.5 to 65.5': Core slightly discolored and slightly weathered, several quartz inclusions or veins also notch in core. Especially at very bottom of core run.	Comp. Jtc	No charcoal Sample taken	
65.0										
					6.0 min		Bottom of exploration at 65.5'. Borings terminated in bedrock. Install deep monitoring (completion) well in completed borehole.			
66.0										
67.0										
68.0										
69.0										
70.0										
71.0										
72.0										

TYPE OF DRILLING RIG: Acker ADII truck rig
METHOD OF ADVANCING BORING:
METHOD OF SOIL SAMPLING: (see page 1)
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW07 (P)
PAGE: 2 OF 2

Tinus Form 0018

(1) 3-inch O.D. Split barrel sampler driven 24 inches w/a 140 lb safety hammer w/30" drop.
(2) 2-inch O.D. Split barrel sampler driven 24 inches w/a 300 lb. cathead hole hammer w/ 18" drop.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTERDALE MANOR PHASE II
PROJECT NO.: 0400-022Z
LOGGED BY: T. DORLAN
DRILLED BY (Company/Driller): EDI / JAY GRASSER
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW10B
START DATE: 6-26-01
COMPLETION: DATE: 7-25-01
MON. WELL NO.: MW10B
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0							SOIL / FILL SURFACE			
2"	4 6 7 5	1.2 / 2.0	-0002 S-1 1420			BROWN	FILL: SILT, SAND & GRAVEL WITH GLASS PAPER & PLASTIC DEBRIS. NO.6'	FILL	FILL DRY	FID=0.5 PID=0.3
2						BLACK	S-1B = 0.6' - FILL, BLACK MUD - COARSE SAND & FINE GRAVEL SOME ASPHALT FRAGS.	FILL		
2"	4 5 6 7	0.4 / 2.0	-0204 S-2 1430	FILL		↓	ASPHALT FRAGMENTS. POOR RECOVERY, FILL			FID=0.7 PID=0.2
4						↓	F. GRAVEL IN NOSE.			
2"	4 5 5 6	0.3 / 2.0	-0406 S-3 1450			LT. REDDISH BROWN	SAND & GRAVEL.		POSS. FILL	FID=105.2 PID=40.0
6						↓				
2"	11 11 18 23	0.2 / 2.0	-0608 S-4 0750			↓	POOR RECOVERY, FILL, SAND & GRAVEL (ROUNDED) TRACE SLAG.	FILL	FILL SLIGHTLY OXIDIZED LOOSING WATER	FID=0.5 PID=0.5
8										
2"	20 21 23 19	1.2 / 2.0	-0816 S-5 0845	GRAVEL SEE NOTES		LT. BROWN MARK REDDISH BROWN	SAND & GRAVEL. MOSTLY F-C WELL GRADED SAND AND F-C ROUNDED GRAVEL	SW GW	DARK STAINING @ 9.5-10'	FID=3.0 PID=1.2
10						GRAY LIGHT-				
2"	14 11 14 19	0.4 / 2.0	-1012 S-6 0835			GRAY	↓	↓		FID=8.2 PID=1.1
12										
2"	23 30 30 41	1.1 / 2.0	-1214 S-7 0856			LIGHT-GREENISH GRAY	SANDY, GRAVEL. MOSTLY SUBANGULAR GRAVEL (F-C), SOME F-C ANG. GRADED SAND. TRACE SILT.	GW	FID = 3.5 PPM OVER OTER SAMPLE.	FID=21.0 PID=2.0
14						GRAY				
2"	18 40 39 14	0.1? / 2.0	-1416 S-8 0915				POOR RECOVERY. GRAVEL (COARSE) CHIPS & FRAGMENTS FROM ROLLER-BIT. 1-1.5" ROUNDED LARGER GRAVEL		POOR RECOVERY COARSE CUTTINGS PUSHING A CORE	FID= PID=
16										

LOST ~ 50 GALLONS WASH WATER BETWEEN 12-16 FT.

0.0 FID / PID IN B.Z.

90°F BY 0900.

TYPE OF DRILLING RIG: DETRICH D-120 TRUCK MOUNTED RIG.
METHOD OF ADVANCING BORING: 5 IN. & 4 IN. D & IN CASING DRIVEN WITH 300 LB. & 600 LB. HAMMER
METHOD OF SOIL SAMPLING: 2 IN. & 3 IN. SPLIT BARREL DRIVEN W/ 140 LB. HAMMER W/ 30 IN. DROP.
METHOD OF ROCK CORING: NX DUAL-WALL CORE BARREL (C-1).
GROUNDWATER LEVELS: APPROX. 9 FT. BGS BASED ON WET RODS IN A.M. ON 6/27/01
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.
BORING NO.:
PAGE: 1 OF 6

TtNUS Form 0018

6/26/01 - S-4 TO ___.

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: N0400-0221
LOGGED BY: TRACY DORGAN
TRANSCRIBED BY:
DRILLED BY (Company/Driller): INUILD DRILLING
GRD. SURFACE ELEVATION:
ELEVATION FROM:
BORING NO.: MW07
START DATE: 12/21/00
COMPLETION: DATE: 12/21/00
MON. WELL NO.: MW07S
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MATL CHG/ WELL PROFL	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0						BRAUN	GRASS SURFACE			
	22 22	1.9 / 2.0	MW07-MW07 0002			BROWN OLIVE	LOAM. SILTY, SAND. F-C GRAVEL, SOME CLAY. S-1A = 0.4'	SM		
2	22 23		S-1 0915			TAN	S-1B = 1.0' - SILTY, SANDY, GRAVEL	SM	MOIST @ 1.5 DOWN	
	20 10	1.3 / 2.0	-0204			OLIVE	S-1C = F-C SAND	SW	FABRIC LINER @ 2'	
4	6 8		S-2 0925	SILT			S-2A = 0.8' = SIMILAR TO ABOVE. (SILT) S-2B = 0.5' - ORG. SILT. MOSTLY SILT, TRACE F-M SAND. ROOT FIBERS HIGHLIGHT. PIECE OF PLASTIC IN AREA	SW OL	WET SAMP. 0504 @ 0925.	FID = 1,824 PPM PID = 15.1 PPM
	5 5	1.1 / 2.0	-0400			BROWN	S-3A = 0.4' SIM. TO S-2B.			FID = 602 PPM
6	5 14		S-3 0940				S-3B = 0.7' - SAND. F-C SAND POORLY SORTED, COMPOSED DOWN-WARD SEQUENCE. TRACE F. GRAVEL	SP	SATURATED - SAMP. 0406	PID = 0.0 PPM
	13 12	1.0 / 2.0	-0600			GREY BROWN	SAND; GRAVEL. MOSTLY F-C ROUND GRAVEL; SOME F-C SAND.	GW	LAST SAMPLE 0600. SAMPLE SLIGHT OXIDATION ON EDGES	FID = 100.1 PPM
8	12 10		S-4 0946			REDDISH BROWN				PID = 0.0 PPM
	12 22	1.2 / 2.0	-0810						OXIDATION	FID = 0.0 PPM
10	22 15		S-5 1015							PID = 0.0 PPM
	13 10	1.1 / 2.0	-1012			ORANGE				FID = 0.0 PPM
12	23 17		S-6 1020							PID = 0.0 PPM
	20 16	1.1 / 2.0	-1214	SILT		BROWN ORANGE	S-7A = 0.2' - COARSE SAND. S-7B = 0.4' - SILT. RHYTHMICALLY BEDDED SILT, TRACE FINE SAND, TRACE ROOTS	SP ML		FID = 0.0
14	15 14		S-7 1040			BROWN	S-7C - SAND. MOSTLY F-C WELL GRADED	SW		PID = 0.0
	16 16	1.0 / 2.0	-1416			BROWN BLACK	BROWN, SAND. MOSTLY F-C SAND LITTLE ROUNDED COARSE GRAVEL	SP		FID = 0.0 PID = 5.2 PPM
16	17 17		S-8 1055			LIGHT BROWN	1 IN. THICK LAYER OF BLACK FINE SAND	SP PT	MID. SAMPLE, NO ODOR OR READINGS	

TYPE OF DRILLING RIG: TRUCK MOUNTED D-50
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DENISON WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS: APPROX 3.5' BGS
OTHER OBSERVATIONS:
BORING NO.:

Tetra Tech NUS, Inc.

TtNUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR RESTORATION PROJ.
PROJECT NO.: NO400-0221
LOGGED BY: TRACY DORSAM
TRANSCRIBED BY:
DRILLED BY (Company/Driller): LAUILD DRILLING / TONY MARTINELLI
GRD. SURFACE ELEVATION:
ELEVATION FROM:

BORING NO.: MW05
START DATE: 12-21-00
COMPLETION: DATE: 12-21-00
MON. WELL NO.: MW05
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MATL CHG / WELL PROFL	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16	12 12	1.7 /	-1618			GRAY	SAND & GRAVEL, SAND IS F-C WELL GRADED & GRAVEL IS	GW/	NO STRUCTURE NOTED, NO ODOR OR STAINING	FID=0.0
16	15 17	2.0	S-9 1120				F-C RANGED WELL GRADED.	SW		PID=1.5
	16 17	1.1 /	-1620							FID=0.0
20	16 16	2.0	S-10 1125							PID=0.6
							EOB @ 20' 3GS.			

TYPE OF DRILLING RIG: TRUCK MOUNTED D-50
METHOD OF ADVANCING BORING: 4 IN. ID DRIVE & WASH CASING
METHOD OF SOIL SAMPLING: 3 IN. SPLIT-BARREL DRIVEN WITH A 300 LB. HAMMER W/ 18 IN. FALL.
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:
BORING NO.:

Tetra Tech NUS, Inc.

PAGE: 2 OF 2

TtNUS Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thackeray
DRILLED BY (Company/Driller): EDI - A. Oblak
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW04(B)
START DATE: 8/16/04
COMPLETION: DATE:
MON. WELL NO.: MW04(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	Casing Blows Dia. (Type)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0.0						NR	Advance SW drill casing to 8.5 ft. Advance 5 7/8" roller bit to 7ft.		No chemical samples	
2.0						NR	coarse to fine sand and wood fragments noted in wash water return.			
						NR				
4.0						NR	Refer to boring log MW04(A) for soil descriptions at various depths.			
						NR				
6.0						NR				
						NR				
8.0						NR				
						NR	Advance SW casing to 14ft.			
10.0						NR	Advance 5 7/8" roller bit to 14ft. coarse to medium sand and			
						NR	wood fragments noted in water return.			
12.0						NR				
						NR	Quit for the day, 8/16/04. Casing at 14 ft.			
8/17/04	190					NR	Change out wash water and			
						NR	clean out mud tub.			
16.0						NR	Telescope AW drill casing to 24ft. Advance 4 3/4" roller bit to 24.3 ft.			

TYPE OF DRILLING RIG: Acker ADT truck rig
METHOD OF ADVANCING BORING: 6 3/4 inch (SW), 5 3/4 inch (RW), 4 3/4 inch (HW) and 3 3/4 inch (NW) drill casing. D&W
METHOD OF SOIL SAMPLING: 2 inch O.D. split barrel sampler.
METHOD OF ROCK CORING: AD wireline coring system w/ 6' core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS: "NR" Denotes not recorded

Tetra Tech NUS, Inc.

BORING NO.: MW04(B) PAGE: 1 OF 7

Ttnus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thielbar
DRILLED BY (Company/Driller): EDI - A. Obley
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW04(B)
START DATE: 8/1/01
COMPLETION: DATE:
MON. WELL NO.: MW04(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* - [FID, (PPM)]
16.0							Cobble / boulder notch from 24 to 29.3 ft. Coarse sand & fine ground noted in wash water returns.		No chemical samples	
18.6										
20.0										
22.0										
24.0										
26.0							Advance PW drill casing to 24 ft. Advance 4¾" roller bit to 29 ft. medium to coarse sand and fine gravel noted in wash water returns.			
28.0										
30.0							Advance PW drill casing to 34 ft. Advance 4¾" roller bit to 34 ft. Driller opts to telescope PW drill casing. Drive shoe on PW casing may be damaged.			
32.0										

TYPE OF DRILLING RIG: Acker AD II truck rig
METHOD OF ADVANCING BORING: 6inch (0-8'), 5inch (8-24'), 4¾inch (24-34') and 3inch (34-40') drill casing, DTH
METHOD OF SOIL SAMPLING: 2inch OD split barrel sampler
METHOD OF ROCK CORING: NQ wireline water w/5' core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW04(B)
PAGE: 2 OF 2

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblinsky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW04(B)
START DATE: 6/10/01
COMPLETION: DATE:
MON. WELL NO.: MW04(B)
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
30.0							Casing to medium sand with 7% wash water return.		No chemical samples	
34.0							Telescope HW drill casing to 40 ft.			
							Advance 3 7/8" roller bit to 40 ft. Wash clean two split spoons to obtain soil for chemical testing.			
36.0										
38.0										
40.0										
42.0										
	29	7"/19"	S-1 43'-43.6' CM-SO-MW04B-4344 1156	(44')	Medium dense	Brown	Poorly graded sand w/ gravel (SP); wet, coarse to fine sand.	SP	(4) VOAs & (2) 2 oz. jars collected Sample times:	Headspace: FID: 0.1 ppm PID: 0.0 ppm
44.0	7						Same as above to subangular cobble to fine gravel, trace silt, brown.			
	11						Traces of weathered bedrock with in bottom of sample.		11:54 AM 12:00 PM Duplicate	
46.0	30/1"			Bedrock			Advance HW drill casing to 44 ft. Casing refusal. Top of bedrock at 44 ft. Advance 3 7/8" button bit to 46 ft to create rock socket.			
48.0	(50)						Telescope HW casing to 46 ft. Spot casing and wash w/ clean water.			

TYPE OF DRILLING RIG: Acker AD II truck rig
METHOD OF ADVANCING BORING: 6 3/4 inch (SW); 5 3/4 inch (RW); 4 3/4 inch (HW) and 3 3/4 inch (NW) drill casing, DCW
METHOD OF SOIL SAMPLING: 2 inch split barrel
METHOD OF ROCK CORING: NQ diamond core with 5' core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW04 (B)
PAGE: 3 OF 7

Tinus Form 0018

US EPA ARCHIVE DOCUMENT

BORING LOG FOR: CENTREDALE MANOR - PHASE II
PROJECT NO.: 0400
LOGGED BY: E. Thibodeau
DRILLED BY (Company/Driller): EDI - A. Oblisky
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW04(B)
START DATE: 8.1.01
COMPLETION: DATE:
MON. WELL NO.: MW04(B)
CHECKED BY:

8/2/01

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
46.0		RQ	46'-47'		2 min.		Clean out mud tub. Install HQ wireline casing. Quit for the			
47.0							day. 8/2/01 Begin NQ rock core @ 46.0'.			
			47'-48'		2 min.		RQ = 46'-51'			
48.0						Green gray	Fresh, medium hard to soft, greenish gray, fine-grained SCHIST.	SCHIST		
			48'-49'		1.5 min.		Approx. 35-40° (moderately dipping) foliation. No discernible foliation from 46.5' to 48'. One natural			
49.0										
			49'-50'		2 min.		joint noted @ 48.1'. Joint is smooth, planar, and tight.			
50.0							Maybe a micro fracture, micro fracture noted @ 48.3'. RQD=95%.			
			50'-51'		1.5 min.		RQD = 95% (cumulative). A total of			
51.0							seven mechanical breaks noted. Distinct light green mineralization noted from 46.7'-47.7'			
		RQ	51'-52'		1.5 min.	Green gray	RQ: 51'-56' Fresh, soft to medium hard,	SCHIST		
52.0							greenish-gray, fine-grained			
			52'-53'		1.5 min.		SCHIST. Approx 45° (moderately dipping) foliation. No discernible			
53.0							foliation from 54.8'-56'. One			
			53'-54'		1.5 min.		natural joint noted @ 51.9'. Joint is rough, planar, and slightly			
54.0							discolored and open. RQD = 98%; (RQD = 95% cumulative).			

TYPE OF DRILLING RIG: Acker AD II truck rig
METHOD OF ADVANCING BORING: 6 inch (SW), 5 inch (RQ), 4 inch (HW), and 3 inch (NW) casing. DTW
METHOD OF SOIL SAMPLING: 2 inch split barrel
METHOD OF ROCK CORING: NQ wireline system w/ 5' core barrel
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: MW04(B)
PAGE: 4 OF 7

Tmus Form 0018

US EPA ARCHIVE DOCUMENT

APPENDIX B

DETAILS OF WELL INSTALLATIONS

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS, INC.

PROJECT NAME: Centredale Manor - Phase II — PROJECT NO: 0400-0222
PROJECT LOCATION: N. Providence, RI — WELL NO: MW02(M)
CLIENT: U.S EPA — BORING NO: MW02(M)
CONTRACTOR: EDI — DRILLER: A. Oblasky — BORING LOCATION: Approx. 24' west of MW02(S)
LOGGED BY: E. Thibodeau — DATE: 6/26 & 6/27/01
CHECKED BY: — DATE:
PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: 3'5"
ELEVATION TOP OF RISER PIPE: 3'2½"
GROUND ELEVATION: 0

padlock
vent hole

LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	2.9'
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	2.7'
TYPE OF SURFACE SEAL	Concrete
DIA. SURFACE SEAL BGS (In.)	18"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	1'
I.D. OF PROTECTIVE CASING (In.)	6"
TYPE OF PROTECTIVE CASING	Steel
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	2.1'
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	3'
RISER PIPE (In.) I.D.: 2" O.D.:	
TYPE OF RISER PIPE	Sched. 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Volclay grout
DEPTH TOP OF SEAL (Ft.)	20'
TYPE OF SEAL	Bentonite chips
DEPTH BOTTOM OF SEAL (Ft.)	23'
DEPTH TOP OF PERVIOUS SECTION (Ft.)	25'
DIAMETER OF BOREHOLE (In.)	4"
TYPE OF PERVIOUS SECTION	Sched. 40 PVC
TYPE OF OPENINGS	0.010" (10 slot)
PERVIOUS SECTION (In.) I.D.: 2" O.D.:	
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	#1 silica sand
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	30'
DEPTH BOTTOM OF FILTER PACK (Ft.)	31'

SAND DRAIN LAYER

Installed two stainless steel centralizers, one at the bottom of the well screen with the second one located 15 feet up on the riser.

NO SUMP, SLIP ON END CAP PLACED ON CUT END OF PVC.

END OF BORING (69.5')

Boring backfilled w/ bentonite chips from 69.5' to 31'
3K (E7)

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

US EPA ARCHIVE DOCUMENT

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS, INC.

PROJECT NAME: Centredale Manor - Phase II
PROJECT NO: 0700
PROJECT LOCATION: N. PROVIDENCE, RI
WELL NO: MW-20
CLIENT: EPA
BORING NO: MW20
CONTRACTOR: EDI
DRILLER:
BORING LOCATION: Cap area, Northeast portion.
LOGGED BY: M Hanley
DATE:
CHECKED BY:
DATE:
PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING
ELEVATION TOP OF RISER PIPE
GROUND ELEVATION 0'

LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.) 3½'
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.) 3'10"

TYPE OF SURFACE SEAL: CONCRETE
DIA. SURFACE SEAL BGS (In.): 10"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.): ~1'
I.D. OF PROTECTIVE CASING (In.): 6
TYPE OF PROTECTIVE CASING: STEEL PIPE
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.): 2'11"
DEPTH BOTTOM OF DRAIN LAYER (Ft.): ~3-5'
RISER PIPE (In.) I.D.: 2 in O.D.: 2 3/8
TYPE OF RISER PIPE: PVC
TYPE OF BACKFILL AROUND RISER PIPE: Bentonite slurry
DEPTH TOP OF SEAL (Ft.): 60'6"
TYPE OF SEAL: Bentonite
DEPTH BOTTOM OF SEAL (Ft.): 62'6"
DEPTH TOP OF PERVIOUS SECTION (Ft.): 65'3"
DIAMETER OF BOREHOLE (In.): 4 in - 66'+ 4.5"
TYPE OF PERVIOUS SECTION: PVC
TYPE OF OPENINGS: 0.010
PERVIOUS SECTION (In.) I.D.: 2 O.D.: 2 3/8
TYPE OF FILTER PACK AROUND PERVIOUS SECTION: mud sand
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.): mid 70'-3" 69'9"
DEPTH BOTTOM OF FILTER PACK (Ft.): mid 69'9" 70'3"

SAND DRAIN LAYER

STAINLESS-STEEL CENTRALIZER ON MID-SCREEN

10" Sump

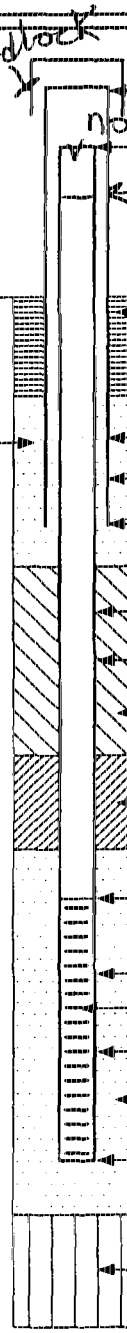
END OF BORING

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS, INC.

PROJECT NAME: CENTREDALE MANOR PHASE II
PROJECT NO: 0400-0222
PROJECT LOCATION: N. PROVIDENCE, RI
WELL NO: MW04S
CLIENT: U.S. EPA
BORING NO: MW04S
CONTRACTOR: EDI INC.
DRILLER: A. ORLICKY
BORING LOCATION: SOUTH END CAP AREA 1.25' NORTH OF P-15.
LOGGED BY: T. DORGAN
DATE: 6-15-01
CHECKED BY:
DATE:
PAGE: 1 OF 1



ELEVATION TOP OF PROTECTIVE CASING	3.6
ELEVATION TOP OF RISER PIPE	2'10½"
GROUND ELEVATION	0
LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	3.1'
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	2.55'
TYPE OF SURFACE SEAL	CONCRETE
DIA. SURFACE SEAL BGS (In.)	1.5 FT.
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	1.3 FT
I.D. OF PROTECTIVE CASING (In.)	6 IN.
TYPE OF PROTECTIVE CASING	STEEL PIPE
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	1.9 FT.
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	2.0 FT.
RISER PIPE (In.) I.D.: 2 O.D.: 2 3/8	
TYPE OF RISER PIPE	SCHEDULE 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	—
DEPTH TOP OF SEAL (Ft.)	2.0 FT.
TYPE OF SEAL (HYDRATED)	BENTONITE CHIPS
DEPTH BOTTOM OF SEAL (Ft.)	3.2'
DEPTH TOP OF PERVIOUS SECTION (Ft.)	4.0'
DIAMETER OF BOREHOLE (In.)	4.0"
TYPE OF PERVIOUS SECTION	SCHEDULE 40 PVC
TYPE OF OPENINGS	0.010" FACTORY SLOTTED
PERVIOUS SECTION (In.) I.D.: 2 O.D.: 2 3/8	
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	NO. 1 SILICA SAND
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	14.0'
DEPTH BOTTOM OF FILTER PACK (Ft.)	14.5'
TYPE OF BACKFILL BELOW FILTER PACK	BENTONITE CHIP
END OF BORING (Ft.)	15.0'

2 STAINLESS STEEL CENTRALIZERS ON WELL. 1ST @ BOTTOM & 2ND SPACED ON RISER JUST ABOVE SCREEN.

GENERAL NOTE:

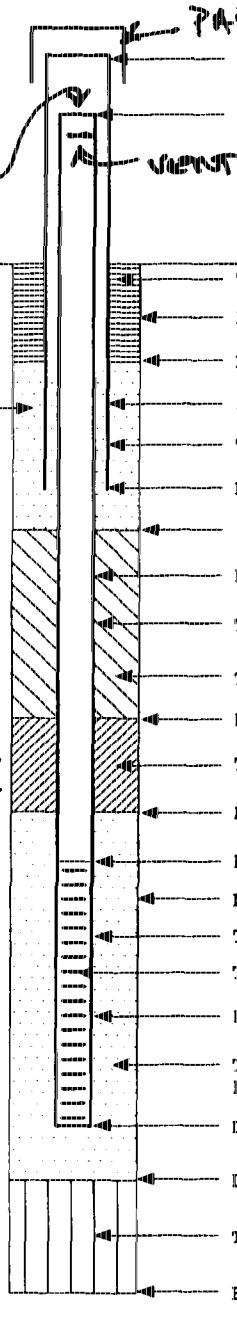
1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

US EPA ARCHIVE DOCUMENT

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS, INC.

PROJECT NAME: CENTRAL MANOR — PROJECT NO: 0400-0222
PROJECT LOCATION: N. PROVIDENCE, RI — WELL NO: MW04D
CLIENT: U.S. EPA - REGION I — BORING NO: MW04
CONTRACTOR: EDI — DRILLER: A. ORLICKY
LOGGED BY: T. DORGAN/E. THIBODEAU — DATE: 6-14 & 15-01
CHECKED BY: — DATE:
BORING LOCATION: SOUTH END CAP AREA 1. 20' NORTH OF P-15
PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: 2'9"
ELEVATION TOP OF RISER PIPE: 2'5½"
GROUND ELEVATION: 0



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	2.7'
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	2.5'
TYPE OF SURFACE SEAL	CONCRETE
DIA. SURFACE SEAL BGS (In.)	~6-8
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	2.3'
I.D. OF PROTECTIVE CASING (In.)	6
TYPE OF PROTECTIVE CASING	STEEL PIPE
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	2.3'
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	3.0'
RISER PIPE (In.) I.D.: 2 O.D.:	
TYPE OF RISER PIPE	SCHEDULE 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	VOLCLAY GROUT W/ BENT. CHIPS TO SURF
DEPTH TOP OF SEAL (Ft.)	37.5'
TYPE OF SEAL	BENTONITE CHIPS
DEPTH BOTTOM OF SEAL (Ft.)	40.5'
DEPTH TOP OF PERVIOUS SECTION (Ft.)	42.5'
DIAMETER OF BOREHOLE (In.)	5
TYPE OF PERVIOUS SECTION	SCHEDULE 40 PVC
TYPE OF OPENINGS	0.010" FACTORY SLOTTED
PERVIOUS SECTION (In.) I.D.: 2 O.D.:	
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	NO. 1 SILICA SAND
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	45.5'
DEPTH BOTTOM OF FILTER PACK (Ft.)	46.0'
TYPE OF BACKFILL BELOW FILTER PACK	BENTONITE CHIPS
END OF BORING (Ft.)	54.5'

2 STAINLESS STEEL CENTRALIZERS ON PVC. AT RISER JUST ABOVE WELL SCREEN. 2ND SET 10 FEET ABOVE.

TOP OF BEDROCK = 46.5'

BOTTOM OF PW CASING = 48'

NX COREHOLE FROM 49.5' TO 54.5'.

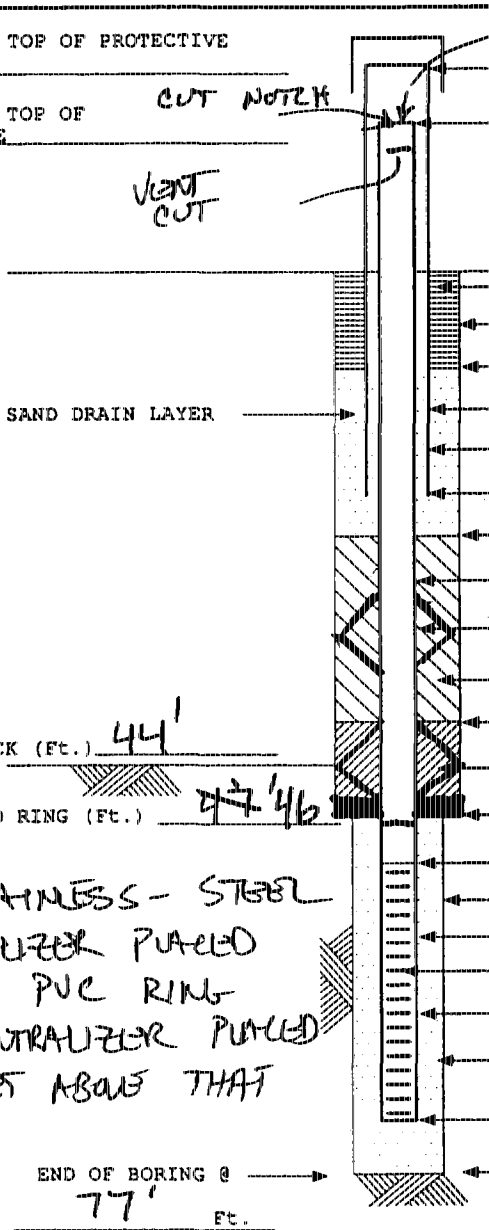
GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

US EPA ARCHIVE DOCUMENT

BEDROCK MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS, INC.

PROJECT NAME: CENTREDALE MANOR - PHASE II — PROJECT NO: 0400-022Z
PROJECT LOCATION: N. PROVIDENCE, RI — WELL NO: MW04B
CLIENT: U.S. EPA REGION I — BORING NO: MW04B
CONTRACTOR: EDI — DRILLER: A. ORUCKY — BORING LOCATION: SOUTH END CAP AREA 1.
LOGGED BY: T. DORGAN — DATE: 8/6/01
CHECKED BY: — DATE:
PAGE: 1 OF 1



ELEVATION TOP OF PROTECTIVE CASING: —
ELEVATION TOP OF RISER PIPE: —
GROUND ELEVATION: —
DEPTH TO BEDROCK (Ft.): 44'
DEPTH TO RING (Ft.): 47'46

LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.): —
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.): —
TYPE OF SURFACE SEAL: CONCRETE
DIA. SURFACE SEAL BGS (In.): 9
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.): 1.2'
I.D. OF PROTECTIVE CASING (In.): 6
TYPE OF PROTECTIVE CASING: —
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.): —
DEPTH BOTTOM OF DRAIN LAYER (Ft.): 4.8'
RISER PIPE (In.) I.D.: 2 O.D.: 2 3/8
TYPE OF RISER PIPE: SCHEDULE 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE: VOLCLAY GROUT (BENTONITE & WATER)
DEPTH TOP OF SEAL (Ft.): 43'
TYPE OF SEAL: BENTONITE CHIPS
DEPTH BOTTOM OF SEAL (Ft.): 47'46'
DEPTH TOP OF PERVIOUS SECTION (Ft.): —
DIAMETER OF BOREHOLE (In.): 3
TYPE OF PERVIOUS SECTION: —
TYPE OF OPENINGS: —
PERVIOUS SECTION (In.) I.D.: — O.D.: —
TYPE OF FILTER PACK AROUND PERVIOUS SECTION: —
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.): —
DEPTH BOTTOM OF FILTER PACK (Ft.): —

1 STAINLESS-STEEL CENTRALIZER PLACED ABOVE PVC RING
2ND CENTRALIZER PLACED 10 FEET ABOVE THAT

OPEN BEDROCK BOREHOLE, NO PVC WELL SCREEN OR FILTER PACK.

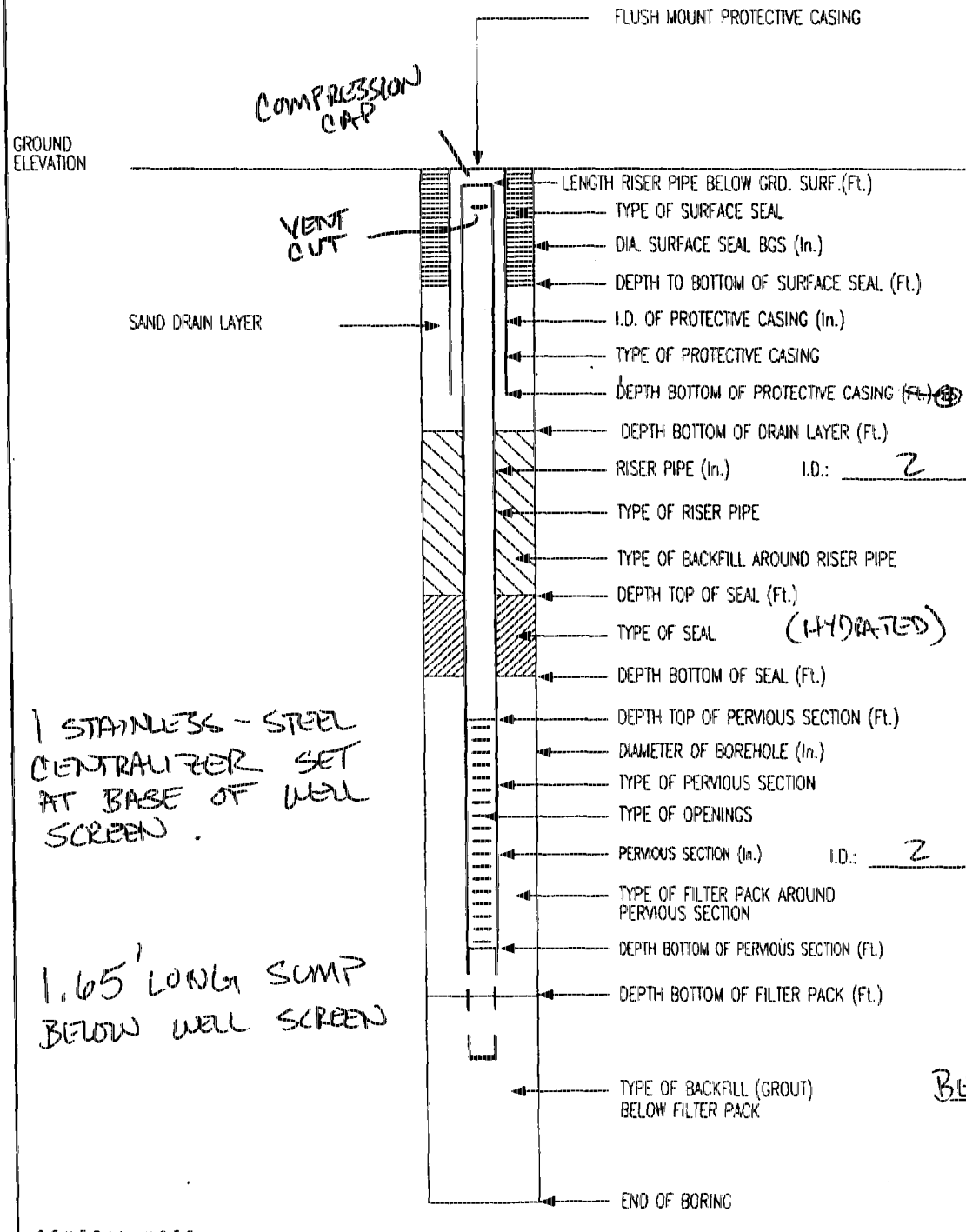
GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

US EPA ARCHIVE DOCUMENT

FLUSH MOUNT MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS INC.

PROJECT NAME: CENTREDALE MANOR PHASE II
PROJECT NO: 0400-0222
PROJECT LOCATION: NORTH PROVIDENCE, RI
WELL NO: MW05S
CLIENT: U.S. EPA REGION I
BORING NO: MW05S
CONTRACTOR: EDI
DRILLER: JAY GRASSER
LOGGED BY: TRACY DORGAN
DATE: 6/19/01
CHECKED BY:
DATE:
BORING LOCATION: MIDWAY BETWEEN P-2 & P-20.
PAGE: 1 OF 1



LENGTH RISER PIPE BELOW GRD. SURF.(Ft.)	0.25 FT.
TYPE OF SURFACE SEAL	CONCRETE
DIA. SURFACE SEAL BGS (In.)	12 IN.
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	8 IN.
I.D. OF PROTECTIVE CASING (In.)	6 IN.
TYPE OF PROTECTIVE CASING	STEEL TOP/ALUM. SKIRT
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	10 IN.
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	1.5 FT.
RISER PIPE (In.) I.D.: 2 O.D.: 2 3/8	
TYPE OF RISER PIPE	SCHEDULE 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	
DEPTH TOP OF SEAL (Ft.)	1.5 FT.
TYPE OF SEAL (HYDRATED)	BENTONITE CHIPS
DEPTH BOTTOM OF SEAL (Ft.)	2.0 FT.
DEPTH TOP OF PERVIOUS SECTION (Ft.)	3.1 FT.
DIAMETER OF BOREHOLE (In.)	6 IN.
TYPE OF PERVIOUS SECTION	SCHEDULE 40 PVC
TYPE OF OPENINGS	0.020 IN. FACTORY SLOT
PERVIOUS SECTION (In.) I.D.: 2 O.D.: 2 3/8	
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	NO. 0 SILICA SAND
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	8.0 FT.
DEPTH BOTTOM OF FILTER PACK (Ft.)	9.0 FT.
TYPE OF BACKFILL (GROUT) BELOW FILTER PACK	BENTONITE CHIPS
END OF BORING	12 FT.

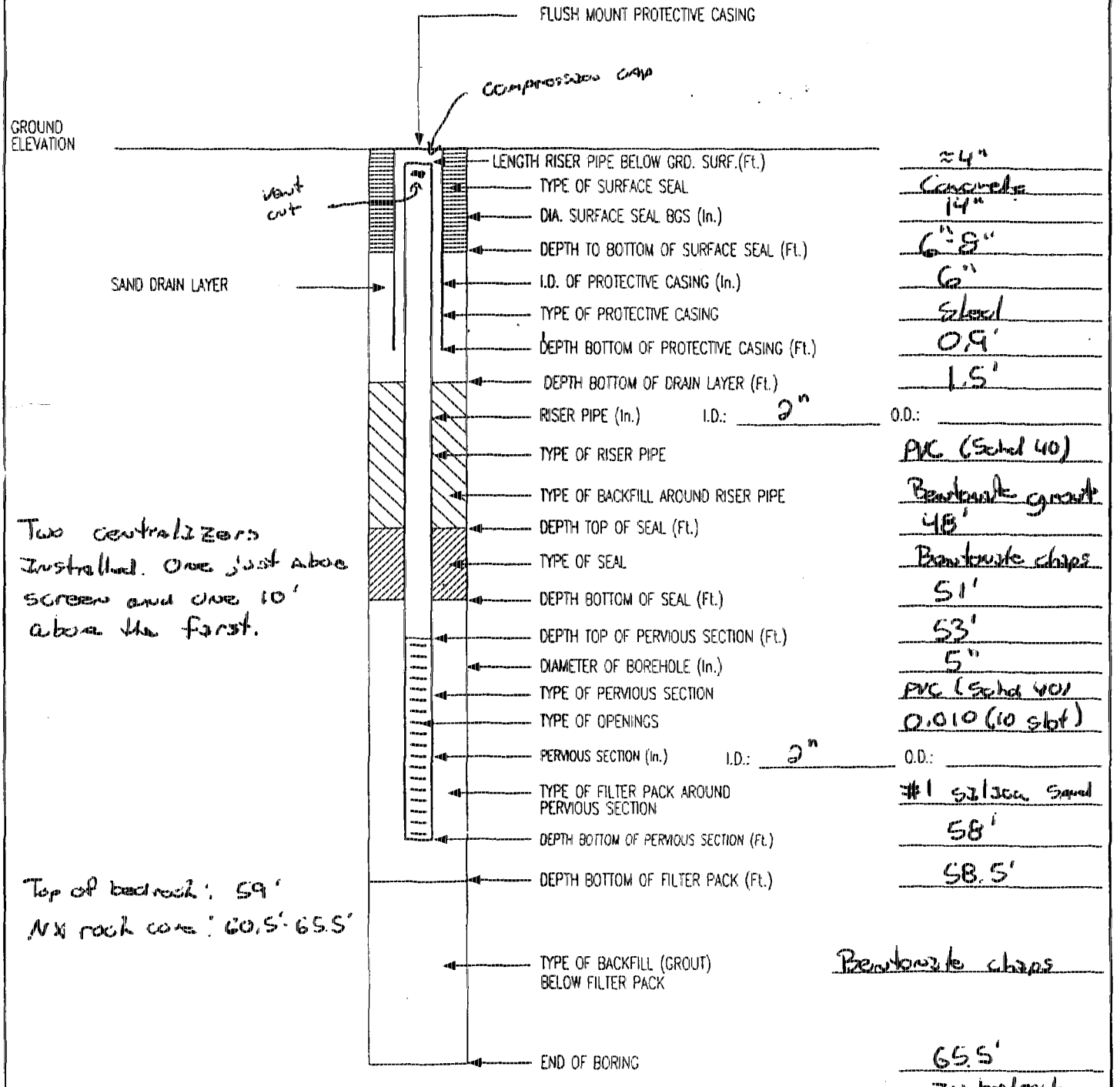
GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation indicates that Surveyed Ground Elevation is NOT Available.

TtNUS Form 0058

FLUSH MOUNT MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS INC.

PROJECT NAME: Centredale Manor - Phase II
PROJECT NO: 0400-0223
PROJECT LOCATION: N Providence, RI
WELL NO: MW07 (D)
CLIENT: U.S. EPA
BORING NO: MW07 (D)
CONTRACTOR: EDI
DRILLER: A. Ob Bailey
BORING LOCATION: Approx. 15' south of MW07 (S)
LOGGED BY: E. Thibodeau
DATE: 6/21/01
CHECKED BY:
DATE: 6/21/01
PAGE: 1 OF 1



Two centralizers installed. One just above screen and one 10' above the first.

Top of bedrock: 59'
NX rock core: 60.5'-65.5'

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation indicates that Surveyed Ground Elevation is NOT Available.

TtNUS Form 0058

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

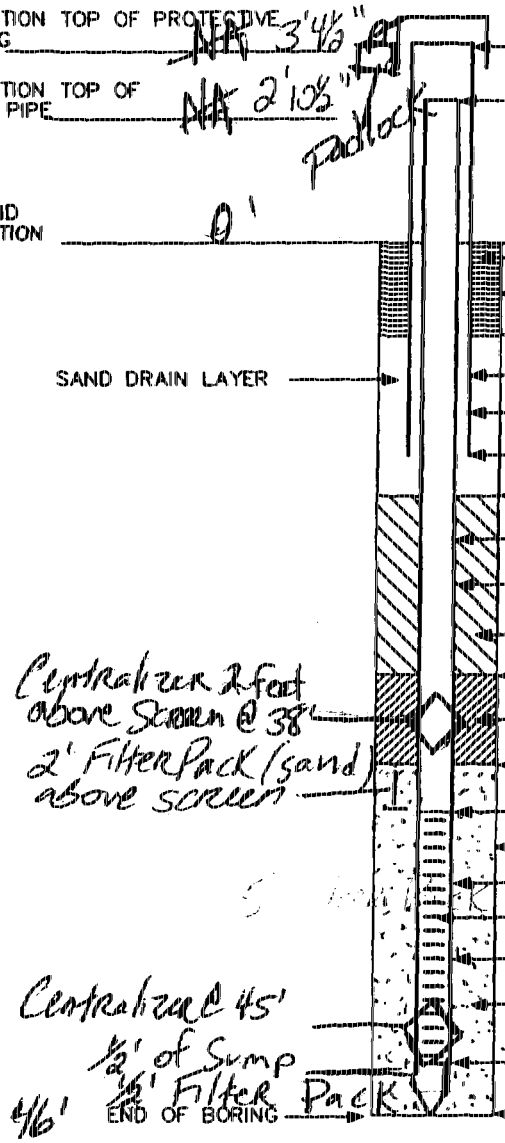
OVERBURDEN MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS, INC.

PROJECT NAME: Centredale Manor
PROJECT LOCATION: N. Providence, RI
CLIENT: U.S. EPA
CONTRACTOR: EDI, Inc.
LOGGED BY: C. Rousseau
CHECKED BY:

PROJECT NO:
WELL NO: MW-102(pr)(D)
BORING NO: MW-102(pr)(D)
BORING LOCATION: Rear of Cumberland Farms
DRILLER: EDI
DATE: 7/12/01
DATE:

PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: NA 3'4½"
ELEVATION TOP OF RISER PIPE: NA 2'10½"
padlock
GROUND ELEVATION: 0'



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	3' 5"
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	2' 8"
TYPE OF SURFACE SEAL	Concrete/Cement
DIA. SURFACE SEAL BGS (In.)	10"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	2'
I.D. OF PROTECTIVE CASING (In.)	12"
TYPE OF PROTECTIVE CASING	Steel Stand Pipe
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	1'4"
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	3'
RISER PIPE (In.) I.D.:	O.D.: 2"
TYPE OF RISER PIPE	PVC
TYPE OF BACKFILL AROUND RISER PIPE	Grout-Bentonite
DEPTH TOP OF SEAL (Ft.)	34'
TYPE OF SEAL	Bentonite Chips
DEPTH BOTTOM OF SEAL (Ft.)	38'
DEPTH TOP OF PERVIOUS SECTION (Ft.)	40'
DIAMETER OF BOREHOLE (In.)	4"
TYPE OF PERVIOUS SECTION	Filter Pack (sand)
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.:	O.D.: 2"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Filter Pack (sand)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	45'
DEPTH BOTTOM OF FILTER PACK (Ft.)	46'

- 2nd Centralizer set 2' above the screen because concerned with being able to measure past the centralizer w/ tape.
- Stand Pipe Length 59"
- Cover and padlocked

GENERAL NOTE

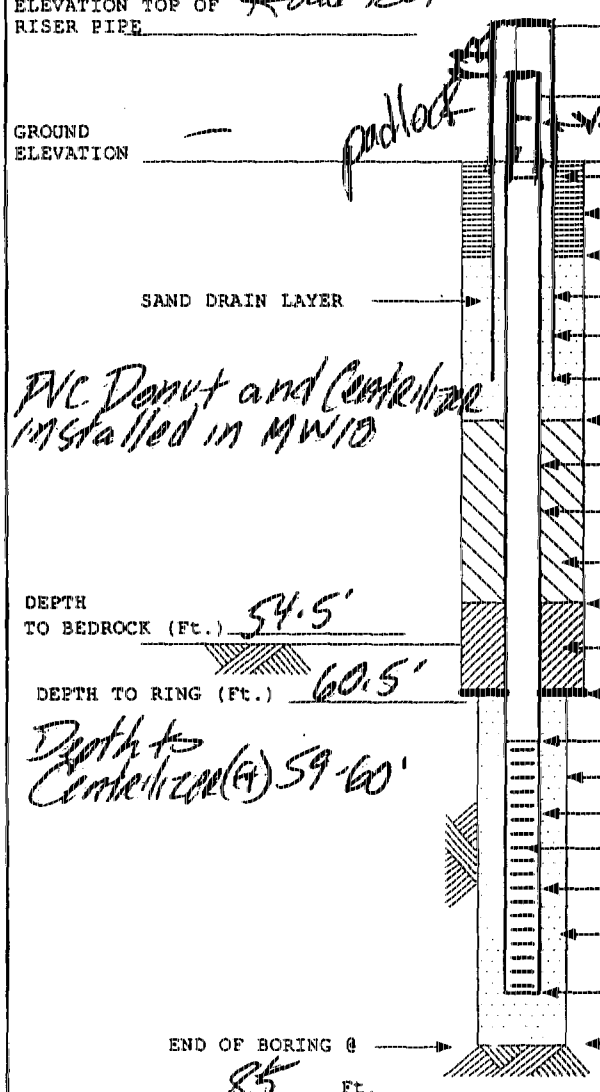
1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

- V-notch and vent slit on PVC riser
- Gripper cap installed

BEDROCK MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS, INC.

PROJECT NAME: Centredale Manor Phase II
PROJECT NO: 2400-022
PROJECT LOCATION: N. Providence, RI
WELL NO: MW10(B)
CLIENT: U.S. EPA
BORING NO: MW10(B)
CONTRACTOR: EDI, Inc.
DRILLER: EDI
BORING LOCATION: Rear of Cumberland Farms
LOGGED BY: C. Rousseau
DATE: 7/9/01 - 7/10/01
CHECKED BY:
DATE:
PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: Not Elevated
ELEVATION TOP OF RISER PIPE: Road Box
GROUND ELEVATION: —



FLUSH MOUNT PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	2'11"
LENGTH OF RISER PIPE ABOVE BELOW GROUND SURFACE (Ft.)	2'10"
TYPE OF SURFACE SEAL	Cement/Concrete
DIA. SURFACE SEAL BGS (In.)	12" to 6"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	2'
I.D. OF PROTECTIVE CASING (In.)	10" 6"
TYPE OF PROTECTIVE CASING	Road Box
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	2'
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	34'
RISER PIPE (In.) I.D.: 2" O.D.:	2"
TYPE OF RISER PIPE	PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite Slurry
DEPTH TOP OF SEAL (Ft.)	53.0'
TYPE OF SEAL	Bentonite Chips
DEPTH BOTTOM OF SEAL (Ft.)	60.5'
DEPTH TOP OF PERVIOUS SECTION (Ft.)	NA
DIAMETER OF BOREHOLE (In.)	3"
TYPE OF PERVIOUS SECTION	NA
TYPE OF OPENINGS	NA
PERVIOUS SECTION (In.) I.D.: NA O.D.:	NA
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	NA
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	NA
DEPTH BOTTOM OF FILTER PACK (Ft.)	NA

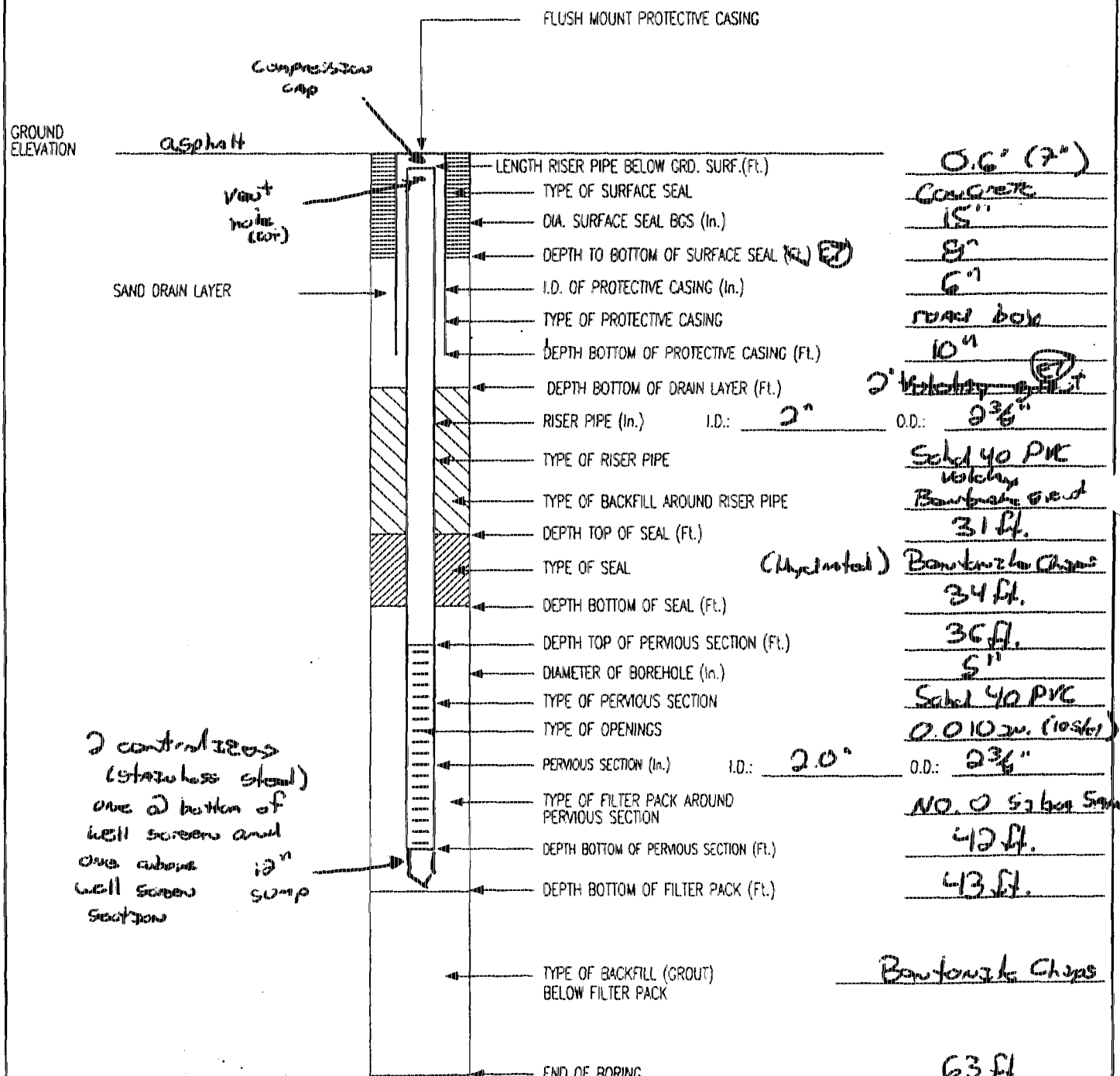
- (6) 10 ft sections of 2" PVC installed
- Bentonite Chips allowed to hydrate for more than an hour
- Stand pipe length 59" covered and padlocked
- V-notch and vent slot on PVC riser
- Gripper Cap installed

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

FLUSH MOUNT MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS INC.

PROJECT NAME: Cranston Manor - Phase II
PROJECT NO: 0400 - 0220
PROJECT LOCATION: N. Providence, RI
WELL NO: MW11(m)
CLIENT: U.S. EPA Region I
BORING NO: B11(m)
CONTRACTOR: EDI
DRILLER: A. Oblasky
BORING LOCATION: End of Amber Street
LOGGED BY: E. Thibodeau
DATE: 7/17/01
CHECKED BY:
DATE:
PAGE: 1 OF 1



LENGTH RISER PIPE BELOW GRD. SURF.(Ft.)	0.6' (7")
TYPE OF SURFACE SEAL	Concrete
DIA. SURFACE SEAL BGS (In.)	15"
DEPTH TO BOTTOM OF SURFACE SEAL (BGL)	8"
I.D. OF PROTECTIVE CASING (In.)	6"
TYPE OF PROTECTIVE CASING	road box
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	10"
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	2' Volclay grout
RISER PIPE (In.) I.D.: 2" O.D.: 2 3/8"	
TYPE OF RISER PIPE	Sch 40 PVC flush
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite grout
DEPTH TOP OF SEAL (Ft.)	31 ft.
TYPE OF SEAL	(Hydrated) Bentonite Chips
DEPTH BOTTOM OF SEAL (Ft.)	34 ft.
DEPTH TOP OF PERVIOUS SECTION (Ft.)	36 ft.
DIAMETER OF BOREHOLE (In.)	8"
TYPE OF PERVIOUS SECTION	Sch 40 PVC
TYPE OF OPENINGS	0.010 in. (slot)
PERVIOUS SECTION (In.) I.D.: 2.0" O.D.: 2 3/8"	
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	NO. 0 Silica Sand
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	43 ft.
DEPTH BOTTOM OF FILTER PACK (Ft.)	43 ft.
TYPE OF BACKFILL (GROUT) BELOW FILTER PACK	Bentonite Chips
END OF BORING	63 ft.

boring abandoned in bedrock at 63 ft.

GENERAL NOTE:

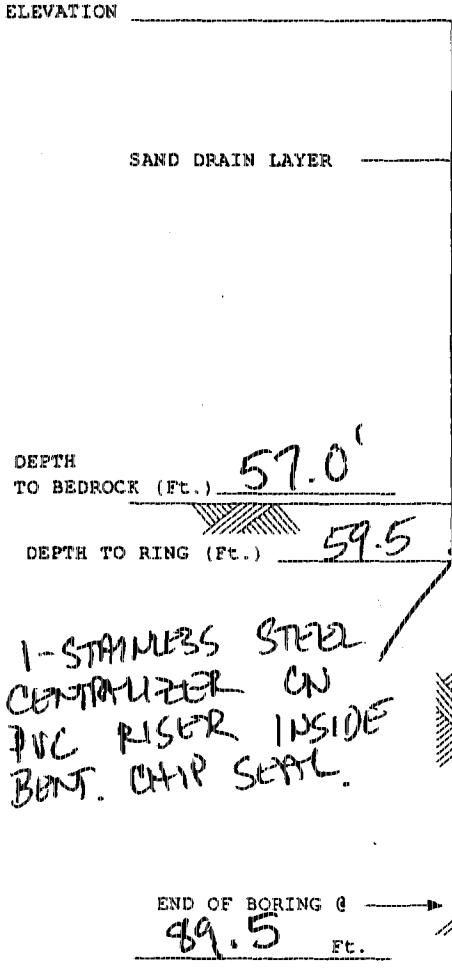
1. Entry of 0.00 for Ground Elevation Indicates that Surveyed Ground Elevation is NOT Available.

TtNUS Form 0058

BEDROCK MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS, INC.

PROJECT NAME: CENTREDALE MANOR - PHASE II
PROJECT NO: 0400-022
PROJECT LOCATION: N. PROVIDENCE/JOHNSTON, R.I.
WELL NO: MW11B
CLIENT: U.S. EPA - REGION I
BORING NO: MW11B
CONTRACTOR: EDI
DRILLER: A. ORLICKY
BORING LOCATION: IN ROAD AT END OF AMBER ST.
LOGGED BY: TRACY DORGAN
DATE: 7/23/01
CHECKED BY:
DATE:
PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING
ELEVATION TOP OF RISER PIPE
GROUND ELEVATION



FLUSH MOUNT PROTECTIVE CASING GROUND SURFACE (Ft.)

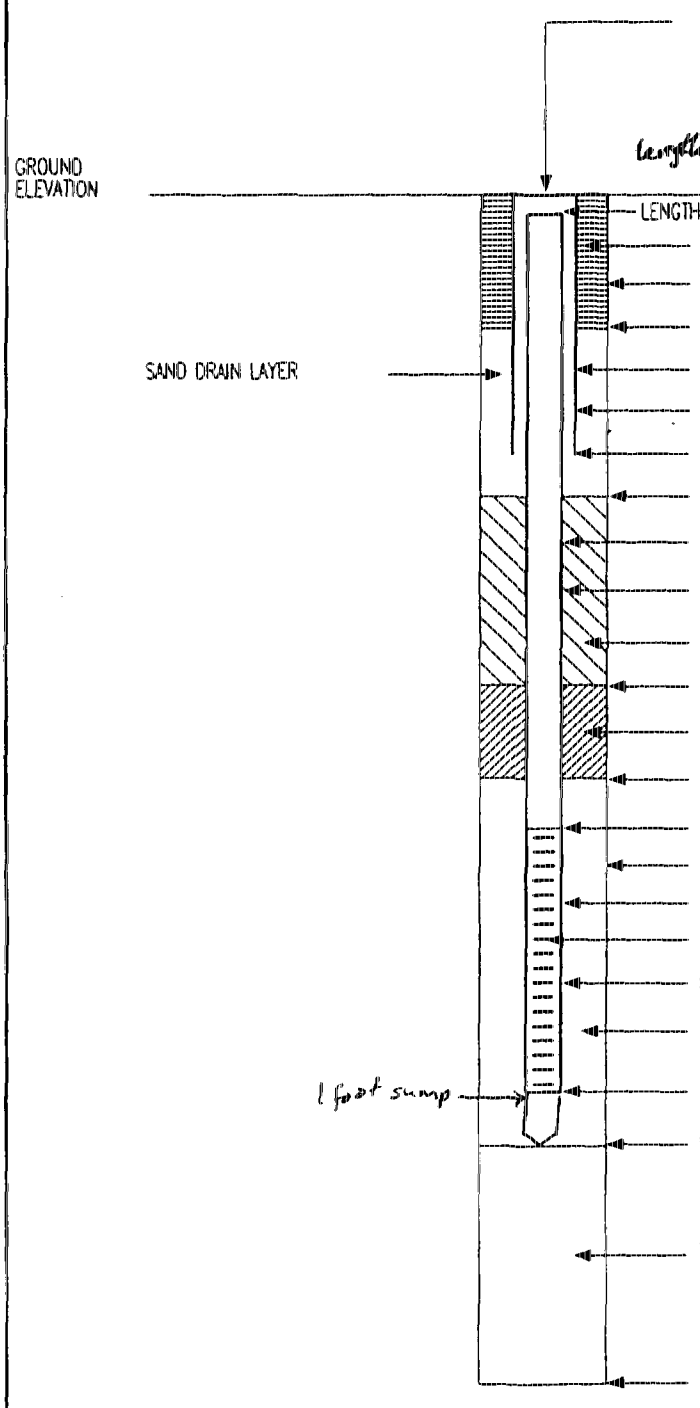
LENGTH OF RISER PIPE BELOW GROUND SURFACE (Ft.)	2"
TYPE OF SURFACE SEAL	CONCRETE
DIA. SURFACE SEAL BGS (In.)	10-12 IN.
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	4 IN.
I.D. OF PROTECTIVE CASING (In.)	6 IN.
TYPE OF PROTECTIVE CASING	ALUM. SKIRT/STEEL LID
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	10 IN.
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	1.0
RISER PIPE (In.) I.D.: 2 O.D.: 2 3/8	
TYPE OF RISER PIPE	SCHEDULE 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	BENTONITE/WATER SLURRY
DEPTH TOP OF SEAL (Ft.)	54.0
TYPE OF SEAL	BENTONITE CHIPS
DEPTH BOTTOM OF SEAL (Ft.)	59.5
DEPTH TOP OF PERVIOUS SECTION (Ft.)	
DIAMETER OF BOREHOLE (In.)	3
TYPE OF PERVIOUS SECTION	
TYPE OF OPENINGS	
PERVIOUS SECTION (In.) I.D.: O.D.:	
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	
DEPTH BOTTOM OF FILTER PACK (Ft.)	

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

FLUSH MOUNT MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS INC.

PROJECT NAME: Centredale Manor Phase II — PROJECT NO: 0400-0222
PROJECT LOCATION: N. Providence, RI — WELL NO: MW-115
CLIENT: EPA — BORING NO:
CONTRACTOR: EDI — DRILLER: — BORING LOCATION:
LOGGED BY: J. Lambert — DATE: 8/15/01
CHECKED BY: — DATE: — PAGE: 1 OF 1



LENGTH RISER PIPE above GRD. SURF.(Ft.)	~~length of protective casing ft above ground surface ft~~ N/A ~~3'~~ 3"
TYPE OF SURFACE SEAL	cement
DIA. SURFACE SEAL BGS (In.)	10"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	4"
I.D. OF PROTECTIVE CASING (In.)	6"
TYPE OF PROTECTIVE CASING	~~PVC~~ steel
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	~~12"~~ 0.9'
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	3' 2"
RISER PIPE (In.) I.D.: 2	O.D.: 2 3/8
TYPE OF RISER PIPE	PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite slurry
DEPTH TOP OF SEAL (Ft.)	15' 6"
TYPE OF SEAL	Bentonite chips
DEPTH BOTTOM OF SEAL (Ft.)	17' 10"
DEPTH TOP OF PERVIOUS SECTION (Ft.)	~~17' 10"~~ 20'
DIAMETER OF BOREHOLE (In.)	4"
TYPE OF PERVIOUS SECTION	PVC
TYPE OF OPENINGS	0.90
PERVIOUS SECTION (In.) I.D.: 2	O.D.: 2 3/8
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	#1 sand
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	25'
DEPTH BOTTOM OF FILTER PACK (Ft.)	26'
TYPE OF BACKFILL (GROUT) BELOW FILTER PACK	N/A
END OF BORING	26'

GENERAL NOTE:

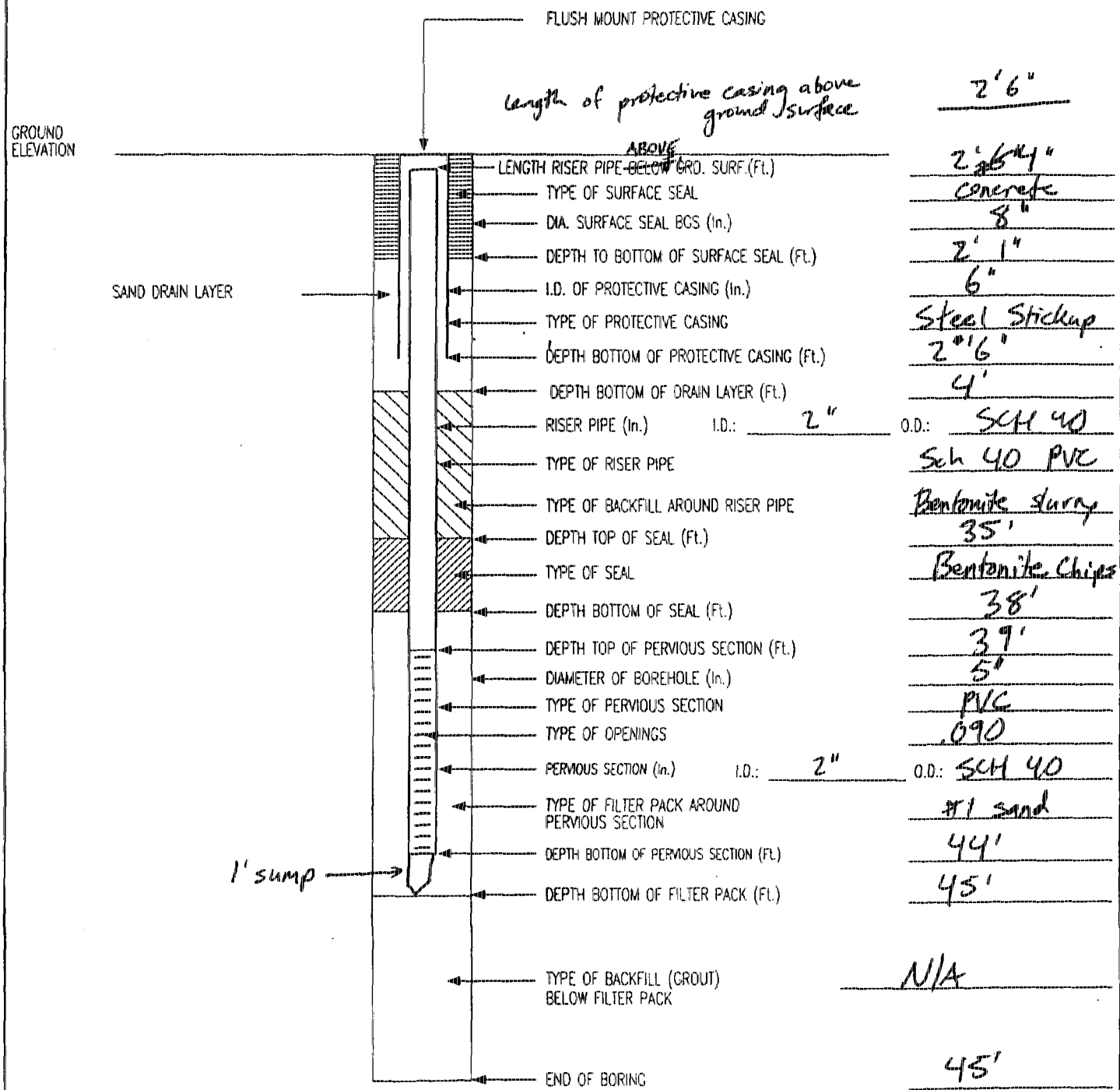
1. Entry of 0.00 for Ground Elevation Indicates that Surveyed Ground Elevation is NOT Available.

TtNUS Form 0058

US EPA ARCHIVE DOCUMENT

FLUSH MOUNT MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS INC.

PROJECT NAME:	Centredale Manor - Phase II	PROJECT NO:	8400-0222
PROJECT LOCATION:	N. Providence, RI	WELL NO:	MW-12D
CLIENT:	US EPA	BORING NO:	MW-12D
CONTRACTOR:	EDI	DRILLER:	Jay Grosser
LOGGED BY:	J. Lambert	DATE:	8/14/01
CHECKED BY:		DATE:	
		BORING LOCATION:	
		PAGE:	1 OF 1



length of protective casing above ground surface	2'6"
LENGTH RISER PIPE BELOW GRD. SURF.(Ft.)	2'6¼"
TYPE OF SURFACE SEAL	concrete
DIA. SURFACE SEAL BGS (In.)	8"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	2'1"
I.D. OF PROTECTIVE CASING (In.)	6"
TYPE OF PROTECTIVE CASING	Steel Stickup
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	2'6"
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	4'
RISER PIPE (In.) I.D.: 2" O.D.:	SCH 40
TYPE OF RISER PIPE	Sch 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite slurry
DEPTH TOP OF SEAL (Ft.)	35'
TYPE OF SEAL	Bentonite Chips
DEPTH BOTTOM OF SEAL (Ft.)	38'
DEPTH TOP OF PERVIOUS SECTION (Ft.)	39'
DIAMETER OF BOREHOLE (In.)	5"
TYPE OF PERVIOUS SECTION	PVC
TYPE OF OPENINGS	.090
PERVIOUS SECTION (In.) I.D.: 2" O.D.:	SCH 40
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	#1 sand
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	44'
DEPTH BOTTOM OF FILTER PACK (Ft.)	45'
TYPE OF BACKFILL (GROUT) BELOW FILTER PACK	N/A
END OF BORING	45'

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation Indicates that Surveyed Ground Elevation is NOT Available.

TtNUS Form 0058

BEDROCK MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS, INC.

PROJECT NAME: Centredale Manor - Phase II — PROJECT NO: 0400

PROJECT LOCATION: N. Providence, RI — WELL NO: MW12(B)

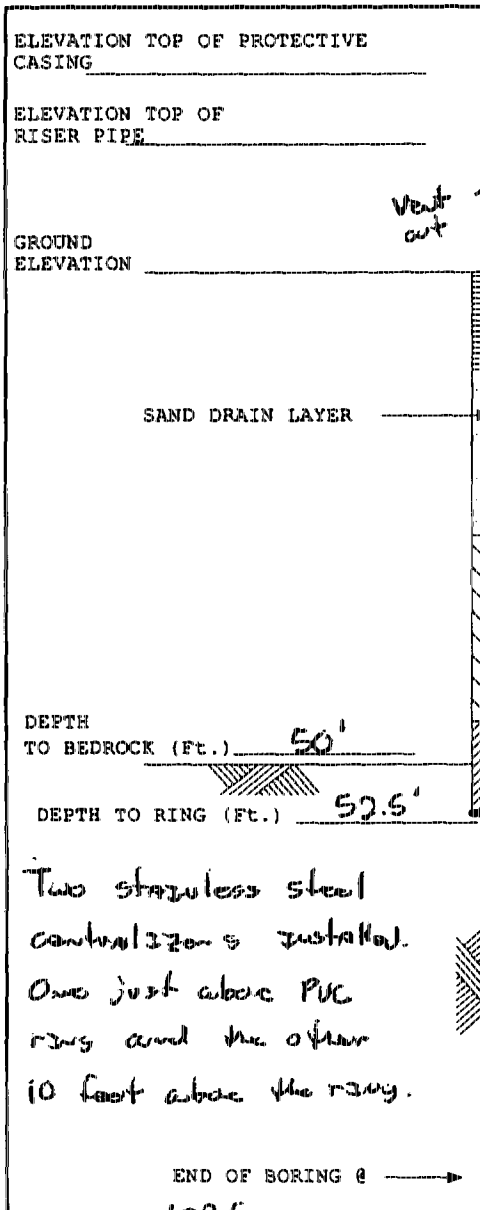
CLIENT: US EPA Region I — BORING NO: MW12(B)

CONTRACTOR: EDI — DRILLER: A. Oblasky — BORING LOCATION: Along establ. easement off side

LOGGED BY: E. Thibodeau — DATE: 8/1/01

CHECKED BY: — DATE:

PAGE: 1 OF 1



ELEVATION TOP OF PROTECTIVE CASING: ____

ELEVATION TOP OF RISER PIPE: ____

LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.): 2.5'

LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.): 2.3'

TYPE OF SURFACE SEAL: Concrete

DIA. SURFACE SEAL BGS (In.): 18"

DEPTH TO BOTTOM OF SURFACE SEAL (Ft.): 1.5'

I.D. OF PROTECTIVE CASING (In.): 6"

TYPE OF PROTECTIVE CASING: Steel

DEPTH BOTTOM OF PROTECTIVE CASING (Ft.): 2.5'

DEPTH BOTTOM OF DRAIN LAYER (Ft.): 5'

RISER PIPE (In.) I.D.: 2" O.D.: ____

TYPE OF RISER PIPE: Sch. 40 PVC

TYPE OF BACKFILL AROUND RISER PIPE: Volclay Grout

DEPTH TOP OF SEAL (Ft.): 48'

TYPE OF SEAL: Bentonite Chips

DEPTH BOTTOM OF SEAL (Ft.): 52.5'

DEPTH TOP OF PERVIOUS SECTION (Ft.): No Screen used

DIAMETER OF BOREHOLE (In.): ≈ 2.8"

TYPE OF PERVIOUS SECTION: N/A

TYPE OF OPENINGS: N/A

PERVIOUS SECTION (In.) I.D.: N/A O.D.: N/A

TYPE OF FILTER PACK AROUND PERVIOUS SECTION: No filter pack

DEPTH BOTTOM OF PERVIOUS SECTION (Ft.): N/A

DEPTH BOTTOM OF FILTER PACK (Ft.): No filter pack

Two stainless steel centralizers installed. One just above PVC rang and the other 10 feet above the rang.

Top of Bedrock: 50 ft.

Bedrock cored: 52.5 - 102.5 ft.

Packer testing: 55.5' - 99.5'

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

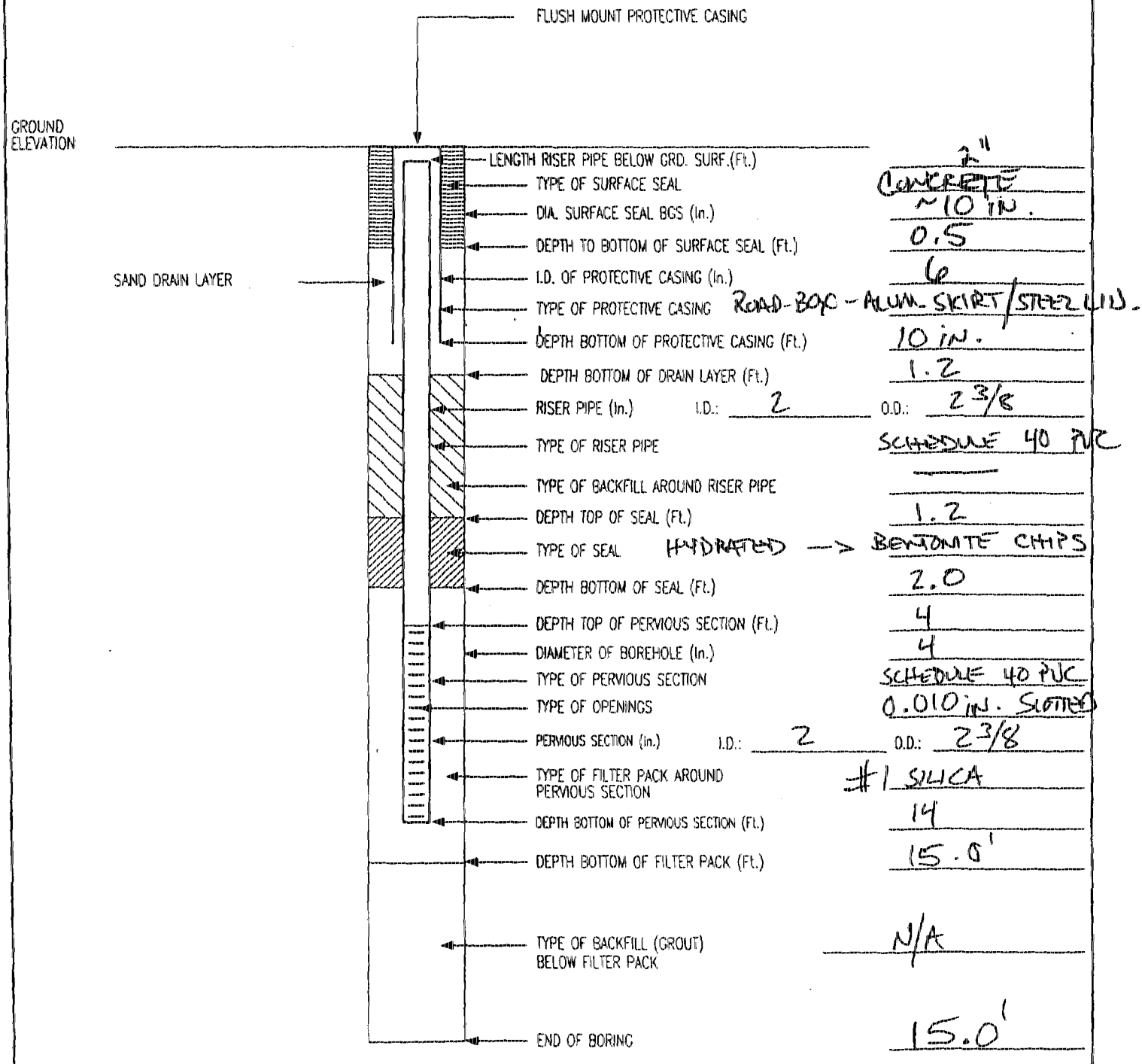
Note: Sounded completed well w/ weighted tape. Total depth ~ 101.0'. Bottom of hole felt soft, there may be ≈ 1.5' of rock flour cuttings in bottom of hole.

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

FLUSH MOUNT MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS INC.

PROJECT NAME: CENTREDALE MANOR PHASE II — PROJECT NO: 0400-0222
PROJECT LOCATION: N. PROVIDENCE, RI — WELL NO: MW13S
JENT: U.S. EPA REGION I — BORING NO: MW13S
CONTRACTOR: EDI — DRILLER: DAVE ERICSON — BORING LOCATION: END OF REDFERN ST.
LOGGED BY: TRACY DORGAN — DATE: 7/9/01
CHECKED BY: — DATE:
PAGE: 1 OF 1



LENGTH RISER PIPE BELOW GRD. SURF.(Ft.)	2"
TYPE OF SURFACE SEAL	CONCRETE
DIA. SURFACE SEAL BGS (In.)	~10 IN.
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	0.5
I.D. OF PROTECTIVE CASING (In.)	6
TYPE OF PROTECTIVE CASING	ROAD-BOX - ALUM. SKIRT/STEEL LID.
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	10 IN.
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	1.2
RISER PIPE (In.) I.D.: 2 O.D.: 2 3/8	
TYPE OF RISER PIPE	SCHEDULE 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	
DEPTH TOP OF SEAL (Ft.)	1.2
TYPE OF SEAL	HYDRATED -> BENTONITE CHIPS
DEPTH BOTTOM OF SEAL (Ft.)	2.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	4
DIAMETER OF BOREHOLE (In.)	4
TYPE OF PERVIOUS SECTION	SCHEDULE 40 PVC
TYPE OF OPENINGS	0.010 IN. SLOTTED
PERVIOUS SECTION (In.) I.D.: 2 O.D.: 2 3/8	
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	#1 SILICA
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	14
DEPTH BOTTOM OF FILTER PACK (Ft.)	15.0'
TYPE OF BACKFILL (GROUT) BELOW FILTER PACK	N/A
END OF BORING	15.0'

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation Indicates that Surveyed Ground Elevation is NOT Available.

TtNUS Form 0058

FLUSH MOUNT MONITORING WELL CONSTRUCTION LOG

TETRA TECH NUS INC.

PROJECT NAME: Centredale Manor Phase II

PROJECT NO: 0900

PROJECT LOCATION: East Providence R.I.

WELL NO: MW-13AT D-GAP

CLIENT: EPA

BORING NO: MW-13AT D-GAP

CONTRACTOR: EDI

DRILLER: Jay

BORING LOCATION: End of Redfern St.

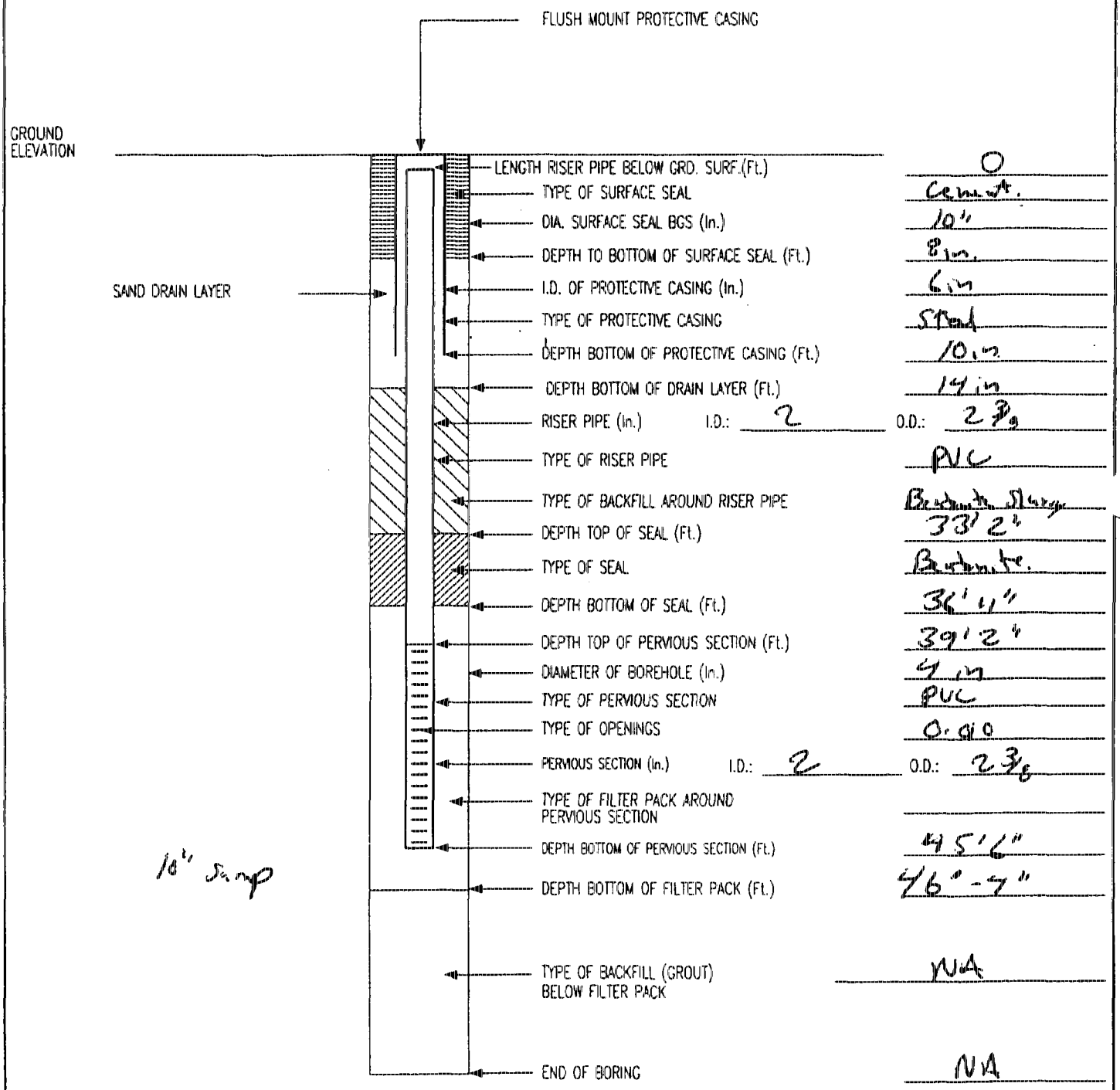
LOGGED BY: M. Henley

DATE: 7-6-01

CHECKED BY:

DATE:

PAGE: 1 OF 1



LENGTH RISER PIPE BELOW GRD. SURF.(Ft.)	0
TYPE OF SURFACE SEAL	Cement
DIA. SURFACE SEAL BGS (In.)	10"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	8 in.
I.D. OF PROTECTIVE CASING (In.)	6 in
TYPE OF PROTECTIVE CASING	Steel
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	10 in
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	14 in
RISER PIPE (In.) I.D.: 2 O.D.: 2 3/8	
TYPE OF RISER PIPE	PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite Slurry
DEPTH TOP OF SEAL (Ft.)	33' 2"
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	36' 11"
DEPTH TOP OF PERVIOUS SECTION (Ft.)	39' 2"
DIAMETER OF BOREHOLE (In.)	4 in
TYPE OF PERVIOUS SECTION	PVC
TYPE OF OPENINGS	0.010
PERVIOUS SECTION (In.) I.D.: 2 O.D.: 2 3/8	
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	45' 6"
DEPTH BOTTOM OF FILTER PACK (Ft.)	46' - 7"
TYPE OF BACKFILL (GROUT) BELOW FILTER PACK	NA
END OF BORING	NA

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation Indicates that Surveyed Ground Elevation is NOT Available.

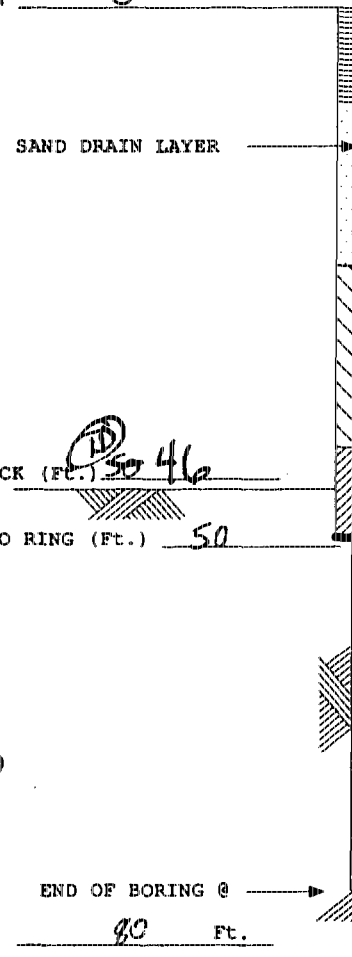
TtNUS Form 0058

US EPA ARCHIVE DOCUMENT

BEDROCK MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS, INC.

PROJECT NAME: Centredale Manor Phase II
PROJECT NO: 9402-0222
PROJECT LOCATION: N. Providence, RI
WELL NO: MW13B
CLIENT: US EPA
BORING NO: MW13
CONTRACTOR: EDI, Inc.
DRILLER: EDI
BORING LOCATION: Redfern St.
LOGGED BY: C. Rousseau
DATE: 3 July 2001
CHECKED BY:
DATE:
PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: ground level
ELEVATION TOP OF RISER PIPE: 2" bgs
GROUND ELEVATION: 0



- FLUSH MOUNT PROTECTIVE CASING TO GROUND SURFACE (Ft.): 10"
- LENGTH OF RISER PIPE BELOW GROUND SURFACE (Ft.): 2"
- TYPE OF SURFACE SEAL: Concrete Cement
- DIA. SURFACE SEAL BGS (In.): 10"
- DEPTH TO BOTTOM OF SURFACE SEAL (Ft.): 4"
- I.D. OF PROTECTIVE CASING (In.): 6"
- TYPE OF PROTECTIVE CASING: Plastic Roadbox/Steel Cover
- DEPTH BOTTOM OF PROTECTIVE CASING (Ft.): 10"
- DEPTH BOTTOM OF DRAIN LAYER (Ft.): 12"
- RISER PIPE (In.) I.D.: ; O.D.: 2"
- TYPE OF RISER PIPE: 2" PVC
- TYPE OF BACKFILL AROUND RISER PIPE: Sand
- DEPTH TOP OF SEAL (Ft.): 16"
- TYPE OF SEAL: Bentonite
- DEPTH BOTTOM OF SEAL (Ft.): 50'
- DEPTH TOP OF PERVIOUS SECTION (Ft.): NA
- DIAMETER OF BOREHOLE (In.): 3"
- TYPE OF PERVIOUS SECTION: NA
- TYPE OF OPENINGS: NA
- PERVIOUS SECTION (In.) I.D.: NA; O.D.: NA
- TYPE OF FILTER PACK AROUND PERVIOUS SECTION: NA
- DEPTH BOTTOM OF PERVIOUS SECTION (Ft.): NA
- DEPTH BOTTOM OF FILTER PACK (Ft.): NA

39.9' PVC section w/ Centralizer and Donut attached

39.9 feet of PVC (2")

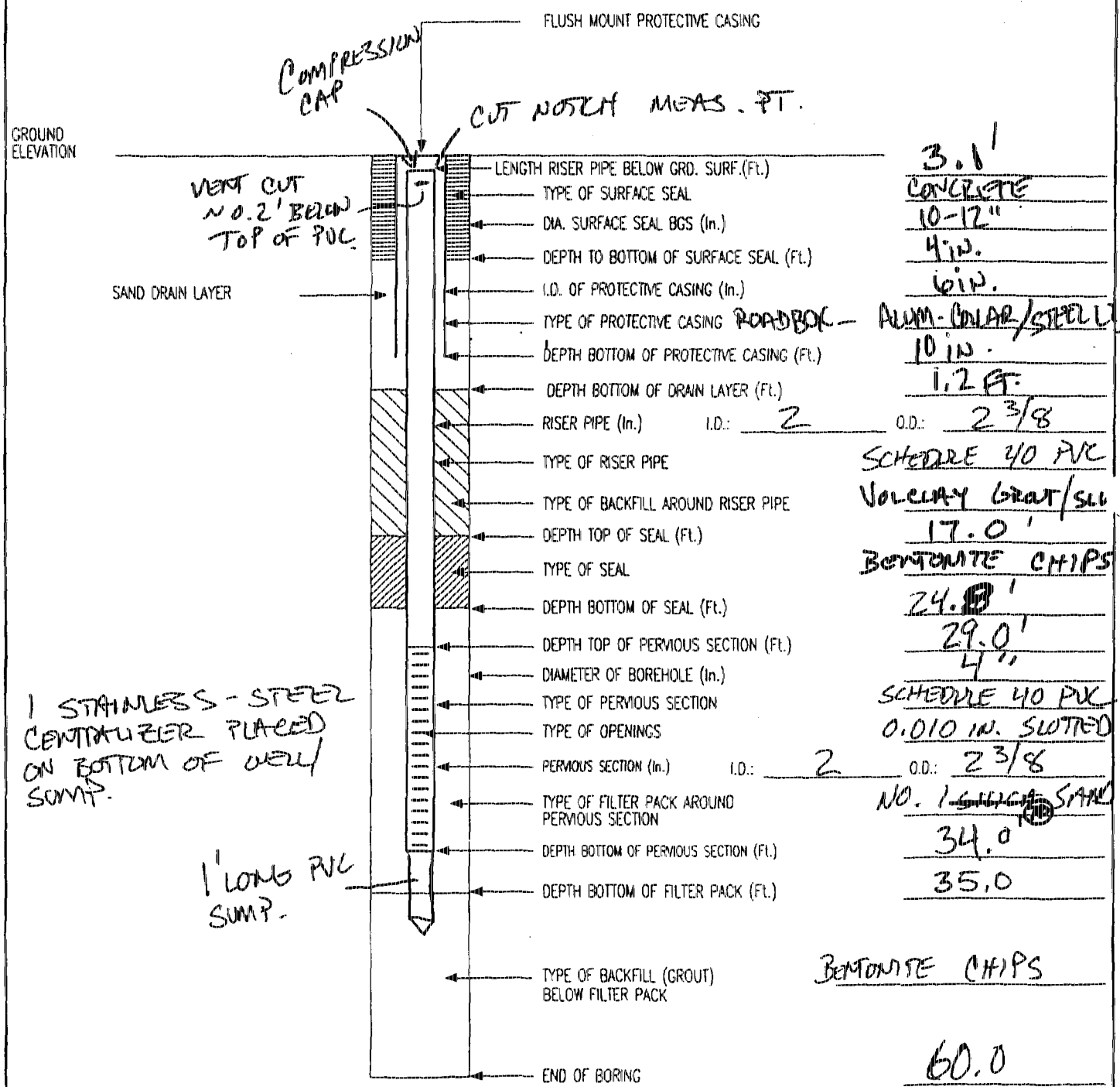
GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

FLUSH MOUNT MONITORING WELL CONSTRUCTION LOG — TETRA TECH NUS INC.

PROJECT NAME: CENTREDALE MANOR - PHASE II
PROJECT LOCATION: N. PROVIDENCE, RI -
CLIENT: U.S. EPA - REGION I
CONTRACTOR: EDI
LOGGED BY: TRACY DORGAN
CHECKED BY:
DRILLER: JAY GRASSOR
DATE: 7/20/01
DATE:

PROJECT NO: 0400-0222
WELL NO: MW14M
BORING NO: MW14D
BORING LOCATION: PARKING LOT SOUTH OF BROOK VILLAGE.
PAGE: 1 OF 1



LENGTH RISER PIPE BELOW GRD. SURF.(Ft.)	3.1'
TYPE OF SURFACE SEAL	CONCRETE
DIA. SURFACE SEAL BGS (In.)	10-12"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	4'
I.D. OF PROTECTIVE CASING (In.)	6"
TYPE OF PROTECTIVE CASING ROADBOX	ALUM-COLLAR/STEEL LID
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	10 IN.
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	1.2 FT.
RISER PIPE (In.) I.D.: 2 O.D.: 2 3/8	
TYPE OF RISER PIPE	SCHEDULE 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	VOLCLAY GROUT/SLU
DEPTH TOP OF SEAL (Ft.)	17.0'
TYPE OF SEAL	BENTONITE CHIPS
DEPTH BOTTOM OF SEAL (Ft.)	24.0'
DEPTH TOP OF PERVIOUS SECTION (Ft.)	29.0'
DIAMETER OF BOREHOLE (In.)	4"
TYPE OF PERVIOUS SECTION	SCHEDULE 40 PVC
TYPE OF OPENINGS	0.010 IN. SLOTTED
PERVIOUS SECTION (In.) I.D.: 2 O.D.: 2 3/8	
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	NO. 1 SILICA SAND
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	34.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	35.0
TYPE OF BACKFILL (GROUT) BELOW FILTER PACK	BENTONITE CHIPS
END OF BORING	60.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation Indicates that Surveyed Ground Elevation is NOT Available.

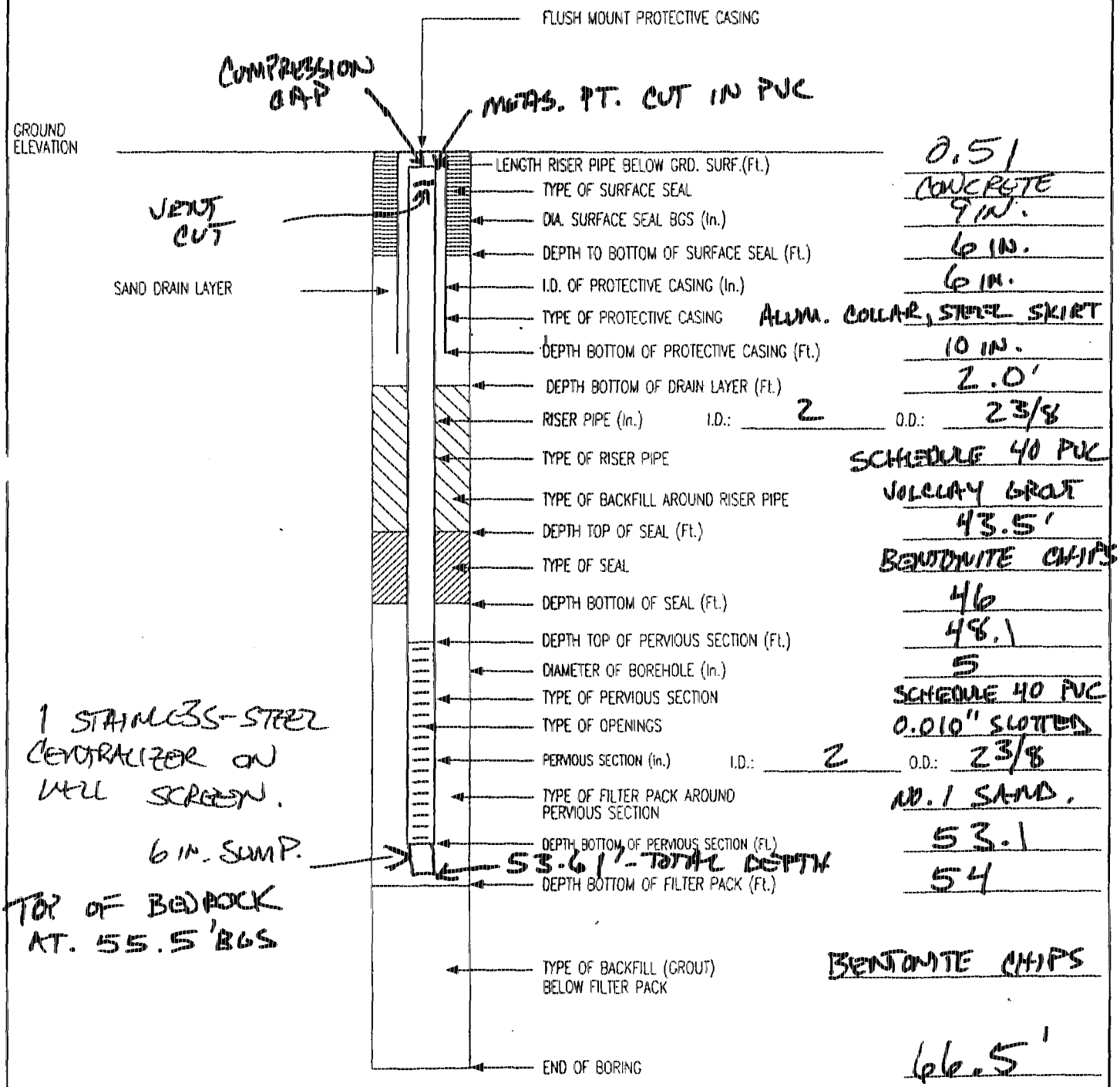
TtNUS Form 0058

US EPA ARCHIVE DOCUMENT

FLUSH MOUNT MONITORING WELL CONSTRUCTION LOG

TETRA TECH NUS

PROJECT NAME: CENTREDALE MANOR - PHASE II
PROJECT NO: 0400-022
PROJECT LOCATION: NORTH PROVIDENCE, R.I.
WELL NO: MW15D
CLIENT: U.S. EPA - REGION I
BORING NO: MW15D
CONTRACTOR: EDI
DRILLER: A. ORLICKY
BORING LOCATION: 1ST PARKING LOT SOUTH, BROOK VILLAGE, ~20' E OF RIVER.
LOGGED BY: T. DORGAN
DATE: 8-9/10-01
CHECKED BY:
DATE:
PAGE: 1 OF 1



LENGTH RISER PIPE BELOW GRD. SURF.(Ft.)	0.51
TYPE OF SURFACE SEAL	CONCRETE
DIA. SURFACE SEAL BGS (In.)	9 IN.
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	6 IN.
I.D. OF PROTECTIVE CASING (In.)	6 IN.
TYPE OF PROTECTIVE CASING	ALUM. COLLAR, STEEL SKIRT
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	10 IN.
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	2.0'
RISER PIPE (In.) I.D.: 2 O.D.:	2 3/8
TYPE OF RISER PIPE	SCHEDULE 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	VOLCLAY GROUT
DEPTH TOP OF SEAL (Ft.)	43.5'
TYPE OF SEAL	BENTONITE CHIPS
DEPTH BOTTOM OF SEAL (Ft.)	46
DEPTH TOP OF PERVIOUS SECTION (Ft.)	48.1
DIAMETER OF BOREHOLE (In.)	5
TYPE OF PERVIOUS SECTION	SCHEDULE 40 PVC
TYPE OF OPENINGS	0.010" SLOTTED
PERVIOUS SECTION (In.) I.D.: 2 O.D.:	2 3/8
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	NO. 1 SAND.
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	53.1
DEPTH BOTTOM OF FILTER PACK (Ft.)	54
TYPE OF BACKFILL (GROUT) BELOW FILTER PACK	BENTONITE CHIPS
END OF BORING	66.5'

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation Indicates that Surveyed Ground Elevation is NOT Available.

US EPA ARCHIVE DOCUMENT

APPENDIX C

ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED

US EPA ARCHIVE DOCUMENT

Analytical Dioxin Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW01-0102		CM-SO-MW01-0204		CM-SO-MW01-0406		CM-SO-MW01-0606		CM-SO-MW02-0204		CM-SO-MW02-0406
Sample Location	MW01		MW01		MW01		MW01		MW02		MW02
Date Sampled	12/28/2000		12/28/2000		12/28/2000		12/28/2000		1/5/2001		1/5/2001
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-6.0		2.0-4.0		4.0-6.0
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW02-0406
Dioxin Analysis (NG/KG)											
1,2,3,4,6,7,8-HpCDD	26.7		45.5		91.6		59.1		7.6		16.5
1,2,3,4,6,7,8-HpCDF	10.1		15.2	EMPC	42.4		22.4		5.7		14.6
1,2,3,4,7,8,9-HpCDF	1.2	U	1.5	U	2.5	J	1.1	EMPC	0.80	U	0.85
1,2,3,4,7,8-HxCDD	0.60	U	0.90	U	0.57	EMPC	0.46	J	0.60	U	0.39
1,2,3,4,7,8-HxCDF	5.0		11.7		6.1		2.7	J	0.95	J	2.5
1,2,3,6,7,8-HxCDD	1.3	EMPC	3.9		3.4		2.2	J	0.51	J	1.1
1,2,3,6,7,8-HxCDF	2.4	J	4.8		4.2		1.4	J	0.74	J	2.0
1,2,3,7,8,9-HxCDD	0.60	U	0.90	U	2.2	J	1.4	J	0.60	U	1.3
1,2,3,7,8,9-HxCDF	0.50	U	0.70	U	0.60	U	0.30	U	0.40	U	0.30
1,2,3,7,8-PeCDD	0.40	U	1.5	EMPC	0.40	U	0.20	U	0.40	U	0.43
1,2,3,7,8-PeCDF	0.30	U	26.9	EMPC	0.30	U	0.10	U	0.30	U	0.20
1,2,4,5,7,8-hexachloro(9H)xanthene		NA	17.2	J	23.4	J	8.67	J		NA	1.75
2,3,4,6,7,8-HxCDF	2.6	J	4.9		4.1	*	1.8	J	1.2	J	3.1
2,3,4,7,8-PeCDF	2.1	EMPC	7.6		1.5	J	0.63	J	0.57	J	1.5
2,3,7,8-TCDD	5.8		1060	$	1.4		2.6		11.5		68.1
2,3,7,8-TCDF	5.5		36.2		1.4	EMPC	0.62	EMPC	0.66	J	2.6
OCDD	201	J	297	J	630		466	J	47.9		92.6
OCDF	17.0	EMPC	24.2	J	113		72.2	J	4.4	J	9.3
PCDD/Fs		NA		NA		NA		NA		NA	
Total HpCDD	53.8	J	86.5	J	176	J	118	J	15.5	J	30.8
Total HpCDF	20.3	J	12.4		136	J	73.2	J	10.2	J	25.7
Total HxCDD	14.9	J	33.2	J	25.1	J	14.2	J	3.3	J	9.9
Total HxCDF	41.4	J	91.3	J	91.9	J	39.0	J	16.1	J	46.0
Total PeCDD	1.8	J	7.9	J	2.9	J	1.5	J	0.40	U	1.4
Total PeCDF	59.7	J	148	J	69.0	J	24.6	J	25.1	J	57.9
Total TCDD	8.6	J	1060	J$	2.9	J	3.1	J	11.8	J	69.6
Total TCDF	29.9	J	233	J	24.0	J	9.0	J	13.0	J	44.7
Toxicity Equivalency	8.9	J	1100	J	5.79	J	4.85	J	12.33	J	71.0

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
$/ * - From dilution analysis; R-Rejected; EB/TB- Equipment/Trip blank contamination;
EMPC- Estimated Maximum Possible Concentration

US EPA ARCHIVE DOCUMENT

Analytical Dioxin Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number		CM-SO-DUP04		CM-SO-MW02-0606		CM-SO-MW02-0610		CM-SO-MW02-1620		CM-SO-MW02-6163		CM-SO-MW02-6466	
Sample Location		MW02		MW02		MW02		MW02		MW02		MW02	
Date Sampled		1/5/2001		1/5/2001		1/5/2001		1/5/2001		6/26/2001		7/2/2001	
Interval		4.0-6.0		6.0-8.0		8.0-10.0		18.0-20.0		61.0-63.0		64.0-66.0	
QC Identifier		Field Dup. CM-SO-MW02-0406		None		None		None		None		Field Dup. CM-SO-MW02-6466	
Dioxin Analysis (NG/KG)													
1,2,3,4,6,7,8-HpCDD		14.6		17.7		0.81	J	0.60	U		NA		NA
1,2,3,4,6,7,8-HpCDF		11.4		12.6		0.23	J	0.30	U		NA		NA
1,2,3,4,7,8,9-HpCDF	J	0.56	J	1.6	U	0.10	U	0.40	U		NA		NA
1,2,3,4,7,8-HxCDD	EMPC	0.30	U	1.0	U	0.10	U	0.30	U		NA		NA
1,2,3,4,7,8-HxCDF	J	1.8	J	2.1	J	0.080	U	0.20	U		NA		NA
1,2,3,6,7,8-HxCDD	J	0.88	J	1.3	J	0.10	U	0.30	U		NA		NA
1,2,3,6,7,8-HxCDF	J	1.5	J	1.8	J	0.080	U	0.20	U		NA		NA
1,2,3,7,8,9-HxCDD	J	1.0	J	1.0	U	0.10	U	0.30	U		NA		NA
1,2,3,7,8,9-HxCDF	U	0.20	U	0.80	U	0.10	U	0.30	U		NA		NA
1,2,3,7,8-PeCDD	EMPC	0.20	U	0.70	U	0.10	U	0.20	U		NA		NA
1,2,3,7,8-PeCDF	U	0.20	U	16.8	EMPC	0.090	U	0.20	U		NA		NA
1,2,4,5,7,8-hexachloro(9H)xanthene	J	1.06	J		NA		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF	J	2.4	J	2.8	J	0.090	U	0.20	U		NA		NA
2,3,4,7,8-PeCDF	J	0.98	EMPC	1.3	J	0.090	U	0.20	U		NA		NA
2,3,7,8-TCDD		86.0		65.2		1.1		0.20	U		NA		NA
2,3,7,8-TCDF		1.4		1.8		0.20	J	0.10	U		NA		NA
OCDD		85.4		110		4.9	J	1.3	U		NA		NA
OCDF	J	7.7	J	10.8		0.30	U	1.1	U		NA		NA
PCDD/Fs	NA		NA		NA		NA		NA		NA		NA
Total HpCDD	J	26.9	J	32.8	J	1.6	J	0.60	U		NA		NA
Total HpCDF	J	20.6	J	21.6	J	0.23	J	0.40	U		NA		NA
Total HxCDD	J	7.1	J	9.0	J	1.2	J	0.30	U		NA		NA
Total HxCDF	J	37.8	J	44.3	J	0.42	J	0.20	U		NA		NA
Total PeCDD	J	1.3	J	0.70	U	1.0	J	0.20	U		NA		NA
Total PeCDF	J	45.8	J	65.5	J	0.41	J	0.20	U		NA		NA
Total TCDD	J	87.6	J	65.1	J	2.9	J	0.20	U		NA		NA
Total TCDF	J	22.0	J	34.5	J	0.72	J	0.33	EMPC		NA		NA
Toxicity Equivalency	J	86.0	J	67.99	J	1.13	J	0.00	U		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
$/ * - From dilution analysis; R-Rejected; EB/TB- Equipment/Trip blank contamination;
EMPC- Estimated Maximum Possible Concentration

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Analytical Dioxin Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02-0701		CM-SO-MW02-7272.2		CM-SO-MW03-0406		CM-SO-MW03-0608		CM-SO-MW04-0204		CM-SO-MW04-0406	
Sample Location	MW02		MW02		MW03		MW03		MW04		MW04	
Date Sampled	7/2/2001		7/3/2001		12/27/2000		12/27/2000		6/12/2001		6/12/2001	
Interval	64.0-66.0		72.0-72.2		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-MW02-6466		None		None		None		None		None	
Dioxin Analysis (NG/KG)												
1,2,3,4,6,7,8-HpCDD		NA		NA	46.7		34.4		112		0.50	U
1,2,3,4,6,7,8-HpCDF		NA		NA	7.7		7.8		132		0.39	EMPC
1,2,3,4,7,8,9-HpCDF		NA		NA	0.90	U	3.2	U	6.7		0.30	U
1,2,3,4,7,8-HxCDD		NA		NA	0.50	U	1.8	U	5.0	J	0.30	U
1,2,3,4,7,8-HxCDF		NA		NA	3.6		3.6		22.0		0.20	U
1,2,3,6,7,8-HxCDD		NA		NA	2.6	J	2.1	J	10.4		0.30	U
1,2,3,6,7,8-HxCDF		NA		NA	2.2	J	2.0	J	14.0		0.20	U
1,2,3,7,8,9-HxCDD		NA		NA	2.3	J	2.2	EMPC	13.8		0.30	U
1,2,3,7,8,9-HxCDF		NA		NA	0.40	U	1.2	U	3.1	J	0.20	U
1,2,3,7,8-PeCDD		NA		NA	1.0	J	3.6		3.8	J	0.20	U
1,2,3,7,8-PeCDF		NA		NA	0.20	U	0.50	U	0.50	U	0.20	U
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA	15.7	J	456	J	153.31	J		NA
2,3,4,6,7,8-HxCDF		NA		NA	3.1		3.1		14.8		0.20	U
2,3,4,7,8-PeCDF		NA		NA	2.3	J	4.9		8.5		0.10	U
2,3,7,8-TCDD		NA		NA	189		907	$	766	$	0.55	U
2,3,7,8-TCDF		NA		NA	4.5		4.7		15.1		0.20	U
OCDD		NA		NA	317	J	246	J	452		2.7	U
OCDF		NA		NA	18.1	J	14.4	J	103		0.60	U
PCDD/Fs		NA		NA		NA		NA		NA		NA
Total HpCDD		NA		NA	89.7	J	75.4	J	237	J	0.50	UJ
Total HpCDF		NA		NA	19.1	J	16.5	J	228	J	0.39	EMPC
Total HxCDD		NA		NA	26.7	J	28.6	J	119	J	0.84	EMPC
Total HxCDF		NA		NA	122	J	523	J	265	J	0.20	UJ
Total PeCDD		NA		NA	6.3	J	15.5	J	23.8	J	0.20	UJ
Total PeCDF		NA		NA	117	J	192	J	213	J	0.10	UJ
Total TCDD		NA		NA	199	J	907	J$	806	$J	0.81	EMPC
Total TCDF		NA		NA	72.0	J	40.1	J$	114	JEB	0.20	UJ
Toxicity Equivalency		NA		NA	180	J	915.27	J	790	J	0.0039	J

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Analytical Dioxin Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW04-0608		CM-SO-MW04B-4244		CM-SO-DUP-04		CM-SO-MW05-0102		CM-SO-DUP-01		CM-SO-MW05-0204	
Sample Location	MW04		MW04B		MW04B		MW05		MW05		MW05	
Date Sampled	6/12/2001		8/2/2001		8/2/2001		6/18/2001		6/18/2001		6/18/2001	
Interval	6.0-8.0		42.0-44.0		42.0-44.0		1.0-2.0		1.0-2.0		2.0-4.0	
QC Identifier	None		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW05-0102		Field Dup. CM-SO-MW05-0102		None	
Dioxin Analysis (NG/KG)												
1,2,3,4,6,7,8-HpCDD	1.2	U		NA		NA	0.70	U	0.50	U	12.7	
1,2,3,4,6,7,8-HpCDF	0.85	J		NA		NA	0.40	U	0.30	U	3.4	J
1,2,3,4,7,8,9-HpCDF	0.30	U		NA		NA	0.50	U	0.30	U	0.60	U
1,2,3,4,7,8-HxCDD	0.30	U		NA		NA	0.50	U	0.40	U	0.60	U
1,2,3,4,7,8-HxCDF	0.20	U		NA		NA	0.46	J	0.20	U	1.0	J
1,2,3,6,7,8-HxCDD	0.30	U		NA		NA	0.50	U	0.50	U	1.1	J
1,2,3,6,7,8-HxCDF	0.20	U		NA		NA	0.30	U	0.20	U	0.67	J
1,2,3,7,8,9-HxCDD	0.30	U		NA		NA	0.50	U	0.40	U	0.60	EMPC
1,2,3,7,8,9-HxCDF	0.20	U		NA		NA	0.30	U	0.30	U	0.40	U
1,2,3,7,8-PeCDD	0.30	U		NA		NA	0.40	U	0.40	U	0.75	J
1,2,3,7,8-PeCDF	0.20	U		NA		NA	0.42	EMPC	0.30	U	0.40	U
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA		NA	10.4	J
2,3,4,6,7,8-HxCDF	0.20	U		NA		NA	0.30	U	0.20	U	0.61	EMPC
2,3,4,7,8-PeCDF	0.20	U		NA		NA	0.30	U	0.20	U	1.0	J
2,3,7,8-TCDD	0.91	U		NA		NA	2.7	EB	4.0	EB	695	$EB
2,3,7,8-TCDF	0.20	U		NA		NA	0.96	J	0.20	U	1.7	
OCDD	15.1			NA		NA	4.2	JEB	3.6	EMPC	110	EB
OCDF	146			NA		NA	0.80	U	0.70	U	5.3	J
PCDD/Fs		NA		NA		NA		NA		NA		NA
Total HpCDD	2.3	UJ		NA		NA	0.70	UJ	0.50	UJ	23.1	JEB
Total HpCDF	1.6	UJ		NA		NA	0.40	UJ	0.30	UJ	8.2	J
Total HxCDD	1.9	EMPC		NA		NA	0.50	UJ	0.40	UJ	12.5	J
Total HxCDF	0.20	UJ		NA		NA	0.46	J	0.90	EMPC	39.3	J
Total PeCDD	0.30	UJ		NA		NA	0.40	UJ	0.40	UJ	5.5	EMPC
Total PeCDF	0.20	UJ		NA		NA	2.7	EMPC	1.7	EMPC	24.5	EMPC
Total TCDD	0.91	UJ		NA		NA	2.7	J	4.0	J	516	J
Total TCDF	0.20	UJ		NA		NA	1.8	EMPC	0.49	UJ	8.0	J
Toxicity Equivalency	0.025	J		NA		NA	2.9	J	4.0	J	700	J

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Analytical Dioxin Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW05-0406		CM-SO-MW05-0810		CM-SO-MW05-1012		CM-SO-MW06-0204		CM-SO-MW06-DUP01		CM-SO-MW06-0406	
Sample Location	MW05		MW05		MW05		MW06		MW06		MW06	
Date Sampled	6/19/2001		6/19/2001		6/19/2001		12/19/2000		12/19/2000		12/19/2000	
Interval	4.0-6.0		8.0-10.0		10.0-12.0		2.0-4.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		Field Dup. CM-SO-MW06-0204		Field Dup. CM-SO-MW06-0204		None	
Dioxin Analysis (NG/KG)												
1,2,3,4,6,7,8-HpCDD	61.9	J	0.90	U	1.7	J	755	J	455		147	
1,2,3,4,6,7,8-HpCDF	11.5	J	0.50	U	0.60	U	327	J	210		59.3	
1,2,3,4,7,8,9-HpCDF	1.1	EMPC	0.70	U	0.80	U	57.0	J	28.7	EMPC	7.3	
1,2,3,4,7,8-HxCDD	2.1	J	0.70	U	0.80	U	17.2	J	11.0		5.8	
1,2,3,4,7,8-HxCDF	3.6	J	0.40	U	0.50	U	127	J	94.1		40.4	
1,2,3,6,7,8-HxCDD	24.8	J	1.9	J	17.3		54.8	J	37.3		20.3	
1,2,3,6,7,8-HxCDF	1.8	J	0.40	U	0.50	U	58.8	J	34.3	J	15.7	
1,2,3,7,8,9-HxCDD	5.7	J	1.1	J	6.9		56.3	J	35.7		17.4	
1,2,3,7,8,9-HxCDF	0.20	UJ	0.50	U	0.70	U	4.2	UJ	2.9	U	0.30	U
1,2,3,7,8-PeCDD	52.2	J	2.8	EMPC	7.8		16.5	J	11.7		6.1	
1,2,3,7,8-PeCDF	3.2	EMPC	0.54	EMPC	0.70	U		R		R		R
1,2,4,5,7,8-hexachloro(9H)xanthene	2350	J	62.2	J	73.8	J	22.6	J	18.2	J		NA
2,3,4,6,7,8-HxCDF	6.7	J	0.40	U	0.50	U	43.7	J	32.7		14.0	
2,3,4,7,8-PeCDF	19.2	J	0.50	U	0.60	U	40.3	J	28.0		9.5	
2,3,7,8-TCDD	20380	EMPC	745	$EB	330	EB	193	J	190		1.3	
2,3,7,8-TCDF	73.0	J	0.93	EMPC	0.50	U	63.7	J	52.6		17.0	
OCDD	803	JEB	2.9	JEB	1.8	U	6520	J$	5310	J$	1010	J
OCDF	34.8	J	1.2	U	1.5	U	953	J	760	J	140	J
PCDD/Fs		NA		NA		NA		NA		NA		NA
Total HpCDD	127	JEB	0.90	UJ	3.1	JEB	1390	J	909	J	346	J
Total HpCDF	42.7	J	0.60	UJ	0.70	UJ	736	J	429	J	152	J
Total HxCDD	629	J	26.0	J	177	J	340	J	383	J	295	J
Total HxCDF	2180	J	3.4	J	12.2	J	510	J	460	J	152	J
Total PeCDD	314	J	10.1	EMPC	20.9	EMPC	16.5	J	90.5	J	63.1	J
Total PeCDF	936	J	2.5	EMPC	4.1	EMPC	333	J$	306	J	375	J
Total TCDD	11550	J	626	J	344	J	297	J	322	J	29.7	J
Total TCDF	1280	J	2.5	UJ	3.1	EMPC	538	J$	316	J$	491	J
Toxicity Equivalency	20500	J	750	J	340	J	284	J	253	J	27.5	J

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Analytical Dioxin Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW06-0608		CM-SO-MW07-0304		CM-SO-MW07-0406		CM-SO-MW07-0608		CM-SO-MW08-0102		CM-SO-MW08-0204	
Sample Location	MW06		MW07		MW07		MW07		MW08		MW08	
Date Sampled	12/19/2000		12/21/2000		12/21/2000		12/21/2000		12/26/2000		12/26/2000	
Interval	6.0-8.0		3.0-4.0		4.0-6.0		6.0-8.0		1.0-2.0		2.0-4.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW08-0204	
Dioxin Analysis (NG/KG)												
1,2,3,4,6,7,8-HpCDD	77.1		105		17.0		0.43	EMPC	1150		33.9	
1,2,3,4,6,7,8-HpCDF	32.2		32.3		6.7	B	1.5	JB	548		83.5	
1,2,3,4,7,8,9-HpCDF	4.0	J	2.0	J	0.40	U	0.30	U	50.5		2.7	J
1,2,3,4,7,8-HxCDD	2.7	J	1.5	J	0.23	J	0.20	U	20.3		0.72	J
1,2,3,4,7,8-HxCDF	18.7		4.8	J	1.4	JB	0.97	JB	248		7.3	B
1,2,3,6,7,8-HxCDD	9.4		5.3		0.47	J	0.20	U	72.2		2.4	J
1,2,3,6,7,8-HxCDF	7.8		2.8	J	0.65	JB	0.46	JB	82.6		5.2	
1,2,3,7,8,9-HxCDD	8.6		4.4	J	0.46	EMPC	0.20	U	136		3.7	J
1,2,3,7,8,9-HxCDF	0.30	U	0.20	U	0.30	U	0.20	U	3.5	U	0.40	U
1,2,3,7,8-PeCDD	3.1	J	1.4	J	0.20	U	0.20	U	17.1		0.40	U
1,2,3,7,8-PeCDF		R		R	0.20	U	0.68	J	1.6	U	0.30	U
1,2,4,5,7,8-hexachloro(9H)xanthene		NA	83.3	J		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF	6.9		3.5	J	0.72	J	0.21	EMPC	103		5.1	
2,3,4,7,8-PeCDF	4.6	J	1.9	J	0.58	EMPC	0.32	J	54.9		2.8	EMPC
2,3,7,8-TCDD	0.84	EMPC	417	$	40.3		3.1		47.9		3.1	
2,3,7,8-TCDF	8.1		2.8		0.61	J	0.49	J	41.5		1.7	
OCDD	663	J	689	J	816		7.7	JB	5560	E	183	
OCDF	91.2	J	51.5		30.6		0.50	U	341		53.3	
PCDD/Fs		NA		NA		NA		NA		NA		NA
Total HpCDD	182	J	211	J	38.0		0.97	EMPC	2160		61.4	
Total HpCDF	84.7	J	77.8	J	14.9	EMPC	1.5		944		141	
Total HxCDD	119	J	55.8	J	7.5	EMPC	2.0	EMPC	858		24.4	
Total HxCDF	79.3	J	88.7	J	15.1	EMPC	3.2	EMPC	1290	EMPC	117	EMPC
Total PeCDD	27.9	J	9.9	J	0.20	U	0.87	EMPC	215	EMPC	3.3	EMPC
Total PeCDF	174	J	47.9	J	15.0	EMPC	3.9	EMPC	2950	EMPC	262	EMPC
Total TCDD	11.2	J	442	J$	43.1	EMPC	3.4	EMPC	214	EMPC	7.2	EMPC
Total TCDF	225	J	30.2	J	24.6	EMPC	1.9	EMPC	6560	EMPC	455	EMPC
Toxicity Equivalency	13.7	J	423	J		NA		NA		NA		NA

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Analytical Dioxin Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02		CM-SO-MW08-0406		CM-SO-MW08-0606		CM-SO-MW09-0406		CM-SO-MW09-1011		CM-SO-MW14-0102	
Sample Location	MW08		MW08		MW08		MW09		MW09		MW14	
Date Sampled	12/26/2000		12/26/2000		12/26/2000		12/18/2000		12/18/2000		7/13/2001	
Interval	2.0-4.0		4.0-6.0		6.0-8.0		4.0-6.0		10.0-11.0		1.0-2.0	
QC Identifier	Field Dup. CM-SO-MW08-0204		None		None		None		None		Field Dup. CM-SO-MW14-0102	
Dioxin Analysis (NG/KG)												
1,2,3,4,6,7,8-HpCDD	36.7		22.3		1.6	J	16.1	J	0.60	J	83.5	EB
1,2,3,4,6,7,8-HpCDF	75.0		3.7	JB	1.7	JB	27.4	J	1.5	U	28.5	EB
1,2,3,4,7,8,9-HpCDF	2.9	J	0.45	J	0.40	U	1.7	J	0.20	U	3.6	JEB
1,2,3,4,7,8-HxCDD	0.83	EMPC	0.40	U	0.40	U	0.30	UJ	0.20	U	1.6	JEB
1,2,3,4,7,8-HxCDF	10.5		1.6	JB	1.1	JB	6.2	J	0.71	U	14.4	EB
1,2,3,6,7,8-HxCDD	2.8	EMPC	0.40	U	0.40	U	1.1	J	0.20	U	4.2	JEB
1,2,3,6,7,8-HxCDF	5.6		1.0	JB	0.20	U	5.3	J	0.36	U	6.2	EB
1,2,3,7,8,9-HxCDD	4.2	J	0.73	J	0.40	U	0.30	UJ	0.20	U	5.3	EB
1,2,3,7,8,9-HxCDF	0.30	U	0.30	U	0.30	U	0.20	UJ	0.20	U	0.60	U
1,2,3,7,8-PeCDD	1.1	J	0.30	U	0.30	U	1.6	J	0.20	U	0.60	U
1,2,3,7,8-PeCDF	0.20	U	0.20	U	0.30	U		R		R	29.3	EMPC
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA	3620	J	3.17	J		NA
2,3,4,6,7,8-HxCDF	5.6		0.57	J	0.30	U	3.0	J	0.19	J	5.1	EB
2,3,4,7,8-PeCDF	3.7	J	0.79	J	0.30	U	1.6	EMPC	0.29	EMPC	5.6	EB
2,3,7,8-TCDD	3.8		0.76	J	0.30	U	7150	$	25.0		3.3	EB
2,3,7,8-TCDF	2.2		0.77	EMPC	0.20	U	10.2	J	0.87	EMPC	15.2	EB
OCDD	186		597		10.2	B	139	J	6.4	UJ	685	EB
OCDF	46.2		3.1	J	0.60	U	46.9	J	0.52	EMPC	81.4	EB
PCDD/Fs		NA		NA		NA		NA		NA		NA
Total HpCDD	70.3		55.7		3.1		34.6	J	0.60	J	167	JEB
Total HpCDF	124		6.3		1.7		50.9	J	1.9	UJ	67.0	JEB
Total HxCDD	32.7	EMPC	4.0	EMPC	0.40	U	11.2	UJ	2.3	UJ	47.2	JEB
Total HxCDF	115	EMPC	7.0		3.1	EMPC	72.1	J	3.7	UJ	67.4	JEB
Total PeCDD	10.7	EMPC	0.53	EMPC	0.30	U	5.5	J	0.39	UJ	5.3	JEB
Total PeCDF	285	EMPC	12.6	EMPC	4.5	EMPC	53.1	J	4.6	UJ	58.4	JEB
Total TCDD	9.7		1.4		0.46		7290	J$	25.1	J	22.6	J
Total TCDF	524	EMPC	26.7	EMPC	6.7	EMPC	64.3	J	0.86	UJ	81.3	JEB
Toxicity Equivalency		NA		NA		NA	7160	J	25.3	J	14.1	J

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EMPC- Estimated Maximum Possible Concentration

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Analytical Dioxin Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP03-0701		CM-SO-MW14-0204		CM-SO-MW14-0607		CM-SO-MW14-0808		CM-SO-MW14-0708		CM-SO-MW14-5252.75	
Sample Location	MW14		MW14		MW14		MW14		MW14		MW14	
Date Sampled	7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/18/2001	
Interval	1.0-2.0		2.0-4.0		6.0-7.0		6.0-8.0		7.0-8.0		52.0-52.8	
QC Identifier	Field Dup. CM-SO-MW14-0102		None		None		None		None		None	
Dioxin Analysis (NG/KG)												
1,2,3,4,6,7,8-HpCDD	112	EB	3.1	JEB		NA	0.30	U		NA		NA
1,2,3,4,6,7,8-HpCDF	40.4	EB	2.5	JEB		NA	0.10	U		NA		NA
1,2,3,4,7,8,9-HpCDF	6.1	JEB	0.40	U		NA	0.20	U		NA		NA
1,2,3,4,7,8-HxCDD	2.1	U	0.30	U		NA	0.20	U		NA		NA
1,2,3,4,7,8-HxCDF	20.9	EB	0.78	JEB		NA	0.090	U		NA		NA
1,2,3,6,7,8-HxCDD	6.5	EB	0.40	U		NA	2.2	JEB		NA		NA
1,2,3,6,7,8-HxCDF	8.4	EB	0.20	U		NA	0.090	U		NA		NA
1,2,3,7,8,9-HxCDD	6.3	EB	0.40	U		NA	0.20	U		NA		NA
1,2,3,7,8,9-HxCDF	1.7	U	0.30	U		NA	0.10	U		NA		NA
1,2,3,7,8-PeCDD	1.8	U	0.30	U		NA	2.2	JEB		NA		NA
1,2,3,7,8-PeCDF	15.4	EMPC	0.20	U		NA	0.10	U		NA		NA
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA	17.0	J		NA		NA
2,3,4,6,7,8-HxCDF	7.8	EB	0.43	JEB		NA	0.38	JEB		NA		NA
2,3,4,7,8-PeCDF	7.8	EB	0.20	U		NA	0.090	U		NA		NA
2,3,7,8-TCDD	4.6	EB	2.8	EB		NA	4.2	EB		NA		NA
2,3,7,8-TCDF	20.5	EB	1.1	EB		NA	1.6	EMPC		NA		NA
OCDD	956	EB	22.4	EB		NA	0.50	U		NA		NA
OCDF	107	EB	4.1	JEB		NA	0.40	U		NA		NA
PCDD/Fs		NA		NA		NA		NA		NA		NA
Total HpCDD	229	JEB	6.7	JEB		NA	0.30	UJ		NA		NA
Total HpCDF	96.8	JEB	4.6	JEB		NA	0.10	UJ		NA		NA
Total HxCDD	66.0	JEB	1.2	JEB		NA	15.3	JEB		NA		NA
Total HxCDF	96.7	JEB	3.3	JEB		NA	36.7	JEB		NA		NA
Total PeCDD	5.9	JEB	0.30	UJ		NA	10.9	JEB		NA		NA
Total PeCDF	106	JEB	5.4	JEB		NA	5.9	JEB		NA		NA
Total TCDD	29.3	J	3.3	J		NA	6.4	J		NA		NA
Total TCDF	113	JEB	3.4	JEB		NA	1.1	JEB		NA		NA
Toxicity Equivalency	18.2	J	3.09	J		NA	6.82	J		NA		NA

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$/ ° - From dilution analysis; R-Rejected; EB/TB- Equipment/Trip blank contamination;
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Analytical Dioxin Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW15D-0204		CM-SO-MW15D-0406		CM-SO-DUP-05		CM-SO-DUP05-0801		CM-SO-MW15D-0608		CM-SO-MW15D-4650	
Sample Location	MW15D		MW15D		MW15D		MW15D		MW15D		MW15D	
Date Sampled	8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/8/2001	
Interval	2.0-4.0		4.0-6.0		4.0-6.0		4.0-6.0		6.0-8.0		48.0-50.0	
QC Identifier	None		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		None		None	
Dioxin Analysis (NG/KG)												
1,2,3,4,6,7,8-HpCDD	2.1	J	87.6	J	84.4	J		NA	1.2	EMPC		NA
1,2,3,4,6,7,8-HpCDF	1.3	J	14.8	EMPC	12.3	J		NA	0.60	U		NA
1,2,3,4,7,8,9-HpCDF	0.40	U	2.2	UJ	4.9	UJ		NA	0.70	U		NA
1,2,3,4,7,8-HxCDD	0.40	U	1.7	UJ	1.8	UJ		NA	0.60	U		NA
1,2,3,4,7,8-HxCDF	0.55	J	7.2	J	6.6	J		NA	0.40	U		NA
1,2,3,6,7,8-HxCDD	0.40	U	1.8	UJ	1.7	EMPC		NA	0.60	U		NA
1,2,3,6,7,8-HxCDF	0.30	U	1.1	UJ	2.7	UJ		NA	0.40	U		NA
1,2,3,7,8,9-HxCDD	0.40	U	1.7	UJ	1.8	UJ		NA	0.60	U		NA
1,2,3,7,8,9-HxCDF	0.30	U	1.3	UJ	3.3	UJ		NA	0.50	U		NA
1,2,3,7,8-PeCDD	0.40	U	0.90	UJ	0.60	UJ		NA	0.60	U		NA
1,2,3,7,8-PeCDF	0.30	U	0.80	UJ	0.90	UJ		NA	0.40	U		NA
1,2,4,5,7,8-hexachloro(9H)xanthene	1.8	J	78.8	J	58.7	J		NA		NA		NA
2,3,4,6,7,8-HxCDF	0.30	U	1.0	UJ	2.7	UJ		NA	0.40	UJ		NA
2,3,4,7,8-PeCDF	0.30	U	3.2	J	3.6	J		NA	0.40	U		NA
2,3,7,8-TCDD	60.1		2640	J$	1470	J$		NA	23.9			NA
2,3,7,8-TCDF	0.51	J	5.7	J	4.8	J		NA	0.30	U		NA
OCDD	20.3		813	J	602	J		NA	22.3			NA
OCDF	2.8	J	35.5	J	21.4	J		NA	1.3	U		NA
PCDD/Fs		NA		NA		NA		NA		NA		NA
Total HpCDD	4.0	J	174	J	125	J		NA	2.4	EMPC		NA
Total HpCDF	1.3	J	16.0	J	38.3	J		NA	0.59	EMPC		NA
Total HxCDD	0.40	UJ	13.6	JEB	10.1	JEB		NA	0.60	UJ		NA
Total HxCDF	15.9	J	216	J	146	J		NA	4.0	J		NA
Total PeCDD	0.40	UJ	9.4	EMPC	1.8	UJ		NA	0.60	UJ		NA
Total PeCDF	3.0	J	22.9	J	8.9	J		NA	0.40	UJ		NA
Total TCDD	61.1	J	2670	J$	1480	J$		NA	23.9	J		NA
Total TCDF	1.8	UJ	36.3	J	9.1	J		NA	0.30	UJ		NA
Toxicity Equivalency	60.3	J	2600	J	1500	J		NA	24.0	J		NA

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EMPC- Estimated Maximum Possible Concentration

US EPA ARCHIVE DOCUMENT

Analytical Dioxin Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB-14-271-0102		CM-SO-SB-14-271-0204		CM-SO-SB-14-271-0406		CM-SO-SB-14-271-0608		CM-SO-SB-14-271-1416	
Sample Location	SB-14-271		SB-14-271		SB-14-271		SB-14-271		SB-14-271	
Date Sampled	6/21/2001		6/21/2001		6/21/2001		6/21/2001		6/21/2001	
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		14.0-16.0	
QC Identifier	None		None		None		None		None	
Dioxin Analysis (NG/KG)										
1,2,3,4,6,7,8-HpCDD			0.30	U	1.7	J	0.20	U		NA
1,2,3,4,6,7,8-HpCDF	18.7		0.20	U	0.93	J	0.10	U		NA
1,2,3,4,7,8,9-HpCDF	11.8		0.30	U	0.30	U	0.20	U		NA
1,2,3,4,7,8-HxCDD	0.81	J	0.20	U	0.20	U	0.10	U		NA
1,2,3,4,7,8-HxCDF	0.43	J	0.20	U	0.31	J	0.090	U		NA
1,2,3,6,7,8-HxCDD	4.3		0.20	U	0.20	U	0.10	U		NA
1,2,3,6,7,8-HxCDF	1.4	J	0.20	U	0.15	EMPC	0.10	U		NA
1,2,3,7,8,9-HxCDD	2.6	J	0.20	U	0.20	U	0.10	U		NA
1,2,3,7,8,9-HxCDF	1.3	J	0.20	U	0.20	U	0.10	U		NA
1,2,3,7,8-PeCDD	0.32	J	0.20	U	0.20	U	0.10	U		NA
1,2,3,7,8-PeCDF	0.75	EMPC	0.20	U	0.20	U	0.10	U		NA
1,2,4,5,7,8-hexachloro(9H)xanthene	0.50	U		NA	0.311	J		NA		NA
2,3,4,6,7,8-HxCDF	0.488	J	0.20	U	0.23	J	0.090	U		NA
2,3,4,7,8-PeCDF	3.7		0.20	U	0.20	U	0.10	U		NA
2,3,7,8-TCDD	2.9	J	0.20	U	12.2	EB	0.66	EB		NA
2,3,7,8-TCDF	42.0	EB	0.20	U	0.57	J	0.10	U		NA
OCDD	8.0		3.5	JEB	12.6	EB	0.40	U		NA
OCDF	114	EB	0.50	U	1.2	J	0.40	U		NA
PCDD/Fs	17.7			NA		NA		NA		NA
Total HpCDD		NA	0.30	UJ	3.2	JEB	0.20	UJ		NA
Total HpCDF	37.2	JEB	0.20	UJ	1.7	J	0.10	UJ		NA
Total HxCDD	23.0	J	0.20	UJ	1.2	EMPC	0.10	UJ		NA
Total HxCDF	15.9	J	0.20	UJ	3.2	J	0.10	UJ		NA
Total PeCDD	48.6	J	0.20	UJ	0.20	UJ	0.10	UJ		NA
Total PeCDF	9.7	EMPC	0.92	EMPC	4.9	EMPC	0.10	UJ		NA
Total TCDD	75.3	EMPC	0.20	UJ	13.5	J	0.66	J		NA
Total TCDF	53.2	J	0.80	UJ	1.4	UJ	0.21	EMPC		NA
Toxicity Equivalency	43.7	J	0.00035	J	12.0	J	0.66	J		NA
	47.0	J								

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Analytical Dioxin Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB02-0204		CM-SO-DUP03		CM-SO-SB02-0406		CM-SO-SB02-0608		CM-SO-SB03-0204		CM-SO-SB03-0406	
Sample Location	SB02		SB02		SB02		SB02		SB03		SB03	
Date Sampled	1/3/2001		1/3/2001		1/3/2001		1/3/2001		1/9/2001		1/9/2001	
Interval	2.0-4.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-SB02-0204		Field Dup. CM-SO-SB02-0204		None		None		None		Field Dup. CM-SO-SB03-0406	
Dioxin Analysis (NG/KG)												
1,2,3,4,6,7,8-HpCDD	714			NA	561		333	J	56.7		1.3	J
1,2,3,4,6,7,8-HpCDF	2.7	U		NA	32.0		26.5	J	10.4		0.37	EMPC
1,2,3,4,7,8,9-HpCDF	3.6	U		NA	4.7		3.1	J	0.77	EMPC	0.20	U
1,2,3,4,7,8-HxCDD	6.6	EMPC		NA	4.6		3.3	J	0.70	J	0.20	U
1,2,3,4,7,8-HxCDF	21.9			NA	13.0		11.2	J	1.4	J	0.10	U
1,2,3,6,7,8-HxCDD	21.7			NA	15.6		10.3	J	3.1	J	0.20	U
1,2,3,6,7,8-HxCDF	11.8			NA	5.6		4.9	J	1.3	J	0.10	U
1,2,3,7,8,9-HxCDD	26.3			NA	14.5		11.0	J	1.7	J	0.20	U
1,2,3,7,8,9-HxCDF	1.2	U		NA	1.7	U	1.8	UJ	0.48	J	0.10	U
1,2,3,7,8-PeCDD	4.3			NA	2.6	EMPC	2.1	J	0.55	J	0.20	U
1,2,3,7,8-PeCDF	106	EMPC		NA	40.7	EMPC	34.5	EMPC	0.20	U	0.10	U
1,2,4,5,7,8-hexachloro(9H)xanthene	92.5	J		NA	64.6	J	43.1	J	1.25	J		U
2,3,4,6,7,8-HxCDF	17.2			NA	7.3		6.7	J	1.4	J	0.10	U
2,3,4,7,8-PeCDF	9.4			NA	6.5	EMPC	6.0	J	0.75	J	0.10	U
2,3,7,8-TCDD	923	$		NA	964	$	970	J$	12.7		0.50	J
2,3,7,8-TCDF	22.9			NA	13.8		10.3	J	1.4		0.10	U
OCDD	4660	J$EB		NA	3150	J$EB	2330	JEB	367	EB	5.7	JEB
OCDF	95.4	J		NA	57.9		41.7	J	22.0		0.71	EMPC
PCDD/Fs		NA		NA		NA		NA		NA		NA
Total HpCDD	1310	J		NA	937	J	564	J	96.2	J	2.1	J
Total HpCDF	183	J		NA	79.1	J	64.6	J	27.9	J	0.47	J
Total HxCDD	222	J		NA	128	J	79.5	J	13.0	J	0.20	UJ
Total HxCDF	371	J		NA	155	J	131	J	20.9	J	0.33	EMPC
Total PeCDD	29.3	J		NA	15.4	J	11.5	J	0.94	J	0.20	UJ
Total PeCDF	368	J		NA	135	J	131	J	9.4	J	0.10	UJ
Total TCDD	923	J$EB		NA	964	J$EB	984	J$EB	13.8	J	0.50	J
Total TCDF	245	J		NA	126	J	132	J	8.4	J	0.31	UJ
Toxicity Equivalency	957.76	J		NA	985.62	J	986.46	J	16.0	J	0.517	J

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US EPA ARCHIVE DOCUMENT

Analytical Dioxin Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP05		CM-SO-SB03-0608		CM-SO-SB03-1820	
Sample Location	SB03		SB03		SB03	
Date Sampled	1/9/2001		1/9/2001		1/9/2001	
Interval	4.0-6.0		6.0-8.0		18.0-20.0	
QC Identifier	Field Dup. CM-SO-SB03-0406		None		None	
Dioxin Analysis (NG/KG)						
1,2,3,4,6,7,8-HpCDD	1.2	J	0.39	EMPC	0.30	U
1,2,3,4,6,7,8-HpCDF	0.31	EMPC	0.20	U	0.20	U
1,2,3,4,7,8,9-HpCDF	0.20	U	0.20	U	0.20	U
1,2,3,4,7,8-HxCDD	0.20	U	0.20	U	0.20	U
1,2,3,4,7,8-HxCDF	0.10	U	0.10	U	0.10	U
1,2,3,6,7,8-HxCDD	0.20	U	0.20	U	0.20	U
1,2,3,6,7,8-HxCDF	0.090	U	0.10	U	0.10	U
1,2,3,7,8,9-HxCDD	0.20	U	0.20	U	0.20	U
1,2,3,7,8,9-HxCDF	0.10	U	0.20	U	0.20	U
1,2,3,7,8-PeCDD	0.10	U	0.20	U	0.10	U
1,2,3,7,8-PeCDF	0.10	U	0.10	U	0.10	U
1,2,4,5,7,8-hexachloro(9H)xanthene		U		U		U
2,3,4,6,7,8-HxCDF	0.10	U	0.10	U	0.10	U
2,3,4,7,8-PeCDF	0.10	U	0.10	U	0.10	U
2,3,7,8-TCDD	0.22	EMPC	0.16	EMPC	0.10	U
2,3,7,8-TCDF	0.090	U	0.10	U	0.090	U
OCDD	6.4	JEB	2.9	JEB	0.79	EB
OCDF	0.60	U	0.62	J	0.50	U
PCDD/Fs		NA		NA		NA
Total HpCDD	2.1	J	0.44	J	0.30	UJ
Total HpCDF	0.31	EMPC	0.20	UJ	0.20	UJ
Total HxCDD	0.20	UJ	0.20	UJ	0.20	UJ
Total HxCDF	0.29	J	0.10	UJ	0.10	UJ
Total PeCDD	0.10	UJ	0.20	UJ	0.10	UJ
Total PeCDF	0.10	UJ	0.10	UJ	0.10	UJ
Total TCDD	0.22	EMPC	0.16	EMPC	0.10	UJ
Total TCDF	0.60	UJ	0.78	UJ	0.57	UJ
Toxicity Equivalency	0.24	J	0.16	J	0.000079	J

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
$/ * - From dilution analysis; R-Rejected; EB/TB- Equipment/Trip blank contamination;
EMPC- Estimated Maximum Possible Concentration

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW01-0102		CM-SO-MW01-0204		CM-SO-MW01-0406		CM-SO-MW01-0608		CM-SO-MW02-0204		CM-SO-MW02-0406	
Sample Location	MW01		MW01		MW01		MW01		MW02		MW02	
Date Sampled	12/28/2000		12/28/2000		12/28/2000		12/28/2000		1/5/2001		1/5/2001	
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW02-0406	
Volatile Organic Analysis (UG/KG)												
1,1,1,2-Tetrachloroethane		NA		NA		NA		NA		NA		NA
1,1,1-Trichloroethane	340	U	220	U	240	U	260	U	200	U	420	U
1,1,2,2-Tetrachloroethene	340	U	220	U	240	U	260	U	200	U	420	U
1,1,2-Trichloro-1,2,2-trifluoroethane	340	U	220	U	240	U	260	U	200	U	420	U
1,1,2-Trichloroethane	340	U	220	U	240	U	260	U	200	U	420	U
1,1-Dichloroethane	340	U	220	U	240	U	260	U	200	U	420	U
1,1-Dichloroethene	340	U	220	U	240	U	260	U	200	U	420	U
1,1-Dichloropropene		NA		NA		NA		NA		NA		NA
1,2,3-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,3-Trichloropropane		NA		NA		NA		NA		NA		NA
1,2,4-Trichlorobenzene	340	U	220	U	240	U	260	U	200	U	420	U
1,2,4-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,2-Dibromo-3-chloropropane	340	U	220	U	240	U	260	U	200	U	420	U
1,2-Dibromoethane	340	U	220	U	240	U	260	U	200	U	420	U
1,2-Dichlorobenzene	340	U	220	U	240	U	260	U	200	U	420	U
1,2-Dichloroethane	340	U	220	U	240	U	260	U	200	U	420	U
1,2-Dichloropropane	340	U	220	U	240	U	260	U	200	U	420	U
1,3,5-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	340	U	220	U	240	U	260	U	200	U	420	U
1,3-Dichloropropane		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	340	U	220	U	240	U	260	U	200	U	420	U
2,2-Dichloropropane		NA		NA		NA		NA		NA		NA
2-Butanone	340	U	220	U	240	U	260	U	200	U	420	U
2-Chlorotoluene		NA		NA		NA		NA		NA		NA
2-Hexanone	340	U	220	U	240	U	260	U	200	U	420	U
4-Chlorotoluene		NA		NA		NA		NA		NA		NA
4-Methyl-2-Pentanone	340	U	220	U	240	U	260	U	200	U	420	U
Acetone	340	UJ	410	UJ	290	UJ	390	UJ	490	U	420	UJ

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW01-0102		CM-SO-MW01-0204		CM-SO-MW01-0406		CM-SO-MW01-0608		CM-SO-MW02-0204		CM-SO-MW02-0406	
Sample Location	MW01		MW01		MW01		MW01		MW02		MW02	
Date Sampled	12/28/2000		12/28/2000		12/28/2000		12/28/2000		1/5/2001		1/5/2001	
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW02-0406	
Benzene	340	U	220	U	240	U	260	U	200	U	420	U
Bromobenzene		NA		NA		NA		NA		NA		NA
Bromochloromethane		NA		NA		NA		NA		NA		NA
Bromodichloromethane	340	U	220	U	240	U	260	U	200	U	420	U
Bromoform	340	U	220	U	240	U	260	U	200	U	420	U
Bromomethane	340	U	220	U	240	U	260	U	200	U	420	U
Carbon Disulfide	340	U	220	U	240	U	260	U	200	U	420	U
Carbon Tetrachloride	340	U	220	U	240	U	260	U	200	U	420	U
Chlorobenzene	340	U	220	U	240	U	69	J	200	U	420	U
Chloroethane	340	U	220	U	240	U	260	U	200	U	420	U
Chloroform	340	U	220	U	240	U	260	U	200	U	420	U
Chloromethane	340	U	220	U	240	U	260	U	200	U	420	U
cis-1,2-Dichloroethene	340	U	220	U	50	J	260	U	200	U	420	U
cis-1,3-Dichloropropene	340	U	220	U	240	U	260	U	200	U	420	U
Cyclohexane	340	U	220	U	240	U	260	U	200	U	420	U
Dibromochloromethane	340	U	220	U	240	U	260	U	200	U	420	U
Dibromomethane		NA		NA		NA		NA		NA		NA
Dichlorodifluoromethane	340	U	220	U	240	U	260	U	200	U	420	U
Ethylbenzene	340	U	220	U	240	U	260	U	200	U	420	U
Hexachlorobutadiene		NA		NA		NA		NA		NA		NA
Isopropylbenzene	340	U	220	U	240	U	260	U	200	U	420	U
m&p-Xylene		NA		NA		NA		NA		NA		NA
Methyl Acetate	300	JTB	430	TB	260	TB	250	JTB	240	U	530	U
Methyl tert-Butyl Ether	340	U	220	U	240	U	260	U	200	U	420	U
Methylcyclohexane	340	U	220	U	240	U	260	U	200	U	420	U
Methylene Chloride	90	JTB	220	U	240	U	64	JTB	200	U	420	U
n-Butylbenzene		NA		NA		NA		NA		NA		NA
n-Propylbenzene		NA		NA		NA		NA		NA		NA
Naphthalene		NA		NA		NA		NA		NA		NA
o-Xylene		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW01-0102		CM-SO-MW01-0204		CM-SO-MW01-0406		CM-SO-MW01-0608		CM-SO-MW02-0204		CM-SO-MW02-0406	
Sample Location	MW01		MW01		MW01		MW01		MW02		MW02	
Date Sampled	12/28/2000		12/28/2000		12/28/2000		12/28/2000		1/5/2001		1/5/2001	
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW02-0406	
p-Isopropyltoluene		NA		NA		NA		NA		NA		NA
sec-Butylbenzene		NA		NA		NA		NA		NA		NA
Styrene	340	U	220	U	240	U	260	U	200	U	420	U
tert-Butylbenzene		NA		NA		NA		NA		NA		NA
Tetrachloroethene	340	U	220	U	520		140	J	200	U	420	U
Toluene	340	U	220	U	240	U	260	U	200	U	420	U
Total Volatile Organics		NA		NA		NA		NA		NA		NA
Total Xylenes	340	U	220	U	240	U	260	U	200	U	420	U
trans-1,2-Dichloroethene	340	U	220	U	240	U	260	U	200	U	420	U
trans-1,3-Dichloropropene	340	U	220	U	240	U	260	U	200	U	420	U
Trichloroethene	340	U	220	U	260		260	U	200	U	420	U
Trichlorofluoromethane	340	UJ	220	UJ	240	UJ	260	UJ	200	U	420	U
Vinyl Chloride	340	U	220	U	240	U	260	U	200	U	420	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP04		CM-SO-MW02-0606		CM-SO-MW02-0810		CM-SO-MW02-1820		CM-SO-MW02-6163		CM-SO-MW02-6466	
Sample Location	MW02		MW02		MW02		MW02		MW02		MW02	
Date Sampled	1/5/2001		1/5/2001		1/5/2001		1/5/2001		6/26/2001		7/2/2001	
Interval	4.0-6.0		6.0-8.0		8.0-10.0		18.0-20.0		61.0-63.0		64.0-66.0	
QC Identifier	Field Dup. CM-SO-MW02-0406		None		None		None		None		Field Dup. CM-SO-MW02-6466	
Volatile Organic Analysis (UG/KG)												
1,1,1,2-Tetrachloroethane		NA		NA		NA		NA		NA		NA
1,1,1-Trichloroethane	550	U	290	U	220	U	240	U	100	U	140	U
1,1,2,2-Tetrachloroethane	550	U	290	U	220	U	240	U	100	U	140	U
1,1,2-Trichloro-1,2,2-trifluoroethane	550	U	290	U	220	U	240	U	100	U	140	U
1,1,2-Trichloroethane	550	U	290	U	220	U	240	U	100	U	140	U
1,1-Dichloroethane	550	U	290	U	220	U	240	U	100	U	140	U
1,1-Dichloroethene	550	U	290	U	220	U	240	U	100	U	140	U
1,1-Dichloropropene		NA		NA		NA		NA		NA		NA
1,2,3-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,3-Trichloropropane		NA		NA		NA		NA		NA		NA
1,2,4-Trichlorobenzene	550	U	290	U	220	U	240	U	100	U	140	U
1,2,4-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,2-Dibromo-3-chloropropane	550	U	290	U	220	U	240	U		R		R
1,2-Dibromoethene	550	U	290	U	220	U	240	U	100	U	140	U
1,2-Dichlorobenzene	550	U	290	U	220	U	240	U	100	U	140	U
1,2-Dichloroethane	550	U	290	U	220	U	240	U	100	U	140	U
1,2-Dichloropropane	550	U	290	U	220	U	240	U	100	U	140	U
1,3,5-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	550	U	290	U	220	U	240	U	100	U	140	U
1,3-Dichloropropane		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	550	U	290	U	220	U	240	U	100	U	140	U
2,2-Dichloropropane		NA		NA		NA		NA		NA		NA
2-Butanone	300	J	140	J	51	J	240	U	100	U	140	U
2-Chlorotoluene		NA		NA		NA		NA		NA		NA
2-Hexanone	550	U	290	U	220	U	240	U	100	UJ	140	UJ
4-Chlorotoluene		NA		NA		NA		NA		NA		NA
4-Methyl-2-Pentanone	550	U	290	U	220	U	240	U	100	U	140	U
Acetone	1300	UJ	750	U	220	U	610	U	350	U	460	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP04		CM-SO-MW02-0606		CM-SO-MW02-0810		CM-SO-MW02-1820		CM-SO-MW02-6163		CM-SO-MW02-6466	
Sample Location	MW02		MW02		MW02		MW02		MW02		MW02	
Date Sampled	1/5/2001		1/5/2001		1/5/2001		1/5/2001		6/26/2001		7/2/2001	
Interval	4.0-6.0		6.0-8.0		8.0-10.0		18.0-20.0		61.0-63.0		64.0-66.0	
QC Identifier	Field Dup. CM-SO-MW02-0406		None		None		None		None		Field Dup. CM-SO-MW02-6466	
Benzene	550	U	290	U	220	U	240	U	100	U	140	U
Bromobenzene		NA		NA		NA		NA		NA		NA
Bromochloromethane		NA		NA		NA		NA		NA		NA
Bromodichloromethane	550	U	290	U	220	U	240	U	100	U	140	U
Bromoform	550	U	290	U	220	U	240	U	100	U	140	U
Bromomethane	550	U	290	U	220	U	240	U	100	U	140	U
Carbon Disulfide	550	U	290	U	220	U	240	U	100	U	140	U
Carbon Tetrachloride	550	U	290	U	220	U	240	U	100	U	140	U
Chlorobenzene	550	U	290	U	220	U	240	U	100	U	140	U
Chloroethane	550	U	290	U	220	U	240	U	100	U	140	U
Chloroform	550	U	290	U	220	U	240	U	100	U	140	U
Chloromethane	550	U	290	U	220	U	240	U	100	U	140	U
cis-1,2-Dichloroethene	550	U	290	U	220	U	240	U	100	U	140	U
cis-1,3-Dichloropropene	550	U	290	U	220	U	240	U	100	U	140	U
Cyclohexane	550	U	290	U	220	U	240	U	100	U	140	U
Dibromochloromethane	550	U	290	U	220	U	240	U	100	U	140	U
Dibromomethane		NA		NA		NA		NA		NA		NA
Dichlorodifluoromethane	550	U	290	U	220	U	240	U	100	U	140	U
Ethylbenzene	550	U	290	U	220	U	240	U	100	U	140	U
Hexachlorobutadiene		NA		NA		NA		NA		NA		NA
Isopropylbenzene	550	U	290	U	220	U	240	U	100	U	140	U
m&p-Xylene		NA		NA		NA		NA		NA		NA
Methyl Acetate	550	U	430	U	220	U	320	U	260	U	330	U
Methyl tert-Butyl Ether	550	U	290	U	220	U	240	U	100	U	140	U
Methylcyclohexane	550	U	290	U	220	U	240	U	100	U	140	U
Methylene Chloride	550	U	290	U	220	U	240	U	100	U	140	U
n-Butylbenzene		NA		NA		NA		NA		NA		NA
n-Propylbenzene		NA		NA		NA		NA		NA		NA
Naphthalene		NA		NA		NA		NA		NA		NA
o-Xylene		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP04		CM-SO-MW02-0608		CM-SO-MW02-0810		CM-SO-MW02-1820		CM-SO-MW02-6163		CM-SO-MW02-6466	
Sample Location	MW02		MW02		MW02		MW02		MW02		MW02	
Date Sampled	1/5/2001		1/5/2001		1/5/2001		1/5/2001		6/26/2001		7/2/2001	
Interval	4.0-6.0		6.0-8.0		8.0-10.0		18.0-20.0		61.0-63.0		64.0-66.0	
QC Identifier	Field Dup. CM-SO-MW02-0406		None		None		None		None		Field Dup. CM-SO-MW02-6466	
p-Isopropyltoluene		NA		NA		NA		NA		NA		NA
sec-Butylbenzene		NA		NA		NA		NA		NA		NA
Styrene	550	U	290	U	220	U	240	U	100	U	140	U
tert-Butylbenzene		NA		NA		NA		NA		NA		NA
Tetrachloroethene	550	U	290	U	220	U	240	U	100	U	140	U
Toluene	550	U	290	U	220	U	240	U	100	U	140	U
Total Volatile Organics		NA		NA		NA		NA		NA		NA
Total Xylenes	550	U	290	U	220	U	240	U	100	U	140	U
trans-1,2-Dichloroethene	550	U	290	U	220	U	240	U	100	U	140	U
trans-1,3-Dichloropropene	550	U	290	U	220	U	240	U	100	U	140	U
Trichloroethene	550	U	290	U	220	U	240	U	100	U	140	U
Trichlorofluoromethane	550	U	290	U	220	U	240	U	100	U	140	U
Vinyl Chloride	550	U	290	U	220	U	240	U	100	U	140	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02-0701		CM-SO-MW02-7272.2		CM-SO-MW03-0406		CM-SO-MW03-0608		CM-SO-MW04-0204		CM-SO-MW04-0406	
Sample Location	MW02		MW02		MW03		MW03		MW04		MW04	
Date Sampled	7/2/2001		7/3/2001		12/27/2000		12/27/2000		6/12/2001		6/12/2001	
Interval	64.0-66.0		72.0-72.2		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-MW02-6466		None		None		None		None		None	
Volatile Organic Analysis (UG/KG)												
1,1,1,2-Tetrachloroethane		NA		NA		NA		NA		NA		NA
1,1,1-Trichloroethane	100	U	120	U	350	U	290	U	500	U	180	U
1,1,2,2-Tetrachloroethane	100	U	120	U	350	U	290	U	500	U	180	U
1,1,2-Trichloro-1,2,2-trifluoroethane	100	U	120	U	350	U	290	U	500	UJ	180	UJ
1,1,2-Trichloroethane	100	U	120	U	350	U	290	U	500	U	180	U
1,1-Dichloroethane	100	U	120	U	350	U	290	U	500	U	180	U
1,1-Dichloroethene	100	U	120	U	350	U	290	UJ	500	UJ	180	U
1,1-Dichloropropene		NA		NA		NA		NA		NA		NA
1,2,3-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,3-Trichloropropane		NA		NA		NA		NA		NA		NA
1,2,4-Trichlorobenzene	100	U	120	U	350	U	290	U	500	U	180	U
1,2,4-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,2-Dibromo-3-chloropropane		R		R	350	U	290	U	500	U	180	U
1,2-Dibromoethane	100	U	120	U	350	U	290	U	500	U	180	U
1,2-Dichlorobenzene	100	U	120	U	350	U	290	U	500	U	180	U
1,2-Dichloroethane	100	U	120	U	350	U	290	U	500	U	180	U
1,2-Dichloropropane	100	U	120	U	350	U	290	U	500	U	180	U
1,3,5-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	100	U	120	U	350	U	290	U	500	U	180	U
1,3-Dichloropropane		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	100	U	120	U	350	U	290	U	500	U	180	U
2,2-Dichloropropane		NA		NA		NA		NA		NA		NA
2-Butanone	100	U	120	U	220	J	190	J	500	U	180	U
2-Chlorotoluene		NA		NA		NA		NA		NA		NA
2-Hexanone	100	UJ	120	UJ	350	U	290	U	500	U	180	U
4-Chlorotoluene		NA		NA		NA		NA		NA		NA
4-Methyl-2-Pentanone	100	U	120	U	350	U	290	U	500	U	180	U
Acetone	350	U	350	U	490	UJ	290	UJ	500	U	480	UJ

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02-0701		CM-SO-MW02-7272.2		CM-SO-MW03-0406		CM-SO-MW03-0608		CM-SO-MW04-0204		CM-SO-MW04-0406	
Sample Location	MW02		MW02		MW03		MW03		MW04		MW04	
Date Sampled	7/2/2001		7/3/2001		12/27/2000		12/27/2000		6/12/2001		6/12/2001	
Interval	64.0-66.0		72.0-72.2		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-MW02-6466		None		None		None		None		None	
Benzene	100	U	120	U	350	U	290	U	500	U	180	U
Bromobenzene		NA		NA		NA		NA		NA		NA
Bromochloromethane		NA		NA		NA		NA		NA		NA
Bromodichloromethane	100	U	120	U	350	U	290	U	500	U	180	U
Bromoform	100	U	120	U	350	U	290	U	500	U	180	U
Bromomethane	100	U	120	U	350	U	290	U	500	U	180	U
Carbon Disulfide	100	U	120	U	350	U	290	U	500	U	180	U
Carbon Tetrachloride	100	U	120	U	350	U	290	U	500	U	180	U
Chlorobenzene	100	U	120	U	350	U	290	U	500	U	180	U
Chloroethane	100	U	120	U	350	U	290	U	500	U	180	U
Chloroform	100	U	120	U	350	U	290	U	500	U	180	U
Chloromethane	100	U	120	U	350	U	290	U	500	U	180	U
cis-1,2-Dichloroethene	100	U	120	U	350	U	290	U	500	U	180	U
cis-1,3-Dichloropropene	100	U	120	U	350	U	290	U	500	U	180	U
Cyclohexane	100	U	120	U	350	U	290	U	500	U	180	U
Dibromochloromethane	100	U	120	U	350	U	290	U	500	U	180	U
Dibromomethane		NA		NA		NA		NA		NA		NA
Dichlorodifluoromethane	100	U	120	U	350	U	290	U	500	U	180	U
Ethylbenzene	100	U	120	U	350	U	290	U	500	U	180	U
Hexachlorobutadiene		NA		NA		NA		NA		NA		NA
Isopropylbenzene	100	U	120	U	350	U	290	U	500	U	180	U
m&p-Xylene		NA		NA		NA		NA		NA		NA
Methyl Acetate	250	U	260	U	390	TB	210	JTB	6200		180	U
Methyl tert-Butyl Ether	100	U	120	U	350	U	290	U	500	U	180	U
Methylcyclohexane	100	U	120	U	350	U	290	U	500	U	180	U
Methylene Chloride	100	U	120	U	78	JTB	87	JTB	500	U	180	U
n-Butylbenzene		NA		NA		NA		NA		NA		NA
n-Propylbenzene		NA		NA		NA		NA		NA		NA
Naphthalene		NA		NA		NA		NA		NA		NA
o-Xylene		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

US EPA ARCHIVE DOCUMENT

Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02-0701		CM-SO-MW02-7272.2		CM-SO-MW03-0406		CM-SO-MW03-0606		CM-SO-MW04-0204		CM-SO-MW04-0406	
Sample Location	MW02		MW02		MW03		MW03		MW04		MW04	
Date Sampled	7/2/2001		7/3/2001		12/27/2000		12/27/2000		6/12/2001		6/12/2001	
Interval	64.0-66.0		72.0-72.2		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-MW02-6466		None		None		None		None		None	
p-Isopropyltoluene		NA		NA		NA		NA		NA		NA
sec-Butylbenzene		NA		NA		NA		NA		NA		NA
Styrene	100	U	120	U	350	U	290	U	500	U	180	U
tert-Butylbenzene		NA		NA		NA		NA		NA		NA
Tetrachloroethene	28	J	120	U	490		160	J	500	U	180	U
Toluene	100	U	120	U	350	U	290	U	430	J	180	U
Total Volatile Organics		NA		NA		NA		NA		NA		NA
Total Xylenes	100	U	120	U	350	U	290	U	500	U	180	U
trans-1,2-Dichloroethene	100	U	120	U	350	U	290	U	500	U	180	U
trans-1,3-Dichloropropene	100	U	120	U	350	U	290	U	500	U	180	U
Trichloroethene	100	U	120	U	130	J	290	U	500	U	180	U
Trichlorofluoromethane	100	U	120	U	350	UJ	290	UJ	500	U	180	U
Vinyl Chloride	100	U	120	U	350	U	290	U	500	U	180	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW04-0608		CM-SO-MW04B-4244		CM-SO-DUP-04		CM-SO-MW05-0102		CM-SO-DUP-01		CM-SO-MW05-0204	
Sample Location	MW04		MW04B		MW04B		MW05		MW05		MW05	
Date Sampled	6/12/2001		8/2/2001		8/2/2001		6/18/2001		6/18/2001		6/18/2001	
Interval	6.0-8.0		42.0-44.0		42.0-44.0		1.0-2.0		1.0-2.0		2.0-4.0	
QC Identifier	None		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW05-0102		Field Dup. CM-SO-MW05-0102		None	
Volatile Organic Analysis (UG/KG)												
1,1,1,2-Tetrachloroethane		NA		NA		NA		NA		NA		NA
1,1,1-Trichloroethane	160	U	65	U	85	U	110	U	95	U	100	U
1,1,2,2-Tetrachloroethane	160	U	65	U	85	U	110	U	95	U	100	U
1,1,2-Trichloro-1,2,2-trifluoroethane	160	UJ	65	UJ	85	UJ	110	UJ	95	UJ	100	UJ
1,1,2-Trichloroethane	160	U	65	U	85	U	110	U	95	U	100	U
1,1-Dichloroethane	160	U	65	U	85	U	110	U	95	U	100	U
1,1-Dichloroethene	160	U	65	UJ	85	UJ	110	UJ	95	UJ	100	UJ
1,1-Dichloropropene		NA		NA		NA		NA		NA		NA
1,2,3-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,3-Trichloropropane		NA		NA		NA		NA		NA		NA
1,2,4-Trichlorobenzene	160	U	65	U	85	U	110	U	95	U	100	U
1,2,4-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,2-Dibromo-3-chloropropane	160	U	65	U	85	U	110	UJ	95	UJ	100	UJ
1,2-Dibromoethane	160	U	65	U	85	U	110	U	95	U	100	U
1,2-Dichlorobenzene	160	U	65	U	85	U	110	U	95	U	100	U
1,2-Dichloroethane	160	U	65	U	85	U	110	U	95	U	100	U
1,2-Dichloropropane	160	U	65	U	85	U	110	U	95	U	100	U
1,3,5-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	160	U	65	U	85	U	110	U	95	U	100	U
1,3-Dichloropropane		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	160	U	65	U	85	U	110	U	95	U	100	U
2,2-Dichloropropane		NA		NA		NA		NA		NA		NA
2-Butanone	160	U	65	U	85	U	110	UJ	95	UJ	100	UJ
2-Chlorotoluene		NA		NA		NA		NA		NA		NA
2-Hexanone	160	U	65	U	85	U	110	UJ	95	UJ	100	UJ
4-Chlorotoluene		NA		NA		NA		NA		NA		NA
4-Methyl-2-Pentanone	160	U	65	U	85	U	110	U	95	U	100	U
Acetone	470	UJ	73	UJ	110	UJ	320	UJ	340	UJ	340	UJ

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW04-0608		CM-SO-MW04B-4244		CM-SO-DUP-04		CM-SO-MW05-0102		CM-SO-DUP-01		CM-SO-MW05-0204	
Sample Location	MW04		MW04B		MW04B		MW05		MW05		MW05	
Date Sampled	6/12/2001		8/2/2001		8/2/2001		6/18/2001		6/18/2001		6/18/2001	
Interval	6.0-8.0		42.0-44.0		42.0-44.0		1.0-2.0		1.0-2.0		2.0-4.0	
QC Identifier	None		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW05-0102		Field Dup. CM-SO-MW05-0102		None	
Benzene	160	U	65	U	85	U	110	U	95	U	100	U
Bromobenzene		NA		NA		NA		NA		NA		NA
Bromochloromethane		NA		NA		NA		NA		NA		NA
Bromodichloromethane	160	U	65	U	85	U	110	U	95	U	100	U
Bromoform	160	U	65	U	85	U	110	U	95	U	100	U
Bromomethane	160	U	65	U	85	U	110	U	95	U	100	U
Carbon Disulfide	160	U	65	U	85	U	110	U	95	U	100	U
Carbon Tetrachloride	160	U	65	U	85	U	110	U	95	U	100	U
Chlorobenzene	160	U	65	U	85	U	110	U	95	U	100	U
Chloroethane	160	U	65	U	85	U	110	U	95	U	100	U
Chloroform	160	U	65	U	85	U	110	U	95	U	100	U
Chloromethane	160	U	65	U	85	U	110	U	95	U	100	U
cis-1,2-Dichloroethene	160	U	65	U	85	U	110	U	95	U	690	
cis-1,3-Dichloropropene	160	U	65	U	85	U	110	U	95	U	100	U
Cyclohexane	160	U	65	U	85	U	110	U	95	U	100	U
Dibromochloromethane	160	U	65	U	85	U	110	U	95	U	100	U
Dibromomethane		NA		NA		NA		NA		NA		NA
Dichlorodifluoromethane	160	U	65	U	85	U	110	U	95	U	100	U
Ethylbenzene	160	U	65	U	85	U	110	U	95	U	100	U
Hexachlorobutadiene		NA		NA		NA		NA		NA		NA
Isopropylbenzene	160	U	65	U	85	U	110	U	95	U	100	U
m&p-Xylene		NA		NA		NA		NA		NA		NA
Methyl Acetate	250	U	88	U	120	U	210	U	150	U	260	U
Methyl tert-Butyl Ether	160	U	65	U	85	U	110	U	95	U	100	U
Methylcyclohexane	160	U	65	U	85	U	110	U	95	U	100	U
Methylene Chloride	160	U	65	U	85	U	110	U	95	U	100	U
n-Butylbenzene		NA		NA		NA		NA		NA		NA
n-Propylbenzene		NA		NA		NA		NA		NA		NA
Naphthalene		NA		NA		NA		NA		NA		NA
o-Xylene		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW04-0608		CM-SO-MW04B-4244		CM-SO-DUP-04		CM-SO-MW05-0102		CM-SO-DUP-01		CM-SO-MW05-0204	
Sample Location	MW04		MW04B		MW04B		MW05		MW05		MW05	
Date Sampled	6/12/2001		8/2/2001		8/2/2001		6/18/2001		6/18/2001		6/18/2001	
Interval	6.0-8.0		42.0-44.0		42.0-44.0		1.0-2.0		1.0-2.0		2.0-4.0	
QC Identifier	None		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW05-0102		Field Dup. CM-SO-MW05-0102		None	
p-Isopropyltoluene		NA		NA		NA		NA		NA		NA
sec-Butylbenzene		NA		NA		NA		NA		NA		NA
Styrene	160	U	65	U	85	U	110	U	95	U	100	U
tert-Butylbenzene		NA		NA		NA		NA		NA		NA
Tetrachloroethene	160	U	65	U	85	U	110	U	95	U	230	
Toluene	160	U	65	U	85	U	44	J	95	U	100	U
Total Volatile Organics		NA		NA		NA		NA		NA		NA
Total Xylenes	160	U	65	U	85	U	110	U	95	U	100	U
trans-1,2-Dichloroethene	160	U	65	U	85	U	110	U	95	U	84	J
trans-1,3-Dichloropropene	160	U	65	U	85	U	110	U	95	U	100	U
Trichloroethene	160	U	65	U	85	U	110	U	95	U	970	
Trichlorofluoromethane	160	U	65	U	85	U	110	U	95	U	100	U
Vinyl Chloride	160	U	65	U	85	U	110	U	95	U	290	

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW05-0406		CM-SO-MW05-0810		CM-SO-MW05-1012		CM-SO-MW06-0204		CM-SO-MW06-DUP01		CM-SO-MW06-0406	
Sample Location	MW05		MW05		MW05		MW06		MW06		MW06	
Date Sampled	6/19/2001		6/19/2001		6/19/2001		12/19/2000		12/19/2000		12/19/2000	
Interval	4.0-6.0		8.0-10.0		10.0-12.0		2.0-4.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		Field Dup. CM-SO-MW06-0204		Field Dup. CM-SO-MW06-0204		None	
Volatile Organic Analysis (UG/KG)												
1,1,1,2-Tetrachloroethane		NA		NA		NA		NA		NA		NA
1,1,1-Trichloroethane	110	UJ	90	U	100	U	300	U	300	U	430	U
1,1,2,2-Tetrachloroethane	110	UJ	90	U	100	U	300	U	300	U	430	U
1,1,2-Trichloro-1,2,2-trifluoroethane	110	UJ	90	UJ	100	UJ	300	U	300	U	430	U
1,1,2-Trichloroethane	110	UJ	90	U	100	U	300	U	300	U	120	J
1,1-Dichloroethane	110	UJ	90	U	100	U	300	U	300	U	430	U
1,1-Dichloroethene	110	UJ	90	UJ	100	UJ	300	U	300	U	430	U
1,1-Dichloropropene		NA		NA		NA		NA		NA		NA
1,2,3-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,3-Trichloropropane		NA		NA		NA		NA		NA		NA
1,2,4-Trichlorobenzene	160	UJ	90	U	100	U	300	U	300	U	430	U
1,2,4-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,2-Dibromo-3-chloropropane	110	UJ	90	UJ	100	UJ	300	U	300	U	430	U
1,2-Dibromoethane	110	UJ	90	U	100	U	300	U	300	U	430	U
1,2-Dichlorobenzene	3400	J	26	J	40	J	300	U	300	U	6500	
1,2-Dichloroethane	110	UJ	90	U	100	U	300	U	300	U	160	J
1,2-Dichloropropane	110	UJ	90	U	100	U	300	U	300	U	430	U
1,3,5-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	1000	J	90	U	100	U	300	U	300	U	430	U
1,3-Dichloropropane		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	800	J	90	U	100	U	300	U	300	U	580	
2,2-Dichloropropane		NA		NA		NA		NA		NA		NA
2-Butanone	110	UJ	90	UJ	100	UJ	300	U	300	U	4000	
2-Chlorotoluene		NA		NA		NA		NA		NA		NA
2-Hexanone	110	UJ	90	UJ	100	UJ	300	U	300	U	430	U
4-Chlorotoluene		NA		NA		NA		NA		NA		NA
4-Methyl-2-Pentanone	110	UJ	90	U	100	U	300	U	300	U	430	U
Acetone	780	J	90	UJ	410	UJ	1200	UJ	1300	UJ	3500	UJ

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* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW05-0406		CM-SO-MW05-0610		CM-SO-MW05-1012		CM-SO-MW06-0204		CM-SO-MW06-DUP01		CM-SO-MW06-0406	
Sample Location	MW05		MW05		MW05		MW06		MW06		MW06	
Date Sampled	6/19/2001		6/19/2001		6/19/2001		12/19/2000		12/19/2000		12/19/2000	
Interval	4.0-6.0		8.0-10.0		10.0-12.0		2.0-4.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		Field Dup. CM-SO-MW06-0204		Field Dup. CM-SO-MW06-0204		None	
Benzene	110	UJ	90	U	100	U	300	U	300	U	430	U
Bromobenzene		NA		NA		NA		NA		NA		NA
Bromochloromethane		NA		NA		NA		NA		NA		NA
Bromodichloromethane	110	UJ	90	U	100	U	300	U	300	U	430	U
Bromoform	110	UJ	90	U	100	U	300	U	300	U	430	U
Bromomethane	110	UJ	90	U	100	U	300	U	300	U	430	U
Carbon Disulfide	110	UJ	90	U	100	U	300	U	300	U	430	U
Carbon Tetrachloride	110	UJ	90	U	100	U	300	U	300	U	430	U
Chlorobenzene	130	J	90	U	100	U	300	U	300	U	3300	
Chloroethane	110	UJ	90	U	100	U	300	U	300	U	430	U
Chloroform	110	UJ	90	U	100	U	300	U	300	U	430	U
Chloromethane	110	UJ	90	U	100	U	300	UJ	300	UJ	430	UJ
cis-1,2-Dichloroethene	3100	J	220		170		300	U	300	U	7200	
cis-1,3-Dichloropropene	110	UJ	90	U	100	U	300	U	300	U	430	U
Cyclohexane	110	UJ	90	U	100	U	300	U	300	U	530	J
Dibromochloromethane	110	UJ	90	U	100	U	300	U	300	U	430	U
Dibromomethane		NA		NA		NA		NA		NA		NA
Dichlorodifluoromethane	110	UJ	90	U	100	U	300	UJ	300	UJ	430	UJ
Ethylbenzene	150	J	90	U	100	U	300	U	300	U	2300	
Hexachlorobutadiene		NA		NA		NA		NA		NA		NA
Isopropylbenzene	120	J	90	U	100	U	300	U	300	U	430	U
m&p-Xylene		NA		NA		NA		NA		NA		NA
Methyl Acetate	340	UJ	150	U	160	U	560		500		1700	
Methyl tert-Butyl Ether	110	UJ	90	U	100	U	300	U	300	U	430	U
Methylcyclohexane	110	UJ	90	U	100	U	300	U	300	U	1400	
Methylene Chloride	110	UJ	58	J	85	J	300	U	300	U	430	U
n-Butylbenzene		NA		NA		NA		NA		NA		NA
n-Propylbenzene		NA		NA		NA		NA		NA		NA
Naphthalene		NA		NA		NA		NA		NA		NA
o-Xylene		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW05-0406		CM-SO-MW05-0810		CM-SO-MW05-1012		CM-SO-MW06-0204		CM-SO-MW06-DUP01		CM-SO-MW06-0406	
Sample Location	*MW05*		*MW05*		*MW05*		*MW06*		*MW06*		*MW06*	
Date Sampled	6/19/2001		6/19/2001		6/19/2001		12/19/2000		12/19/2000		12/19/2000	
Interval	4.0-6.0		8.0-10.0		10.0-12.0		2.0-4.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		Field Dup. CM-SO-MW06-0204		Field Dup. CM-SO-MW06-0204		None	
p-Isopropyltoluene		NA		NA		NA		NA		NA		NA
sec-Butylbenzene		NA		NA		NA		NA		NA		NA
Styrene	110	UJ	90	U	100	U	300	U	300	U	430	U
tert-Butylbenzene		NA		NA		NA		NA		NA		NA
Tetrachloroethene	300000	*J	9000	*	12000	*	300	U	300	U	160	J
Toluene	130	J	90	U	100	U	590		590		2500	
Total Volatile Organics		NA		NA		NA		NA		NA		NA
Total Xylenes	2500	J	43	J	88	J	300	U	300	U	9800	
trans-1,2-Dichloroethene	62	J	90	U	100	U	300	U	300	U	1200	
trans-1,3-Dichloropropene	110	UJ	90	U	100	U	300	U	300	U	430	U
Trichloroethene	26000	*J	290		300		300	U	300	U	3600	
Trichlorofluoromethane	110	UJ	90	U	100	U	300	U	300	U	430	U
Vinyl Chloride	550	J	90	U	100	U	300	UJ	300	UJ	370	J

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW06-0608		CM-SO-MW07-0304		CM-SO-MW07-0406		CM-SO-MW07-0808		CM-SO-MW08-0102		CM-SO-MW08-0204	
Sample Location	MW06		MW07		MW07		MW07		MW08		MW08	
Date Sampled	12/19/2000		12/21/2000		12/21/2000		12/21/2000		12/26/2000		12/26/2000	
Interval	6.0-8.0		3.0-4.0		4.0-6.0		8.0-8.0		1.0-2.0		2.0-4.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW08-0204	
Volatile Organic Analysis (UG/KG)												
1,1,1,2-Tetrachloroethane		NA		NA		NA		NA		NA		NA
1,1,1-Trichloroethane	190	U	500	U	260	U	280	U	260	U	320	U
1,1,2,2-Tetrachloroethane	190	U	500	U	260	U	280	U	260	U	320	U
1,1,2-Trichloro-1,2,2-trifluoroethane	190	U	500	U	260	U	280	U	260	U	320	U
1,1,2-Trichloroethane	190	U	500	U	260	U	280	U	260	U	320	U
1,1-Dichloroethane	190	U	500	U	260	U	280	U	260	U	320	U
1,1-Dichloroethene	190	U	500	U	260	U	280	U	260	U	320	U
1,1-Dichloropropene		NA		NA		NA		NA		NA		NA
1,2,3-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,3-Trichloropropane		NA		NA		NA		NA		NA		NA
1,2,4-Trichlorobenzene	190	U	500	U	260	U	280	U	260	U	320	U
1,2,4-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,2-Dibromo-3-chloropropane	190	U	500	U	260	U	280	U	61	J	320	U
1,2-Dibromoethane	190	U	500	U	260	U	280	U	260	U	320	U
1,2-Dichlorobenzene	91	J	500	U	260	U	280	U	1000		98	J
1,2-Dichloroethane	190	U	500	U	260	U	280	U	260	U	320	U
1,2-Dichloropropane	190	U	500	U	260	U	280	U	260	U	320	U
1,3,5-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	190	U	500	U	260	U	280	U	260	U	320	U
1,3-Dichloropropane		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	61	J	500	U	260	U	280	U	100	J	320	U
2,2-Dichloropropane		NA		NA		NA		NA		NA		NA
2-Butanone	190	U	150	J	260	UJ	280	UJ	260	U	320	UJ
2-Chlorotoluene		NA		NA		NA		NA		NA		NA
2-Hexanone	190	U	500	UJ	260	UJ	280	UJ	260	U	320	U
4-Chlorotoluene		NA		NA		NA		NA		NA		NA
4-Methyl-2-Pentanone	190	U	500	U	260	U	280	U	260	U	320	U
Acetone	720	UJ	640	UJ	260	UJ	1000	UJ	990	U	320	UJ

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW06-0608		CM-SO-MW07-0304		CM-SO-MW07-0408		CM-SO-MW07-0608		CM-SO-MW08-0102		CM-SO-MW08-0204	
Sample Location	MW06		MW07		MW07		MW07		MW08		MW08	
Date Sampled	12/19/2000		12/21/2000		12/21/2000		12/21/2000		12/26/2000		12/26/2000	
Interval	6.0-8.0		3.0-4.0		4.0-6.0		6.0-8.0		1.0-2.0		2.0-4.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW08-0204	
Benzene	190	U	500	U	260	U	280	U	220	J	320	U
Bromobenzene		NA		NA		NA		NA		NA		NA
Bromochloromethane		NA		NA		NA		NA		NA		NA
Bromodichloromethane	190	U	500	U	260	U	280	U	260	U	320	U
Bromoform	190	U	500	U	260	U	280	U	260	U	320	U
Bromomethane	190	U	500	U	260	U	280	U	260	U	320	U
Carbon Disulfide	190	U	500	U	260	U	280	U	260	U	320	U
Carbon Tetrachloride	190	U	500	U	260	U	280	U	260	U	320	U
Chlorobenzene	350		500	U	260	U	280	U	130	J	320	U
Chloroethane	190	U	500	U	260	U	280	U	260	U	320	U
Chloroform	190	U	500	U	260	U	280	U	260	U	320	U
Chloromethane	190	UJ	500	UJ	260	UJ	280	UJ	260	U	320	U
cis-1,2-Dichloroethene	42	J	500	U	260	U	280	U	260	U	320	U
cis-1,3-Dichloropropene	190	U	500	U	260	U	280	U	260	U	320	U
Cyclohexane	190	U	500	U	260	U	280	U	260	U	320	U
Dibromochloromethane	190	U	500	U	260	U	280	U	260	U	320	U
Dibromomethane		NA		NA		NA		NA		NA		NA
Dichlorodifluoromethane	190	UJ	500	UJ	260	UJ	280	UJ	260	U	320	U
Ethylbenzene	190	U	250	J	260	U	280	U	1300		320	U
Hexachlorobutadiene		NA		NA		NA		NA		NA		NA
Isopropylbenzene	190	U	500	U	260	U	280	U	360		320	U
m&p-Xylene		NA		NA		NA		NA		NA		NA
Methyl Acetate	190	U	1200	U	260	U	280	U	330	U	400	U
Methyl tert-Butyl Ether	190	U	500	U	260	U	280	U	260	U	320	U
Methylcyclohexane	270		500	U	260	U	280	U	210	J	320	U
Methylene Chloride	190	U	500	U	260	U	280	U	260	U	320	U
n-Butylbenzene		NA		NA		NA		NA		NA		NA
n-Propylbenzene		NA		NA		NA		NA		NA		NA
Naphthalene		NA		NA		NA		NA		NA		NA
o-Xylene		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW06-0608		CM-SO-MW07-0304		CM-SO-MW07-0406		CM-SO-MW07-0608		CM-SO-MW08-0102		CM-SO-MW08-0204	
Sample Location	MW06		MW07		MW07		MW07		MW08		MW08	
Date Sampled	12/19/2000		12/21/2000		12/21/2000		12/21/2000		12/26/2000		12/26/2000	
Interval	6.0-8.0		3.0-4.0		4.0-6.0		6.0-8.0		1.0-2.0		2.0-4.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW08-0204	
p-Isopropyltoluene		NA		NA		NA		NA		NA		NA
sec-Butylbenzene		NA		NA		NA		NA		NA		NA
Styrene	190	U	500	U	260	U	260	U	260	U	320	U
tert-Butylbenzene		NA		NA		NA		NA		NA		NA
Tetrachloroethene	190	U	500	U	260	U	260	U	260	U	320	U
Toluene	190	U	6200		260	U	260	U	560		320	U
Total Volatile Organics		NA		NA		NA		NA		NA		NA
Total Xylenes	220		500	U	260	U	260	U	7600		320	J
trans-1,2-Dichloroethene	190	U	500	U	260	U	260	U	260	U	320	U
trans-1,3-Dichloropropene	190	U	500	U	260	U	260	U	260	U	320	U
Trichloroethene	190	U	500	U	260	U	260	U	260	U	320	U
Trichlorofluoromethane	190	U	500	U	260	U	260	U	260	U	320	U
Vinyl Chloride	190	UJ	500	U	260	U	260	U	260	U	320	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02		CM-SO-MW08-0406		CM-SO-MW08-0606		CM-SO-MW09-0406		CM-SO-MW09-1011		CM-SO-MW14-0102	
Sample Location	MW08		MW08		MW08		MW09		MW09		MW14	
Date Sampled	12/26/2000		12/26/2000		12/26/2000		12/18/2000		12/18/2000		7/13/2001	
Interval	2.0-4.0		4.0-6.0		6.0-8.0		4.0-6.0		10.0-11.0		1.0-2.0	
QC Identifier	Field Dup. CM-SO-MW08-0204		None		None		None		None		Field Dup. CM-SO-MW14-0102	
Volatile Organic Analysis (UG/KG)												
1,1,1,2-Tetrachloroethane		NA		NA		NA		NA		NA		NA
1,1,1-Trichloroethane	210	U	300	U	270	U	260	U	180	U	110	U
1,1,2,2-Tetrachloroethane	210	U	300	U	270	U	260	U	180	U	110	U
1,1,2-Trichloro-1,2,2-trifluoroethane	210	U	300	U	270	U	260	U	180	U	110	U
1,1,2-Trichloroethane	210	U	300	U	270	U	260	U	180	U	110	U
1,1-Dichloroethane	210	U	300	U	270	U	260	U	180	U	110	U
1,1-Dichloroethene	210	U	300	U	270	U	260	U	180	U	26	J
1,1-Dichloropropene		NA		NA		NA		NA		NA		NA
1,2,3-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,3-Trichloropropane		NA		NA		NA		NA		NA		NA
1,2,4-Trichlorobenzene	210	U	300	U	270	U	260	U	180	U	110	U
1,2,4-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,2-Dibromo-3-chloropropane	210	U	300	U	270	U	240	J	180	U		R
1,2-Dibromoethane	210	U	300	U	270	U	260	U	180	U	110	U
1,2-Dichlorobenzene	65	J	300	U	270	U	260	U	180	U	1400	J
1,2-Dichloroethane	210	U	300	U	270	U	260	U	180	U	110	U
1,2-Dichloropropane	210	U	300	U	270	U	260	U	180	U	110	U
1,3,5-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	210	U	300	U	270	U	260	U	180	U	390	J
1,3-Dichloropropane		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	210	U	300	U	270	U	260	U	180	U	390	J
2,2-Dichloropropane		NA		NA		NA		NA		NA		NA
2-Butanone	230	J	300	U	270	U	260	U	180	U	110	U
2-Chlorotoluene		NA		NA		NA		NA		NA		NA
2-Hexanone	210	U	300	U	270	U	260	U	180	U	110	U
4-Chlorotoluene		NA		NA		NA		NA		NA		NA
4-Methyl-2-Pentanone	210	U	300	U	270	U	260	U	180	U	250	
Acetone	900	UJ	1200	U	270	UJ	1100	UJ	720	UJ	540	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02		CM-SO-MW08-0406		CM-SO-MW08-0608		CM-SO-MW09-0406		CM-SO-MW09-1011		CM-SO-MW14-0102	
Sample Location	MW08		MW08		MW08		MW09		MW09		MW14	
Date Sampled	12/26/2000		12/26/2000		12/26/2000		12/18/2000		12/18/2000		7/13/2001	
Interval	2.0-4.0		4.0-6.0		6.0-8.0		4.0-6.0		10.0-11.0		1.0-2.0	
QC Identifier	Field Dup. CM-SO-MW08-0204		None		None		None		None		Field Dup. CM-SO-MW14-0102	
Benzene	210	U	110	J	270	U	260	U	180	U	41	J
Bromobenzene		NA		NA		NA		NA		NA		NA
Bromochloromethane		NA		NA		NA		NA		NA		NA
Bromodichloromethane	210	U	300	U	270	U	260	U	180	U	110	U
Bromoform	210	U	300	U	270	U	260	U	180	U	110	U
Bromomethane	210	U	300	U	270	U	260	U	180	U	110	U
Carbon Disulfide	210	U	300	U	270	U	260	U	180	U	110	U
Carbon Tetrachloride	210	U	300	U	270	U	260	U	180	U	110	U
Chlorobenzene	210	U	200	J	270	U	260	U	180	U	94	J
Chloroethane	210	U	300	U	270	U	260	U	180	U	110	U
Chloroform	210	U	300	U	270	U	260	U	180	U	110	U
Chloromethane	210	U	300	U	270	U	260	UJ	180	UJ	110	U
cis-1,2-Dichloroethene	210	U	300	U	270	U	260	U	180	U	1400	
cis-1,3-Dichloropropene	210	U	300	U	270	U	260	U	180	U	110	U
Cyclohexane	210	U	300	U	270	U	260	U	180	U	110	U
Dibromochloromethane	210	U	300	U	270	U	260	U	180	U	110	U
Dibromomethane		NA		NA		NA		NA		NA		NA
Dichlorodifluoromethane	210	U	300	U	270	U	260	UJ	180	UJ	110	U
Ethylbenzene	210	U	300	U	270	U	260	U	180	U	120	
Hexachlorobutadiene		NA		NA		NA		NA		NA		NA
Isopropylbenzene	210	U	300	U	270	U	260	U	180	U	110	U
m&p-Xylene		NA		NA		NA		NA		NA		NA
Methyl Acetate	310	U	510	U	270	U	250	J	180	U	380	U
Methyl tert-Butyl Ether	210	U	300	U	270	U	260	U	180	U	110	U
Methylcyclohexane	210	U	300	U	270	U	260	U	180	U	110	U
Methylene Chloride	210	U	300	U	270	U	260	U	180	U	150	UJ
n-Butylbenzene		NA		NA		NA		NA		NA		NA
n-Propylbenzene		NA		NA		NA		NA		NA		NA
Naphthalene		NA		NA		NA		NA		NA		NA
o-Xylene		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02		CM-SO-MW08-0406		CM-SO-MW08-0608		CM-SO-MW09-0406		CM-SO-MW09-1011		CM-SO-MW14-0102	
Sample Location	MW08		MW08		MW08		MW09		MW09		MW14	
Date Sampled	12/26/2000		12/26/2000		12/26/2000		12/18/2000		12/18/2000		7/13/2001	
Interval	2.0-4.0		4.0-6.0		6.0-6.0		4.0-6.0		10.0-11.0		1.0-2.0	
QC Identifier	Field Dup. CM-SO-MW08-0204		None		None		None		None		Field Dup. CM-SO-MW14-0102	
p-Isopropyltoluene		NA		NA		NA		NA		NA		NA
sec-Butylbenzene		NA		NA		NA		NA		NA		NA
Styrene	210	U	300	U	270	U	260	U	180	U	110	U
tert-Butylbenzene		NA		NA		NA		NA		NA		NA
Tetrachloroethene	210	U	300	U	270	U	260	U	180	U	170	
Toluene	210	U	300	U	270	U	260	U	180	U	97	J
Total Volatile Organics		NA		NA		NA		NA		NA		NA
Total Xylenes	230		500		270	U	260	U	180	U	660	J
trans-1,2-Dichloroethene	210	U	300	U	270	U	260	U	180	U	180	
trans-1,3-Dichloropropene	210	U	300	U	270	U	260	U	180	U	110	U
Trichloroethene	210	U	300	U	270	U	260	U	180	U	2000	J
Trichlorofluoromethane	210	U	300	U	270	UJ	260	U	180	U	110	U
Vinyl Chloride	210	U	300	U	270	U	260	UJ	180	UJ	110	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP03-0701		CM-SO-MW14-0204		CM-SO-MW14-0607		CM-SO-MW14-0608		CM-SO-MW14-0708		CM-SO-MW14-5252.75	
Sample Location	MW14		MW14		MW14		MW14		MW14		MW14	
Date Sampled	7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/18/2001	
Interval	1.0-2.0		2.0-4.0		6.0-7.0		6.0-8.0		7.0-8.0		52.0-52.8	
QC Identifier	Field Dup. CM-SO-MW14-0102		None		None		None		None		None	
Volatile Organic Analysis (UG/KG)												
1,1,1,2-Tetrachloroethane		NA		NA		NA		NA		NA		NA
1,1,1-Trichloroethane	150	UJ	140	U	90	U		NA	75	U	90	U
1,1,2,2-Tetrachloroethane	150	UJ	140	U	90	U		NA	75	U	90	U
1,1,2-Trichloro-1,2,2-trifluoroethane	150	UJ	140	U	90	U		NA	75	U	90	U
1,1,2-Trichloroethane	150	UJ	140	U	90	U		NA	75	U	90	U
1,1-Dichloroethane	150	UJ	140	U	90	U		NA	75	U	90	U
1,1-Dichloroethene	150	UJ	140	U	90	U		NA	75	U	90	U
1,1-Dichloropropene		NA		NA		NA		NA		NA		NA
1,2,3-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,3-Trichloropropane		NA		NA		NA		NA		NA		NA
1,2,4-Trichlorobenzene	150	UJ	140	U	90	U		NA	75	U	90	U
1,2,4-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,2-Dibromo-3-chloropropane		R		R		R		NA		R		R
1,2-Dibromoethane	150	UJ	140	U	90	U		NA	75	U	90	U
1,2-Dichlorobenzene	4200	J	69	J	90	U		NA	75	U	90	U
1,2-Dichloroethene	150	UJ	140	U	90	U		NA	75	U	90	U
1,2-Dichloropropane	150	UJ	140	U	90	U		NA	75	U	90	U
1,3,5-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	150	UJ	140	U	90	U		NA	75	U	90	U
1,3-Dichloropropane		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	1100	J	140	U	90	U		NA	75	U	90	U
2,2-Dichloropropane		NA		NA		NA		NA		NA		NA
2-Butanone	150	UJ	140	U	90	U		NA	75	U	90	U
2-Chlorotoluene		NA		NA		NA		NA		NA		NA
2-Hexanone	150	UJ	140	U	90	U		NA	75	U	90	U
4-Chlorotoluene		NA		NA		NA		NA		NA		NA
4-Methyl-2-Pentanone	330	J	140	U	90	U		NA	75	U	90	U
Acetone	840	UJ	720	U	410	U		NA	310	U	360	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP03-0701		CM-SO-MW14-0204		CM-SO-MW14-0607		CM-SO-MW14-0808		CM-SO-MW14-0708		CM-SO-MW14-5252.75	
Sample Location	MW14		MW14		MW14		MW14		MW14		MW14	
Date Sampled	7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/18/2001	
Interval	1.0-2.0		2.0-4.0		6.0-7.0		6.0-8.0		7.0-8.0		52.0-52.8	
QC Identifier	Field Dup. CM-SO-MW14-0102		None		None		None		None		None	
Benzene	40	J	140	U	90	U		NA	75	U	90	U
Bromobenzene		NA		NA		NA		NA		NA		NA
Bromochloromethane		NA		NA		NA		NA		NA		NA
Bromodichloromethane	150	UJ	140	U	90	U		NA	75	U	90	U
Bromoform	150	UJ	140	U	90	U		NA	75	U	90	U
Bromomethane	150	UJ	140	U	90	U		NA	26	J	90	U
Carbon Disulfide	150	UJ	140	U	90	U		NA	75	U	90	U
Carbon Tetrachloride	150	UJ	140	U	90	U		NA	75	U	90	U
Chlorobenzene	130	J	140	U	90	U		NA	75	U	90	U
Chloroethane	150	UJ	140	U	90	U		NA	75	U	22	J
Chloroform	150	UJ	140	U	90	U		NA	75	U	90	U
Chloromethane	150	UJ	140	U	90	U		NA	75	U	90	UJ
cis-1,2-Dichloroethene	970	J	140	U	90	U		NA	75	U	90	U
cis-1,3-Dichloropropene	150	UJ	140	U	90	U		NA	75	U	90	U
Cyclohexane	150	UJ	140	U	90	U		NA	75	U	90	U
Dibromochloromethane	150	UJ	140	U	90	U		NA	75	U	90	U
Dibromomethane		NA		NA		NA		NA		NA		NA
Dichlorodifluoromethane	150	UJ	140	U	90	U		NA	75	U	90	UJ
Ethylbenzene	180	J	140	U	90	U		NA	75	U	90	U
Hexachlorobutadiene		NA		NA		NA		NA		NA		NA
Isopropylbenzene	150	UJ	140	U	90	U		NA	75	U	90	U
m&p-Xylene		NA		NA		NA		NA		NA		NA
Methyl Acetate	580	UJ	600	U	240	U		NA	180	U	210	U
Methyl tert-Butyl Ether	150	UJ	140	U	90	U		NA	75	U	90	U
Methylcyclohexane	150	UJ	140	U	90	U		NA	75	U	90	U
Methylene Chloride	150	UJ	140	U	90	U		NA	95	U	90	U
n-Butylbenzene		NA		NA		NA		NA		NA		NA
n-Propylbenzene		NA		NA		NA		NA		NA		NA
Naphthalene		NA		NA		NA		NA		NA		NA
o-Xylene		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

US EPA ARCHIVE DOCUMENT

Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP03-0701		CM-SO-MW14-0204		CM-SO-MW14-0607		CM-SO-MW14-0808		CM-SO-MW14-0708		CM-SO-MW14-5252.75	
Sample Location	MW14		MW14		MW14		MW14		MW14		MW14	
Date Sampled	7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/18/2001	
Interval	1.0-2.0		2.0-4.0		6.0-7.0		6.0-8.0		7.0-8.0		52.0-52.8	
QC Identifier	Field Dup. CM-SO-MW14-0102		None		None		None		None		None	
p-Isopropyltoluene		NA		NA		NA		NA		NA		NA
sec-Butylbenzene		NA		NA		NA		NA		NA		NA
Styrene	150	UJ	140	U	90	U		NA	75	U	90	U
tert-Butylbenzene		NA		NA		NA		NA		NA		NA
Tetrachloroethene	140	J	140	U	90	U		NA	130		90	U
Toluene	93	J	140	U	90	U		NA	75	U	90	U
Total Volatile Organics		NA		NA		NA		NA		NA		NA
Total Xylenes	950	J	140	U	90	U		NA	75	U	90	U
trans-1,2-Dichloroethene	150	J	140	U	90	U		NA	75	U	90	U
trans-1,3-Dichloropropene	150	UJ	140	U	90	U		NA	75	U	90	U
Trichloroethene	970	J	140	U	90	U		NA	75	U	90	U
Trichlorofluoromethane	150	UJ	140	U	90	U		NA	75	U	90	U
Vinyl Chloride	150	UJ	140	U	90	U		NA	75	U	90	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW15D-0204		CM-SO-MW15D-0406		CM-SO-DUP-05		CM-SO-DUP05-0801		CM-SO-MW15D-0606		CM-SO-MW15D-4850	
Sample Location	MW15D		MW15D		MW15D		MW15D		MW15D		MW15D	
Date Sampled	8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/8/2001	
Interval	2.0-4.0		4.0-6.0		4.0-6.0		4.0-6.0		6.0-8.0		48.0-50.0	
QC Identifier	None		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		None		None	
Volatile Organic Analysis (UG/KG)												
1,1,1,2-Tetrachloroethane		NA		NA		NA		NA		NA		NA
1,1,1-Trichloroethane	140	U	120	U	100	U		NA	110	U	100	U
1,1,2,2-Tetrachloroethane	140	U	120	U	100	U		NA	110	U	100	U
1,1,2-Trichloro-1,2,2-trifluoroethane	140	U	120	U	100	U		NA	110	U	100	U
1,1,2-Trichloroethane	140	U	120	U	100	U		NA	110	U	100	U
1,1-Dichloroethane	140	U	120	U	100	U		NA	110	U	100	U
1,1-Dichloroethene	140	U	120	U	100	U		NA	110	U	100	U
1,1-Dichloropropene		NA		NA		NA		NA		NA		NA
1,2,3-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,3-Trichloropropane		NA		NA		NA		NA		NA		NA
1,2,4-Trichlorobenzene	140	U	120	U	100	U		NA	110	U	100	U
1,2,4-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,2-Dibromo-3-chloropropane		R		R		R		NA		R		R
1,2-Dibromoethane	140	U	120	U	100	U		NA	110	U	100	U
1,2-Dichlorobenzene	140	U	120	U	100	U		NA	110	U	100	U
1,2-Dichloroethane	140	U	120	U	100	U		NA	110	U	100	U
1,2-Dichloropropane	140	U	120	U	100	U		NA	110	U	100	U
1,3,5-Trimethylbenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	140	U	120	U	100	U		NA	110	U	100	U
1,3-Dichloropropane		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	140	U	120	U	100	U		NA	110	U	100	U
2,2-Dichloropropane		NA		NA		NA		NA		NA		NA
2-Butanone	140	U	120	U	100	U		NA	110	U	100	U
2-Chlorotoluene		NA		NA		NA		NA		NA		NA
2-Hexanone	140	U	120	U	100	U		NA	110	U	100	U
4-Chlorotoluene		NA		NA		NA		NA		NA		NA
4-Methyl-2-Pentanone	140	U	120	U	100	U		NA	110	U	100	U
Acetone	500	U	490	U	410	U		NA	400	U	340	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW15D-0204		CM-SO-MW15D-0406		CM-SO-DUP-05		CM-SO-DUP05-0801		CM-SO-MW15D-0808		CM-SO-MW15D-4850	
Sample Location	MW15D		MW15D		MW15D		MW15D		MW15D		MW15D	
Date Sampled	8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/8/2001	
Interval	2.0-4.0		4.0-6.0		4.0-6.0		4.0-6.0		6.0-8.0		48.0-50.0	
QC Identifier	None		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		None		None	
Benzene	140	U	120	U	100	U		NA	110	U	100	U
Bromobenzene		NA		NA		NA		NA		NA		NA
Bromochloromethane		NA		NA		NA		NA		NA		NA
Bromodichloromethane	140	U	120	U	100	U		NA	110	U	100	U
Bromoform	140	U	120	U	100	U		NA	110	U	100	U
Bromomethane	140	U	120	U	100	U		NA	110	U	100	U
Carbon Disulfide	140	UJ	120	UJ	100	UJ		NA	110	UJ	100	UJ
Carbon Tetrachloride	140	U	120	U	100	U		NA	110	U	100	U
Chlorobenzene	140	U	120	U	100	U		NA	110	U	100	U
Chloroethane	110	JTB	120	U	100	U		NA	110	U	100	U
Chloroform	140	U	120	U	100	U		NA	110	U	100	U
Chloromethane	140	U	120	U	100	U		NA	110	U	100	U
cis-1,2-Dichloroethene	140	U	120	U	100	U		NA	110	U	100	U
cis-1,3-Dichloropropene	140	U	120	U	100	U		NA	110	U	100	U
Cyclohexane	140	U	120	U	100	U		NA	110	U	100	U
Dibromochloromethane	140	U	120	U	100	U		NA	110	U	100	U
Dibromomethane		NA		NA		NA		NA		NA		NA
Dichlorodifluoromethane	140	U	120	U	100	U		NA	110	U	100	U
Ethylbenzene	140	U	120	U	100	U		NA	110	U	100	U
Hexachlorobutadiene		NA		NA		NA		NA		NA		NA
Isopropylbenzene	140	U	120	U	100	U		NA	110	U	100	U
m&p-Xylene		NA		NA		NA		NA		NA		NA
Methyl Acetate	410	U	490	U	460	U		NA	350	U	200	U
Methyl tert-Butyl Ether	140	U	120	U	100	U		NA	110	U	100	U
Methylcyclohexane	140	U	120	U	100	U		NA	110	U	100	U
Methylene Chloride	140	U	120	U	100	U		NA	110	U	100	U
n-Butylbenzene		NA		NA		NA		NA		NA		NA
n-Propylbenzene		NA		NA		NA		NA		NA		NA
Naphthalene		NA		NA		NA		NA		NA		NA
o-Xylene		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW15D-0204		CM-SO-MW15D-0406		CM-SO-DUP-05		CM-SO-DUP05-0601		CM-SO-MW15D-0608		CM-SO-MW15D-4650	
Sample Location	MW15D		MW15D		MW15D		MW15D		MW15D		MW15D	
Date Sampled	8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/8/2001	
Interval	2.0-4.0		4.0-6.0		4.0-6.0		4.0-6.0		6.0-8.0		48.0-50.0	
QC Identifier	None		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		None		None	
p-Isopropyltoluene		NA		NA		NA		NA		NA		NA
sec-Butylbenzene		NA		NA		NA		NA		NA		NA
Styrene	140	U	120	U	100	U		NA	110	U	100	U
tert-Butylbenzene		NA		NA		NA		NA		NA		NA
Tetrachloroethene	140	U	120	U	100	U		NA	110	U	100	U
Toluene	140	U	35	J	42	J		NA	110	U	100	U
Total Volatile Organics		NA		NA		NA		NA		NA		NA
Total Xylenes	140	U	120	U	100	U		NA	110	U	100	U
trans-1,2-Dichloroethene	140	U	120	U	100	U		NA	110	U	100	U
trans-1,3-Dichloropropene	140	U	120	U	100	U		NA	110	U	100	U
Trichloroethene	140	U	120	U	100	U		NA	110	U	100	U
Trichlorofluoromethane	140	U	120	U	100	U		NA	110	U	100	U
Vinyl Chloride	140	U	120	U	100	U		NA	110	U	100	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB-14-271-0102		CM-SO-SB-14-271-0204		CM-SO-SB-14-271-0406		CM-SO-SB-14-271-0608		CM-SO-SB-14-271-1416	
Sample Location	SB-14-271		SB-14-271		SB-14-271		SB-14-271		SB-14-271	
Date Sampled	8/21/2001		8/21/2001		8/21/2001		8/21/2001		8/21/2001	
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		14.0-16.0	
QC Identifier	None		None		None		None		None	
Volatile Organic Analysis (UG/KG)										
1,1,1,2-Tetrachloroethane		NA		NA		NA		NA		NA
1,1,1-Trichloroethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
1,1,2,2-Tetrachloroethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
1,1,2-Trichloroethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
1,1-Dichloroethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
1,1-Dichloroethene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
1,1-Dichloropropene		NA		NA		NA		NA		NA
1,2,3-Trichlorobenzene		NA		NA		NA		NA		NA
1,2,3-Trichloropropane		NA		NA		NA		NA		NA
1,2,4-Trichlorobenzene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
1,2,4-Trimethylbenzene		NA		NA		NA		NA		NA
1,2-Dibromo-3-chloropropane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
1,2-Dibromoethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
1,2-Dichlorobenzene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
1,2-Dichloroethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
1,2-Dichloropropane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
1,3,5-Trimethylbenzene		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
1,3-Dichloropropane		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
2,2-Dichloropropane		NA		NA		NA		NA		NA
2-Butanone	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
2-Chlorotoluene		NA		NA		NA		NA		NA
2-Hexanone	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
4-Chlorotoluene		NA		NA		NA		NA		NA
4-Methyl-2-Pentanone	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Acetone	210	UJ	130	UJ	220	UJ	100	UJ	100	UJ

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB-14-271-0102		CM-SO-SB-14-271-0204		CM-SO-SB-14-271-0406		CM-SO-SB-14-271-0608		CM-SO-SB-14-271-1416	
Sample Location	SB-14-271		SB-14-271		SB-14-271		SB-14-271		SB-14-271	
Date Sampled	6/21/2001		6/21/2001		6/21/2001		6/21/2001		6/21/2001	
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		14.0-16.0	
QC Identifier	None		None		None		None		None	
Benzene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Bromobenzene		NA		NA		NA		NA		NA
Bromochloromethane		NA		NA		NA		NA		NA
Bromodichloromethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Bromoform	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Bromomethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Carbon Disulfide	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Carbon Tetrachloride	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Chlorobenzene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Chloroethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Chloroform	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Chloromethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
cis-1,2-Dichloroethene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
cis-1,3-Dichloropropene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Cyclohexane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Dibromochloromethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Dibromomethane		NA		NA		NA		NA		NA
Dichlorodifluoromethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Ethylbenzene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Hexachlorobutadiene		NA		NA		NA		NA		NA
Isopropylbenzene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
m&p-Xylene		NA		NA		NA		NA		NA
Methyl Acetate	320	UJ	270	UJ	110	UJ	140	UJ	130	UJ
Methyl tert-Butyl Ether	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Methylcyclohexane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Methylene Chloride	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
n-Butylbenzene		NA		NA		NA		NA		NA
n-Propylbenzene		NA		NA		NA		NA		NA
Naphthalene		NA		NA		NA		NA		NA
o-Xylene		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB-14-271-0102		CM-SO-SB-14-271-0204		CM-SO-SB-14-271-0406		CM-SO-SB-14-271-0606		CM-SO-SB-14-271-1416	
Sample Location	SB-14-271		SB-14-271		SB-14-271		SB-14-271		SB-14-271	
Date Sampled	6/21/2001		6/21/2001		6/21/2001		6/21/2001		6/21/2001	
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		14.0-16.0	
QC Identifier	None		None		None		None		None	
p-Isopropyltoluene		NA		NA		NA		NA		NA
sec-Butylbenzene		NA		NA		NA		NA		NA
Styrene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
tert-Butylbenzene		NA		NA		NA		NA		NA
Tetrachloroethene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Toluene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Total Volatile Organics		NA		NA		NA		NA		NA
Total Xylenes	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
trans-1,2-Dichloroethene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
trans-1,3-Dichloropropene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Trichloroethene	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Trichlorofluoromethane	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ
Vinyl Chloride	120	UJ	130	UJ	110	UJ	100	UJ	100	UJ

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB02-0204		CM-SO-DUP03		CM-SO-SB02-0406		CM-SO-SB02-0608		CM-SO-SB03-0204		CM-SO-SB03-0406		CM-SO-DUP05
Sample Location	SB02		SB02		SB02		SB02		SB03		SB03		SB03
Date Sampled	1/3/2001		1/3/2001		1/3/2001		1/3/2001		1/9/2001		1/9/2001		1/9/2001
Interval	2.0-4.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0		4.0-6.0
QC Identifier	Field Dup. CM-SO-SB02-0204		Field Dup. CM-SO-SB02-0204		None		None		None		Field Dup. CM-SO-SB03-0406		Field Dup. CM-SO-SB03-0406
Volatile Organic Analysis (UG/KG)													
1,1,1,2-Tetrachloroethane		NA		NA		NA		NA		NA		NA	
1,1,1-Trichloroethane	380	U		NA	260	U	220	U	300	U	180	U	200
1,1,2,2-Tetrachloroethane	380	U		NA	260	U	220	U	300	U	180	U	200
1,1,2-Trichloro-1,2,2-trifluoroethane	380	U		NA	260	U	220	U	300	U	180	U	200
1,1,2-Trichloroethane	380	U		NA	260	U	220	U	300	U	180	U	200
1,1-Dichloroethane	380	U		NA	260	U	220	U	300	U	180	U	200
1,1-Dichloroethene	380	U		NA	260	U	220	U	300	U	180	U	200
1,1-Dichloropropene		NA		NA		NA		NA		NA		NA	
1,2,3-Trichlorobenzene		NA		NA		NA		NA		NA		NA	
1,2,3-Trichloropropane		NA		NA		NA		NA		NA		NA	
1,2,4-Trichlorobenzene	380	UJ		NA	260	UJ	220	UJ	300	U	180	U	200
1,2,4-Trimethylbenzene		NA		NA		NA		NA		NA		NA	
1,2-Dibromo-3-chloropropane	380	UJ		NA	260	UJ	220	UJ	300	UJ	180	UJ	200
1,2-Dibromoethane	380	U		NA	260	U	220	U	300	U	180	U	200
1,2-Dichlorobenzene	380	U		NA	260	U	220	U	300	U	180	U	200
1,2-Dichloroethane	380	U		NA	260	U	220	U	300	U	180	U	200
1,2-Dichloropropane	380	U		NA	260	U	220	U	300	U	180	U	200
1,3,5-Trimethylbenzene		NA		NA		NA		NA		NA		NA	
1,3-Dichlorobenzene	380	U		NA	260	U	220	U	300	U	180	U	200
1,3-Dichloropropane		NA		NA		NA		NA		NA		NA	
1,4-Dichlorobenzene	380	U		NA	260	U	220	U	300	U	180	U	200
2,2-Dichloropropane		NA		NA		NA		NA		NA		NA	
2-Butanone	380	U		NA	260	U	44	J	300	U	180	U	200
2-Chlorotoluene		NA		NA		NA		NA		NA		NA	
2-Hexanone	380	U		NA	260	U	220	U	300	U	180	U	200
4-Chlorotoluene		NA		NA		NA		NA		NA		NA	
4-Methyl-2-Pentanone	380	U		NA	260	U	65	J	300	U	180	U	200
Acetone	490	U		NA	660	U	220	U	500	U	440	U	390

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB02-0204		CM-SO-DUP03		CM-SO-SB02-0406		CM-SO-SB02-0606		CM-SO-SB03-0204		CM-SO-SB03-0406		CM-SO-DUP05
Sample Location	SB02		SB02		SB02		SB02		SB03		SB03		SB03
Date Sampled	1/3/2001		1/3/2001		1/3/2001		1/3/2001		1/9/2001		1/9/2001		1/9/2001
Interval	2.0-4.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0		4.0-6.0
QC Identifier	Field Dup. CM-SO-SB02-0204		Field Dup. CM-SO-SB02-0204		None		None		None		Field Dup. CM-SO-SB03-0406		Field Dup. CM-SO-SB03-0406
Benzene	380	U		NA	260	U	220	U	300	U	180	U	200
Bromobenzene		NA		NA		NA		NA		NA		NA	
Bromochloromethane		NA		NA		NA		NA		NA		NA	
Bromodichloromethane	380	U		NA	260	U	220	U	300	U	180	U	200
Bromoform	380	U		NA	260	U	220	U	300	U	180	U	200
Bromomethane	380	U		NA	260	U	220	U	300	U	180	U	200
Carbon Disulfide	380	U		NA	260	U	220	U	300	U	180	U	200
Carbon Tetrachloride	380	U		NA	260	U	220	U	300	U	180	U	200
Chlorobenzene	630			NA	1000		570		300	U	180	U	200
Chloroethane	380	U		NA	260	U	220	U	300	U	180	U	200
Chloroform	380	U		NA	260	U	220	U	300	U	180	U	200
Chloromethane	380	U		NA	260	U	220	U	300	U	180	U	200
cis-1,2-Dichloroethene	380	U		NA	260	U	220	U	320		180	U	200
cis-1,3-Dichloropropene	380	U		NA	260	U	220	U	300	U	180	U	200
Cyclohexane	380	U		NA	260	U	220	U	300	U	180	U	200
Dibromochloromethane	380	U		NA	260	U	220	U	300	U	180	U	200
Dibromomethane		NA		NA		NA		NA		NA		NA	
Dichlorodifluoromethane	380	U		NA	260	U	220	U	300	U	180	U	200
Ethylbenzene	380	U		NA	260	U	220	U	300	U	180	U	200
Hexachlorobutadiene		NA		NA		NA		NA		NA		NA	
Isopropylbenzene	380	U		NA	260	U	220	U	300	U	180	U	200
m&p-Xylene		NA		NA		NA		NA		NA		NA	
Methyl Acetate	610	U		NA	340	U	220	U	320	U	180	U	220
Methyl tert-Butyl Ether	380	U		NA	260	U	220	U	300	U	180	U	200
Methylcyclohexane	380	U		NA	260	U	220	U	300	U	180	U	200
Methylene Chloride	380	U		NA	260	U	220	U	300	U	180	U	200
n-Butylbenzene		NA		NA		NA		NA		NA		NA	
n-Propylbenzene		NA		NA		NA		NA		NA		NA	
Naphthalene		NA		NA		NA		NA		NA		NA	
o-Xylene		NA		NA		NA		NA		NA		NA	

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

US EPA ARCHIVE DOCUMENT

Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB02-0204		CM-SO-DUP03		CM-SO-SB02-0406		CM-SO-SB02-0606		CM-SO-SB03-0204		CM-SO-SB03-0406		CM-SO-DUP05
Sample Location	SB02		SB02		SB02		SB02		SB03		SB03		SB03
Date Sampled	1/3/2001		1/3/2001		1/3/2001		1/3/2001		1/9/2001		1/9/2001		1/9/2001
Interval	2.0-4.0		2.0-4.0		4.0-6.0		6.0-6.0		2.0-4.0		4.0-6.0		4.0-6.0
QC Identifier	Field Dup. CM-SO-SB02-0204		Field Dup. CM-SO-SB02-0204		None		None		None		Field Dup. CM-SO-SB03-0406		Field Dup. CM-SO-SB03-0406
p-Isopropyltoluene		NA		NA		NA		NA		NA		NA	
sec-Butylbenzene		NA		NA		NA		NA		NA		NA	
Styrene	360	U		NA	260	U	220	U	300	U	160	U	200
tert-Butylbenzene		NA		NA		NA		NA		NA		NA	
Tetrachloroethene	360	U		NA	260	U	220	U	430		160	U	200
Toluene	360	U		NA	260	U	220	U	300	U	160	U	200
Total Volatile Organics		NA		NA		NA		NA		NA		NA	
Total Xylenes	360	U		NA	260	U	220	U	300	U	160	U	200
trans-1,2-Dichloroethene	360	U		NA	260	U	220	U	300	U	160	U	200
trans-1,3-Dichloropropene	360	U		NA	260	U	220	U	300	U	160	U	200
Trichloroethene	360	U		NA	260	U	220	U	160	J	160	U	200
Trichlorofluoromethane	360	U		NA	260	U	220	U	300	U	160	U	200
Vinyl Chloride	360	U		NA	260	U	220	U	76	J	160	U	200

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number		CM-SO-SB03-0606		CM-SO-SB03-1820	
Sample Location		SB03		SB03	
Date Sampled		1/9/2001		1/9/2001	
Interval		6.0-6.0		18.0-20.0	
QC Identifier		None		None	
Volatile Organic Analysis (UG/KG)					
1,1,1,2-Tetrachloroethane	NA		NA		NA
1,1,1-Trichloroethane	U	190	U	170	U
1,1,2,2-Tetrachloroethane	U	190	U	170	U
1,1,2-Trichloro-1,2,2-trifluoroethane	U	190	U	170	U
1,1,2-Trichloroethane	U	190	U	170	U
1,1-Dichloroethane	U	190	U	170	U
1,1-Dichloroethene	U	190	U	170	U
1,1-Dichloropropene	NA		NA		NA
1,2,3-Trichlorobenzene	NA		NA		NA
1,2,3-Trichloropropane	NA		NA		NA
1,2,4-Trichlorobenzene	U	190	U	170	U
1,2,4-Trimethylbenzene	NA		NA		NA
1,2-Dibromo-3-chloropropane	UJ	190	UJ	170	UJ
1,2-Dibromoethane	U	190	U	170	U
1,2-Dichlorobenzene	U	190	U	170	U
1,2-Dichloroethane	U	190	U	170	U
1,2-Dichloropropane	U	190	U	170	U
1,3,5-Trimethylbenzene	NA		NA		NA
1,3-Dichlorobenzene	U	190	U	170	U
1,3-Dichloropropane	NA		NA		NA
1,4-Dichlorobenzene	U	190	U	170	U
2,2-Dichloropropane	NA		NA		NA
2-Butanone	U	190	U	170	U
2-Chlorotoluene	NA		NA		NA
2-Hexanone	U	190	U	170	U
4-Chlorotoluene	NA		NA		NA
4-Methyl-2-Pentanone	U	190	U	170	U
Acetone	U	190	U	240	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number		CM-SO-SB03-0608		CM-SO-SB03-1820	
Sample Location		SB03		SB03	
Date Sampled		1/9/2001		1/9/2001	
Interval		6.0-8.0		18.0-20.0	
QC Identifier		None		None	
Benzene	U	190	U	170	U
Bromobenzene	NA		NA		NA
Bromochloromethane	NA		NA		NA
Bromodichloromethane	U	190	U	170	U
Bromoform	U	190	U	170	U
Bromomethane	U	190	U	170	U
Carbon Disulfide	U	190	U	170	U
Carbon Tetrachloride	U	190	U	170	U
Chlorobenzene	U	190	U	170	U
Chloroethane	U	190	U	170	U
Chloroform	U	190	U	170	U
Chloromethane	U	190	U	170	U
cis-1,2-Dichloroethene	U	190	U	170	U
cis-1,3-Dichloropropene	U	190	U	170	U
Cyclohexane	U	190	U	170	U
Dibromochloromethane	U	190	U	170	U
Dibromomethane	NA		NA		NA
Dichlorodifluoromethane	U	190	U	170	U
Ethylbenzene	U	190	U	170	U
Hexachlorobutadiene	NA		NA		NA
Isopropylbenzene	U	190	U	170	U
m&p-Xylene	NA		NA		NA
Methyl Acetate	U	190	U	170	U
Methyl tert-Butyl Ether	U	190	U	170	U
Methylcyclohexane	U	190	U	170	U
Methylene Chloride	U	190	U	170	U
n-Butylbenzene	NA		NA		NA
n-Propylbenzene	NA		NA		NA
Naphthalene	NA		NA		NA
o-Xylene	NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical VOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number		CM-SO-SB03-0608		CM-SO-SB03-1820	
Sample Location		SB03		SB03	
Date Sampled		1/9/2001		1/9/2001	
Interval		6.0-8.0		18.0-20.0	
QC Identifier		None		None	
p-Isopropyltoluene	NA		NA		NA
sec-Butylbenzene	NA		NA		NA
Styrene	U	190	U	170	U
tert-Butylbenzene	NA		NA		NA
Tetrachloroethene	U	190	U	170	U
Toluene	U	190	U	170	U
Total Volatile Organics	NA		NA		NA
Total Xylenes	U	190	U	170	U
trans-1,2-Dichloroethene	U	190	U	170	U
trans-1,3-Dichloropropene	U	190	U	170	U
Trichloroethene	U	190	U	170	U
Trichlorofluoromethane	U	190	U	170	U
Vinyl Chloride	U	190	U	170	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW01-0102		CM-SO-MW01-0204		CM-SO-MW01-0406		CM-SO-MW01-0608		CM-SO-MW02-0204		CM-SO-MW02-0406	
Sample Location	MW01		MW01		MW01		MW01		MW02		MW02	
Date Sampled	12/28/2000		12/28/2000		12/28/2000		12/28/2000		1/5/2001		1/5/2001	
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW02-0406	
Semivolatile Organic Analysis (UG/KG)												
1,1'-Biphenyl	380	U	1600	U	400	U	380	U	380	U		NA
1,2,4-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,4- TRIMETHYLBENZENE		NA		NA		NA		NA		NA		NA
1,2-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene		NA		NA		NA		NA		NA		NA
2,2'-oxybis(1-Chloropropane)	380	U	1600	U	400	U	380	U	380	U		NA
2,4,5-Trichlorophenol	950	U	4000	U	73	J	950	U	970	U		NA
2,4,6-Trichlorophenol	380	U	1600	U	400	U	380	U	380	U		NA
2,4-Dichlorophenol	380	U	1600	U	400	U	380	U	380	U		NA
2,4-Dimethylphenol	380	U	1600	U	400	U	380	U	380	U		NA
2,4-Dinitrophenol	950	U	4000	U	1000	U	950	U	970	U		NA
2,4-Dinitrotoluene	380	U	1600	U	400	U	380	U	380	U		NA
2,6-Dinitrotoluene	380	U	1600	U	400	U	380	U	380	U		NA
2-Chloronaphthalene	380	U	1600	U	400	U	380	U	380	U		NA
2-Chlorophenol	380	U	1600	U	400	U	380	U	380	U		NA
2-Methylnaphthalene	380	U	1600	U	400	U	380	U	380	U		NA
2-Methylphenol	380	U	1600	U	400	U	380	U	380	U		NA
2-Nitroaniline	950	U	4000	U	1000	U	950	U	970	U		NA
2-Nitrophenol	380	U	1600	U	400	U	380	U	380	U		NA
3+4-Methylphenols		NA		NA		NA		NA		NA		NA
3,3'-Dichlorobenzidine	380	U	1600	U	400	U	380	U	380	U		NA
3-Nitroaniline	950	U	4000	U	1000	U	950	U	970	U		NA
4,6-Dinitro-2-methylphenol	950	U	4000	U	1000	U	950	J	970	U		NA
4-Bromophenyl-phenylether	380	U	1600	U	400	U	380	U	380	U		NA
4-Chloro-3-methylphenol	380	U	1600	U	400	U	380	U	380	U		NA
4-Chloroaniline	380	U	1600	U	400	U	380	U	380	U		NA
4-Chlorophenyl-phenylether	380	U	1600	U	400	U	380	U	380	U		NA
4-Methylphenol		R		R		R		R	380	U		NA

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Analytical SVOC Results from Subsurface Samples
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North Providence, Rhode Island

Sample Number	CM-SO-MW01-0102		CM-SO-MW01-0204		CM-SO-MW01-0406		CM-SO-MW01-0608		CM-SO-MW02-0204		CM-SO-MW02-0406	
Sample Location	MW01		MW01		MW01		MW01		MW02		MW02	
Date Sampled	12/28/2000		12/28/2000		12/28/2000		12/28/2000		1/5/2001		1/5/2001	
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW02-0406	
4-Nitroaniline	950	U	4000	UJ	1000	UJ	950	UJ	970	U		NA
4-Nitrophenol	950	U	4000	U	1000	U	950	U	970	U		NA
Acenaphthene	76	J	1600	U	110	J	380	U	380	U		NA
Acenaphthylene	110	J	1600	U	140	J	380	U	380	U		NA
Acetophenone	380	U	1600	U	400	U	380	U	380	U		NA
Anthracene	330	J	280	J	250	J	39	J	380	U		NA
Atrazine	380	U	1600	U	400	U	380	U	380	U		NA
BAPEQ		NA		NA		NA		NA		NA		NA
Benzaldehyde	380	U	1600	U	400	U	380	U	380	U		NA
Benzo(a)anthracene	850		770	J	810		88	J	46	J		NA
Benzo(a)pyrene	900		750	JEB	770		91	J	39	J		NA
Benzo(b)fluoranthene	1600	JEB	750	J	750	EB	93	JEB	53	J		NA
Benzo(g,h,i)perylene	190	J	300	J	310	J	44	J	380	U		NA
Benzo(k)fluoranthene	1600	J	540	J	650		83	J	41	J		NA
Benzoic acid		NA		NA		NA		NA		NA		NA
Benzyl alcohol		NA		NA		NA		NA		NA		NA
Bis(2-Chloroethoxy)methane	380	U	1600	U	400	U	380	U	380	U		NA
Bis(2-Chloroethyl)ether	380	U	1600	U	400	U	380	U	380	U		NA
bis(2-Ethylhexyl)phthalate	86	J	470	J	480		230	J	380	U		NA
bis-(2-chloroisopropyl)ether		NA		NA		NA		NA		NA		NA
Butylbenzylphthalate	380	U	1600	U	400	U	380	U	380	U		NA
Caprolactam	380	U	1600	U	400	U	380	U	380	U		NA
Carbazole	70	J	1600	UJ	140	J	380	UJ	380	U		NA
Chrysene	900	EB	930	JEB	970	EB	120	JEB	66	J		NA
Di-n-Butylphthalate	380	U	1600	U	400	U	380	U	380	U		NA
Di-n-octylphthalate	380	U	1600	U	400	U	380	U	380	U		NA
Dibenzo(a,h)anthracene	380	U	1600	U	140	J	380	U	380	U		NA
Dibenzofuran	53	J	1600	U	62	J	380	U	380	U		NA
Diethylphthalate	380	U	1600	U	400	U	380	U	380	U		NA
Dimethylphthalate	380	U	1600	U	400	U	380	U	380	U		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW01-0102		CM-SO-MW01-0204		CM-SO-MW01-0406		CM-SO-MW01-0608		CM-SO-MW02-0204		CM-SO-MW02-0406	
Sample Location	MW01		MW01		MW01		MW01		MW02		MW02	
Date Sampled	12/28/2000		12/28/2000		12/28/2000		12/28/2000		1/5/2001		1/5/2001	
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW02-0406	
Fluoranthene	2000	EB	1600	EB	1900	EB	170	JEB	99	J		NA
Fluorene	110	J	1600	U	130	J	380	U	380	U		NA
Hexachlorobenzene	380	U	1600	U	400	U	380	U	380	U		NA
Hexachlorobutadiene	380	U	1600	U	400	U	380	U	380	U		NA
Hexachlorocyclopentadiene	380	U	1600	U	400	U	380	U	380	U		NA
Hexachloroethane	380	U	1600	U	400	U	380	U	380	U		NA
High Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
Indeno(1,2,3-cd)pyrene	260	J	340	J	480		67	J	380	U		NA
Isophorone	380	U	1600	U	400	U	380	U	380	U		NA
Low Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
N-Nitroso-di-n-propylamine	380	U	1600	U	400	U	380	U	380	U		NA
N-Nitroso-diphenylamine	380	U	1600	U	400	U	380	U	380	U		NA
Naphthalene	380	U	1600	U	400	U	380	U	380	U		NA
Nitrobenzene	380	U	1600	U	400	U	380	U	380	U		NA
Pentachlorophenol	950	U	4000	U	1000	U	950	U	970	U		NA
PERYLENE	1611	NJ		NA	524	NJ	89.65	NJ		NA		NA
Phenanthrene	1200	EB	1200	JEB	1300	EB	77	JEB	380	U		NA
Phenol	380	U	1600	U	400	U	380	U	380	U		NA
Pyrene	1500	EB	1400	JEB	1700	EB	170	JEB	120	J		NA
Total PAH		NA		NA		NA		NA		NA		NA
Total Semi-Volatile Organics		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP04		CM-SO-MW02-0608		CM-SO-MW02-0810		CM-SO-MW02-1820		CM-SO-MW02-6163		CM-SO-MW02-6466	
Sample Location	MW02		MW02		MW02		MW02		MW02		MW02	
Date Sampled	1/5/2001		1/5/2001		1/5/2001		1/5/2001		6/26/2001		7/2/2001	
Interval	4.0-6.0		6.0-8.0		8.0-10.0		18.0-20.0		61.0-63.0		64.0-66.0	
QC Identifier	Field Dup. CM-SO-MW02-0406		None		None		None		None		Field Dup. CM-SO-MW02-6466	
Semivolatile Organic Analysis (UG/KG)				*								
1,1'-Biphenyl		NA	370	U	400	U	380	U		NA		NA
1,2,4-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,4- TRIMETHYLBENZENE		NA		NA		NA		NA		NA		NA
1,2-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene		NA		NA		NA		NA		NA		NA
2,2'-oxybis(1-Chloropropane)		NA	370	U	400	U	380	U		NA		NA
2,4,5-Trichlorophenol		NA	930	U	1000	U	940	U		NA		NA
2,4,6-Trichlorophenol		NA	370	U	400	U	380	U		NA		NA
2,4-Dichlorophenol		NA	370	U	400	U	380	U		NA		NA
2,4-Dimethylphenol		NA	370	U	400	U	380	U		NA		NA
2,4-Dinitrophenol		NA	930	U	1000	U	940	U		NA		NA
2,4-Dinitrotoluene		NA	370	U	400	U	380	U		NA		NA
2,6-Dinitrotoluene		NA	370	U	400	U	380	U		NA		NA
2-Chloronaphthalene		NA	370	U	400	U	380	U		NA		NA
2-Chlorophenol		NA	370	U	400	U	380	U		NA		NA
2-Methylnaphthalene		NA	370	U	400	U	380	U		NA		NA
2-Methylphenol		NA	370	U	400	U	380	U		NA		NA
2-Nitroaniline		NA	930	U	1000	U	940	U		NA		NA
2-Nitrophenol		NA	370	U	400	U	380	U		NA		NA
3+4-Methylphenols		NA		NA		NA		NA		NA		NA
3,3'-Dichlorobenzidine		NA	370	U	400	U	380	U		NA		NA
3-Nitroaniline		NA	930	U	1000	U	940	U		NA		NA
4,6-Dinitro-2-methylphenol		NA	930	U	1000	U	940	U		NA		NA
4-Bromophenyl-phenylether		NA	370	U	400	U	380	U		NA		NA
4-Chloro-3-methylphenol		NA	370	U	400	U	380	U		NA		NA
4-Chloroaniline		NA	370	U	400	U	380	U		NA		NA
4-Chlorophenyl-phenylether		NA	370	U	400	U	380	U		NA		NA
4-Methylphenol		NA	370	U	400	U	380	U		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP04		CM-SO-MW02-0606		CM-SO-MW02-0810		CM-SO-MW02-1820		CM-SO-MW02-6163		CM-SO-MW02-6466	
Sample Location	MW02		MW02		MW02		MW02		MW02		MW02	
Date Sampled	1/5/2001		1/5/2001		1/5/2001		1/5/2001		6/26/2001		7/2/2001	
Interval	4.0-6.0		6.0-6.0		8.0-10.0		18.0-20.0		61.0-63.0		64.0-66.0	
QC Identifier	Field Dup. CM-SO-MW02-0406		None		None		None		None		Field Dup. CM-SO-MW02-6466	
4-Nitroaniline		NA	930	U	1000	U	940	U		NA		NA
4-Nitrophenol		NA	930	U	1000	U	940	U		NA		NA
Acenaphthene		NA	370	U	400	U	380	U		NA		NA
Acenaphthylene		NA	78	J	400	U	380	U		NA		NA
Acetophenone		NA	370	U	400	U	380	U		NA		NA
Anthracene		NA	130	J	400	U	380	U		NA		NA
Atrazine		NA	370	U	400	U	380	U		NA		NA
BAPEQ		NA		NA		NA		NA		NA		NA
Benzaldehyde		NA	370	U	400	U	380	U		NA		NA
Benzo(a)anthracene		NA	590	J	400	U	380	U		NA		NA
Benzo(a)pyrene		NA	630	J	400	U	380	U		NA		NA
Benzo(b)fluoranthene		NA	660	J	400	U	380	U		NA		NA
Benzo(g,h,i)perylene		NA	220	J	400	U	380	U		NA		NA
Benzo(k)fluoranthene		NA	640	J	400	U	380	U		NA		NA
Benzoic acid		NA		NA		NA		NA		NA		NA
Benzyl alcohol		NA		NA		NA		NA		NA		NA
Bis(2-Chloroethoxy)methane		NA	370	U	400	U	380	U		NA		NA
Bis(2-Chloroethyl)ether		NA	370	U	400	U	380	U		NA		NA
bis(2-Ethylhexyl)phthalate		NA	670	U	400	U	380	U		NA		NA
bis-(2-chloroisopropyl)ether		NA		NA		NA		NA		NA		NA
Butylbenzylphthalate		NA	370	U	400	U	380	U		NA		NA
Caprolactam		NA	370	U	400	U	380	U		NA		NA
Carbazole		NA	370	U	400	U	380	U		NA		NA
Chrysene		NA	760	J	400	U	380	U		NA		NA
Di-n-Butylphthalate		NA	370	U	400	U	380	U		NA		NA
Di-n-octylphthalate		NA	370	UJ	400	U	380	U		NA		NA
Dibenzo(a,h)anthracene		NA	370	UJ	400	U	380	U		NA		NA
Dibenzofuran		NA	370	U	400	U	380	U		NA		NA
Diethylphthalate		NA	370	U	400	U	380	U		NA		NA
Dimethylphthalate		NA	370	U	400	U	380	U		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP04		CM-SO-MW02-0608		CM-SO-MW02-0810		CM-SO-MW02-1820		CM-SO-MW02-6163		CM-SO-MW02-6466	
Sample Location	MW02		MW02		MW02		MW02		MW02		MW02	
Date Sampled	1/5/2001		1/5/2001		1/5/2001		1/5/2001		6/26/2001		7/2/2001	
Interval	4.0-6.0		6.0-8.0		8.0-10.0		18.0-20.0		61.0-63.0		64.0-66.0	
QC Identifier	Field Dup. CM-SO-MW02-0406		None		None		None		None		Field Dup. CM-SO-MW02-6466	
Fluoranthene		NA	1000	J	71	J	360	U		NA		NA
Fluorene		NA	87	J	400	U	360	U		NA		NA
Hexachlorobenzene		NA	370	U	400	U	360	U		NA		NA
Hexachlorobutadiene		NA	370	U	400	U	360	U		NA		NA
Hexachlorocyclopentadiene		NA	370	U	400	U	360	U		NA		NA
Hexachloroethane		NA	370	U	400	U	360	U		NA		NA
High Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
Indeno(1,2,3-cd)pyrene		NA	200	J	400	U	360	U		NA		NA
Isophorone		NA	370	U	400	U	360	U		NA		NA
Low Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
N-Nitroso-di-n-propylamine		NA	370	U	400	U	360	U		NA		NA
N-Nitroso-diphenylamine		NA	370	U	400	U	360	U		NA		NA
Naphthalene		NA	41	J	400	U	360	U		NA		NA
Nitrobenzene		NA	370	U	400	U	360	U		NA		NA
Pentachlorophenol		NA		R	1000	U	940	U		NA		NA
PERYLENE		NA		NA		NA		NA		NA		NA
Phenanthrene		NA	460	J	49	J	360	U		NA		NA
Phenol		NA	370	U	400	U	360	U		NA		NA
Pyrene		NA	1600	J	88	J	360	U		NA		NA
Total PAH		NA		NA		NA		NA		NA		NA
Total Semi-Volatile Organics		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02-0701		CM-SO-MW02-7272.2'		CM-SO-MW03-0406		CM-SO-MW03-0608		CM-SO-MW04-0204		CM-SO-MW04-0406	
Sample Location	MW02		MW02		MW03		MW03		MW04		MW04	
Date Sampled	7/2/2001		7/3/2001		12/27/2000		12/27/2000		6/12/2001		6/12/2001	
Interval	64.0-66.0		72.0-72.2		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-MW02-6466		None		None		None		None		None	
Semivolatile Organic Analysis (UG/KG)												
1,1'-Biphenyl		NA		NA	400	U	1100	U		NA	420	U
1,2,4-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,4- TRIMETHYLBENZENE		NA		NA		NA		NA		NA		NA
1,2-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene		NA		NA		NA		NA		NA		NA
2,2'-oxybis(1-Chloropropane)		NA		NA	400	U	1100	U		NA	420	U
2,4,5-Trichlorophenol		NA		NA	1000	U	2900	U		NA	1100	U
2,4,6-Trichlorophenol		NA		NA	400	U	1100	U		NA	420	U
2,4-Dichlorophenol		NA		NA	400	U	1100	U		NA	420	U
2,4-Dimethylphenol		NA		NA	400	U	1100	U		NA	420	UJ
2,4-Dinitrophenol		NA		NA	1000	U	2900	U		NA	1100	U
2,4-Dinitrotoluene		NA		NA	400	U	1100	U		NA	420	U
2,6-Dinitrotoluene		NA		NA	400	U	1100	U		NA	420	U
2-Chloronaphthalene		NA		NA	400	U	1100	U		NA	420	U
2-Chlorophenol		NA		NA	400	U	1100	U		NA	420	U
2-Methylnaphthalene		NA		NA	400	U	1100	U		NA	420	U
2-Methylphenol		NA		NA	400	U	1100	U		NA	420	U
2-Nitroaniline		NA		NA	1000	U	2900	U		NA	1100	U
2-Nitrophenol		NA		NA	400	U	1100	U		NA	420	U
3+4-Methylphenols		NA		NA		NA		NA		NA		NA
3,3'-Dichlorobenzidine		NA		NA	400	U	1100	U		NA	420	U
3-Nitroaniline		NA		NA	1000	U	2900	U		NA	1100	U
4,6-Dinitro-2-methylphenol		NA		NA	1000	U	2900	U		NA	1100	U
4-Bromophenyl-phenylether		NA		NA	400	U	1100	U		NA	420	U
4-Chloro-3-methylphenol		NA		NA	400	U	1100	U		NA	420	U
4-Chloroaniline		NA		NA	400	U	1100	U		NA	420	U
4-Chlorophenyl-phenylether		NA		NA	400	U	1100	U		NA	420	U
4-Methylphenol		NA		NA		R		R		NA	420	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02-0701		CM-SO-MW02-7272.2		CM-SO-MW03-0406		CM-SO-MW03-0808		CM-SO-MW04-0204		CM-SO-MW04-0406	
Sample Location	MW02		MW02		MW03		MW03		MW04		MW04	
Date Sampled	7/2/2001		7/3/2001		12/27/2000		12/27/2000		6/12/2001		6/12/2001	
Interval	64.0-66.0		72.0-72.2		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-MW02-6466		None		None		None		None		None	
4-Nitroaniline		NA		NA	1000	U	2900	UJ		NA	1100	U
4-Nitrophenol		NA		NA	1000	U	2900	U		NA	1100	U
Acenaphthene		NA		NA	130	J	150	J		NA	420	U
Acenaphthylene		NA		NA	140	J	120	J		NA	420	U
Acetophenone		NA		NA	400	U	1100	U		NA	420	U
Anthracene		NA		NA	300	J	320	J		NA	420	U
Atrazine		NA		NA	400	U	1100	U		NA	420	U
BAPEQ		NA		NA		NA		NA		NA		NA
Benzaldehyde		NA		NA	400	U	1100	U		NA	420	U
Benzo(a)anthracene		NA		NA	840		840	J		NA	420	U
Benzo(a)pyrene		NA		NA	870		790	J		NA		R
Benzo(b)fluoranthene		NA		NA	1300	EB	680	JEB		NA	420	U
Benzo(g,h,i)perylene		NA		NA	240	J	330	J		NA	420	U
Benzo(k)fluoranthene		NA		NA	1000		820	J		NA	420	U
Benzoic acid		NA		NA		NA		NA		NA		NA
Benzyl alcohol		NA		NA		NA		NA		NA		NA
Bis(2-Chloroethoxy)methane		NA		NA	400	U	1100	U		NA	420	U
Bis(2-Chloroethyl)ether		NA		NA	400	U	1100	U		NA	420	U
bis(2-Ethylhexyl)phthalate		NA		NA	900		5000	J		NA	420	U
bis-(2-chloroisopropyl)ether		NA		NA		NA		NA		NA		NA
Butylbenzylphthalate		NA		NA	75	J	1100	U		NA	420	U
Caprolactam		NA		NA	400	U	1100	U		NA	420	U
Carbazole		NA		NA	88	J	150	J		NA	420	U
Chrysene		NA		NA	1100	EB	1000	JEB		NA	420	U
Di-n-Butylphthalate		NA		NA	400	U	1100	U		NA	420	U
Di-n-octylphthalate		NA		NA	400	U	1100	U		NA	420	U
Dibenzo(a,h)anthracene		NA		NA	52	J	1100	U		NA	420	U
Dibenzofuran		NA		NA	62	J	1100	U		NA	420	U
Diethylphthalate		NA		NA	400	U	1100	U		NA	420	U
Dimethylphthalate		NA		NA	400	U	1100	U		NA	420	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02-0701		CM-SO-MW02-7272.2		CM-SO-MW03-0406		CM-SO-MW03-0606		CM-SO-MW04-0204		CM-SO-MW04-0406	
Sample Location	MW02		MW02		MW03		MW03		MW04		MW04	
Date Sampled	7/2/2001		7/3/2001		12/27/2000		12/27/2000		6/12/2001		6/12/2001	
Interval	64.0-66.0		72.0-72.2		4.0-6.0		6.0-6.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-MW02-6466		None		None		None		None		None	
Fluoranthene		NA		NA	2000	EB	2000	EB		NA	420	U
Fluorene		NA		NA	160	J	210	J		NA	420	U
Hexachlorobenzene		NA		NA	400	U	1100	U		NA	420	U
Hexachlorobutadiene		NA		NA	400	U	1100	U		NA	420	U
Hexachlorocyclopentadiene		NA		NA	400	U	1100	U		NA	420	U
Hexachloroethane		NA		NA	400	U	1100	U		NA	420	U
High Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
Indeno(1,2,3-cd)pyrene		NA		NA	280	J	530	J		NA	420	U
Isophorone		NA		NA	400	U	1100	U		NA	420	U
Low Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
N-Nitroso-di-n-propylamine		NA		NA	400	U	1100	U		NA	420	U
N-Nitroso-diphenylamine		NA		NA	400	U	1100	U		NA	420	U
Naphthalene		NA		NA	400	U	1100	U		NA	420	U
Nitrobenzene		NA		NA	400	U	1100	U		NA	420	U
Pentachlorophenol		NA		NA	1000	U	2900	U		NA	1100	U
PERYLENE		NA		NA		NA		NA		NA		NA
Phenanthrene		NA		NA	1200	EB	1400	JEB		NA	420	U
Phenol		NA		NA	400	U	1100	U		NA	420	U
Pyrene		NA		NA	1600	EB	1600	EB		NA	420	U
Total PAH		NA		NA		NA		NA		NA		NA
Total Semi-Volatile Organics		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW04-0608		CM-SO-MW04B-4244		CM-SO-DUP-04		CM-SO-MW05-0102		CM-SO-DUP-01		CM-SO-MW05-0204	
Sample Location	MW04		MW04B		MW04B		MW05		MW05		MW05	
Date Sampled	6/12/2001		8/2/2001		8/2/2001		6/18/2001		6/18/2001		6/18/2001	
Interval	6.0-8.0		42.0-44.0		42.0-44.0		1.0-2.0		1.0-2.0		2.0-4.0	
QC Identifier	None		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW05-0102		Field Dup. CM-SO-MW05-0102		None	
Semivolatile Organic Analysis (UG/KG)												
1,1'-Biphenyl	360	U		NA		NA	360	U	360	U	82	J
1,2,4-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,4- TRIMETHYLBENZENE		NA		NA		NA		NA		NA		NA
1,2-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene		NA		NA		NA		NA		NA		NA
2,2'-oxybis(1-Chloropropane)	360	U		NA		NA	360	U	360	U	370	UJ
2,4,5-Trichlorophenol	900	U		NA		NA	890	U	900	U	86	J
2,4,6-Trichlorophenol	360	U		NA		NA	360	U	360	U	370	UJ
2,4-Dichlorophenol	360	U		NA		NA	360	U	360	U	370	UJ
2,4-Dimethylphenol	360	UJ		NA		NA	360	UJ	360	UJ	370	UJ
2,4-Dinitrophenol	900	U		NA		NA	890	U	900	U	940	UJ
2,4-Dinitrotoluene	360	U		NA		NA	360	U	360	U	370	UJ
2,6-Dinitrotoluene	360	U		NA		NA	360	U	360	U	370	UJ
2-Chloronaphthalene	360	U		NA		NA	360	U	360	U	370	UJ
2-Chlorophenol	360	U		NA		NA	360	U	360	U	370	UJ
2-Methylnaphthalene	360	U		NA		NA	360	U	360	U	240	UJ
2-Methylphenol	360	U		NA		NA	360	U	360	U	370	UJ
2-Nitroaniline	900	U		NA		NA	890	U	900	U	940	UJ
2-Nitrophenol	360	U		NA		NA	360	U	360	U	370	UJ
3+4-Methylphenols		NA		NA		NA		NA		NA		NA
3,3'-Dichlorobenzidine	360	U		NA		NA	360	U	360	U	370	UJ
3-Nitroaniline	900	U		NA		NA	890	U	900	U	940	UJ
4,6-Dinitro-2-methylphenol	900	U		NA		NA	890	U	900	U	940	UJ
4-Bromophenyl-phenylether	360	U		NA		NA	360	U	360	U	370	UJ
4-Chloro-3-methylphenol	360	U		NA		NA	360	U	360	U	370	UJ
4-Chloroaniline	360	U		NA		NA	360	U	360	U	370	UJ
4-Chlorophenyl-phenylether	360	U		NA		NA	360	U	360	U	370	UJ
4-Methylphenol	360	U		NA		NA	360	U	360	U	370	UJ

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW04-0608		CM-SO-MW04B-4244		CM-SO-DUP-04		CM-SO-MW05-0102		CM-SO-DUP-01		CM-SO-MW05-0204	
Sample Location	MW04		MW04B		MW04B		MW05		MW05		MW05	
Date Sampled	6/12/2001		8/2/2001		8/2/2001		6/18/2001		6/18/2001		6/18/2001	
Interval	6.0-8.0		42.0-44.0		42.0-44.0		1.0-2.0		1.0-2.0		2.0-4.0	
QC Identifier	None		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW05-0102		Field Dup. CM-SO-MW05-0102		None	
4-Nitroaniline	900	U		NA		NA	890	U	900	U	940	UJ
4-Nitrophenol	900	U		NA		NA	890	U	900	U	940	UJ
Acenaphthene	360	U		NA		NA	360	U	360	U	950	J
Acenaphthylene	360	U		NA		NA	360	U	360	U	110	J
Acetophenone	360	U		NA		NA	360	U	360	U	40	J
Anthracene	360	U		NA		NA	360	U	360	U	2200	J
Atrazine	360	U		NA		NA	360	U	360	U	370	UJ
BAPEQ		NA		NA		NA		NA		NA		NA
Benzaldehyde	360	U		NA		NA	360	U	360	U	370	UJ
Benzo(a)anthracene	360	U		NA		NA	360	U	360	U	3900	J*
Benzo(a)pyrene		R		NA		NA		R		R	2300	J*
Benzo(b)fluoranthene	360	U		NA		NA	360	U	360	U	4200	J*
Benzo(g,h,i)perylene	360	U		NA		NA	360	U	360	U	1100	J
Benzo(k)fluoranthene	360	U		NA		NA	360	U	360	U	1600	J
Benzoic acid		NA		NA		NA		NA		NA		NA
Benzyl alcohol		NA		NA		NA		NA		NA		NA
Bis(2-Chloroethoxy)methane	360	U		NA		NA	360	U	360	U	370	UJ
Bis(2-Chloroethyl)ether	360	U		NA		NA	360	U	360	U	370	UJ
bis(2-Ethylhexyl)phthalate	360	U		NA		NA	360	U	360	U	540	UJ
bis-(2-chloroisopropyl)ether		NA		NA		NA		NA		NA		NA
Butylbenzylphthalate	360	U		NA		NA	360	U	360	U	370	UJ
Caprolactam	360	U		NA		NA	360	U	360	U	370	UJ
Carbazole	360	U		NA		NA	360	U	360	U	1300	J
Chrysene	360	U		NA		NA	360	U	360	U	3600	J*
Di-n-Butylphthalate	360	U		NA		NA	360	U	360	U	370	UJ
Di-n-octylphthalate	64	J		NA		NA	360	U	360	U	370	UJ
Dibenzo(a,h)anthracene	360	U		NA		NA	360	U	360	U	360	J
Dibenzofuran	360	U		NA		NA	360	U	360	U	700	J
Diethylphthalate	360	U		NA		NA	360	U	360	U	370	UJ
Dimethylphthalate	360	U		NA		NA	360	U	360	U	370	UJ

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

US EPA ARCHIVE DOCUMENT

Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW04-0608		CM-SO-MW04B-4244		CM-SO-DUP-04		CM-SO-MW05-0102		CM-SO-DUP-01		CM-SO-MW05-0204	
Sample Location	MW04		MW04B		MW04B		MW05		MW05		MW05	
Date Sampled	6/12/2001		8/2/2001		8/2/2001		6/18/2001		6/18/2001		6/18/2001	
Interval	6.0-8.0		42.0-44.0		42.0-44.0		1.0-2.0		1.0-2.0		2.0-4.0	
QC Identifier	None		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW05-0102		Field Dup. CM-SO-MW05-0102		None	
Fluoranthene	360	U		NA		NA	360	U	360	U	7600	J*
Fluorene	360	U		NA		NA	360	U	360	U	1200	J
Hexachlorobenzene	360	U		NA		NA	360	U	360	U	370	UJ
Hexachlorobutadiene	360	U		NA		NA	360	U	360	U	370	UJ
Hexachlorocyclopentadiene	360	U		NA		NA	360	U	360	U	370	UJ
Hexachloroethane	360	U		NA		NA	360	U	360	U	370	UJ
High Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
Indeno(1,2,3-cd)pyrene	360	U		NA		NA	360	U	360	U	1500	J
Isophorone	360	U		NA		NA	360	U	360	U	370	UJ
Low Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
N-Nitroso-di-n-propylamine	360	U		NA		NA	360	U	360	U	370	UJ
N-Nitroso-diphenylamine	360	U		NA		NA	360	U	360	U	370	UJ
Naphthalene	360	U		NA		NA	360	U	360	U	430	
Nitrobenzene	360	U		NA		NA	360	U	360	U	66	J
Pentachlorophenol	900	U		NA		NA	890	U	900	U	940	UJ
PERYLENE		NA		NA		NA		NA		NA		NA
Phenanthrene	360	U		NA		NA	360	U	360	U	7100	J*
Phenol	360	U		NA		NA	360	U	360	U	370	UJ
Pyrene	360	U		NA		NA	360	U	360	U	6600	J*
Total PAH		NA		NA		NA		NA		NA		NA
Total Semi-Volatile Organics		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW05-0406		CM-SO-MW05-0810		CM-SO-MW05-1012		CM-SO-MW06-0204		CM-SO-MW06-DUP01		CM-SO-MW06-0406	
Sample Location	MW05		MW05		MW05		MW06		MW06		MW06	
Date Sampled	6/19/2001		6/19/2001		6/19/2001		12/19/2000		12/19/2000		12/19/2000	
Interval	4.0-6.0		8.0-10.0		10.0-12.0		2.0-4.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		Field Dup. CM-SO-MW06-0204		Field Dup. CM-SO-MW06-0204		None	
Semivolatile Organic Analysis (UG/KG)												
1,1'-Biphenyl	820	U	370	U	380	U	490		460		670	
1,2,4-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,4- TRIMETHYLBENZENE		NA		NA		NA		NA		NA		NA
1,2-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene		NA		NA		NA		NA		NA		NA
2,2'-oxybis(1-Chloropropane)	820	U	370	U	380	U	360	U	370	U	460	U
2,4,5-Trichlorophenol	16000	*	7000	*	1400		910	U	920	U	1200	U
2,4,6-Trichlorophenol	820	U	370	U	380	U	360	U	370	U	460	U
2,4-Dichlorophenol	820	U	76	J	380	U	360	U	370	U	460	U
2,4-Dimethylphenol	820	U	370	UJ	380	UJ	360	U	370	U	460	U
2,4-Dinitrophenol	2100	UJ	930	U	960	U	910	UJ	920	UJ	1200	UJ
2,4-Dinitrotoluene	820	U	370	U	380	U	360	U	370	U	460	U
2,6-Dinitrotoluene	820	U	370	U	380	U	360	U	370	U	460	U
2-Chloronaphthalene	820	U	370	U	380	U	360	U	370	U	460	U
2-Chlorophenol	820	U	370	U	380	U	360	U	370	U	460	U
2-Methylnaphthalene	2400		73	J	46	J	210	J	180	J	180	J
2-Methylphenol	820	U	370	U	380	U	360	U	370	U	460	U
2-Nitroaniline	2100	U	930	U	960	U	910	U	920	U	1200	U
2-Nitrophenol	820	U	370	U	380	U	360	U	370	U	460	U
3+4-Methylphenols		NA		NA		NA		NA		NA		NA
3,3'-Dichlorobenzidine		R	370	U	380	U	360	U	370	U	460	U
3-Nitroaniline	2100	U	930	U	960	U	910	U	920	U	1200	U
4,6-Dinitro-2-methylphenol	2100	U	930	U	960	U	910	U	920	U	1200	U
4-Bromophenyl-phenylether	820	U	370	U	380	U	360	U	370	U	460	U
4-Chloro-3-methylphenol	820	U	370	U	380	U	360	U	370	U	460	U
4-Chloroaniline	820	U	370	U	380	U	360	U	370	U	460	U
4-Chlorophenyl-phenylether	820	U	370	U	380	U	360	U	370	U	460	U
4-Methylphenol	820	U	370	U	380	U	78	J		R	170	J

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW05-0406		CM-SO-MW05-0810		CM-SO-MW05-1012		CM-SO-MW06-0204		CM-SO-MW06-DUP01		CM-SO-MW06-0406	
Sample Location	MW05		MW05		MW05		MW06		MW06		MW06	
Date Sampled	6/19/2001		6/19/2001		6/19/2001		12/19/2000		12/19/2000		12/19/2000	
Interval	4.0-6.0		8.0-10.0		10.0-12.0		2.0-4.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		Field Dup. CM-SO-MW06-0204		Field Dup. CM-SO-MW06-0204		None	
4-Nitroaniline	2100	U	930	U	960	U	910	UJ	920	UJ	1200	UJ
4-Nitrophenol	2100	U	930	U	960	U	910	U	920	U	1200	U
Acenaphthene	820	U	370	U	380	U	230	J	170	J	87	J
Acenaphthylene	820	U	370	U	380	U	360	U	370	U	460	U
Acetophenone	820	U	370	U	380	U	360	U	370	U	460	U
Anthracene	820	U	370	U	380	U	110	J	97	J	460	U
Atrazine	820	U	370	U	380	U	360	U	370	U	460	U
BAPEQ		NA		NA		NA		NA		NA		NA
Benzaldehyde	820	U	370	U	380	U	360	U	370	U	460	U
Benzo(a)anthracene	820	U	370	U	380	U	180	J	170	J	84	J
Benzo(a)pyrene	820	U		R		R	190	J	160	J	72	J
Benzo(b)fluoranthene	470	J	370	U	380	U	250	J	340	XJ	92	J
Benzo(g,h,i)perylene	820	U	370	U	380	U	130	J	120	J	53	J
Benzo(k)fluoranthene	820	U	370	U	380	U	170	J	310	XJ	85	J
Benzoic acid		NA		NA		NA		NA		NA		NA
Benzyl alcohol		NA		NA		NA		NA		NA		NA
Bis(2-Chloroethoxy)methane	820	U	370	U	380	U	360	U	370	U	460	U
Bis(2-Chloroethyl)ether	820	U	370	U	380	U	360	U	370	U	460	U
bis(2-Ethylhexyl)phthalate	1300		360	U	380	U	34000	*	41000	*	36000	*
bis-(2-chloroisopropyl)ether		NA		NA		NA		NA		NA		NA
Butylbenzylphthalate	820	U	61	J	40	J	180	J	120	J	460	U
Caprolactam	820	U	370	U	380	U	360	U	370	U	460	U
Carbazole	820	U	370	U	380	U	360	U	370	U	460	U
Chrysene	820	U	370	U	380	U	310	J	280	J	160	J
Di-n-Butylphthalate	820	U	370	U	380	U	560		460		240	J
Di-n-octylphthalate	820	U	370	U	380	U	5100	*	6100	*	200	J
Dibenzo(a,h)anthracene	820	U	370	U	380	U	360	U	370	U	460	U
Dibenzofuran	820	U	370	U	380	U	140	J	100	J	460	U
Diethylphthalate	820	U	370	U	380	U	360	U	370	U	460	U
Dimethylphthalate	820	U	370	U	380	U	360	U	370	U	460	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - *From dilution analysis*; R- Rejected; *EB/TB- Equipment/Trip blank contamination*

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW05-0406		CM-SO-MW05-0810		CM-SO-MW05-1012		CM-SO-MW06-0204		CM-SO-MW06-DUP01		CM-SO-MW06-0406	
Sample Location	MW05		MW05		MW05		MW06		MW06		MW06	
Date Sampled	6/19/2001		6/19/2001		6/19/2001		12/19/2000		12/19/2000		12/19/2000	
Interval	4.0-6.0		8.0-10.0		10.0-12.0		2.0-4.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		Field Dup. CM-SO-MW06-0204		Field Dup. CM-SO-MW06-0204		None	
Fluoranthene	960		370	U	380	U	590		490		210	J
Fluorene	820	U	370	U	380	U	220	J	170	J	72	J
Hexachlorobenzene	820	U	370	U	380	U	360	U	370	U	460	U
Hexachlorobutadiene	820	U	370	U	380	U	360	U	370	U	460	U
Hexachlorocyclopentadiene	820	U	370	U	380	U	360	UJ	370	UJ	460	UJ
Hexachloroethane	820	U	370	U	380	U	360	U	370	U	460	U
High Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
Indeno(1,2,3-cd)pyrene	820	U	370	U	380	U	170	J	140	J	68	J
Isophorone	820	U	370	U	380	U	360	U	370	U	460	U
Low Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
N-Nitroso-di-n-propylamine	820	U	370	U	380	U	360	U	370	U	460	U
N-Nitroso-diphenylamine	820	U	370	U	380	U	360	U	370	U	460	U
Naphthalene	910	J	370	U	380	U	110	J	96	J	160	J
Nitrobenzene	820	U	370	U	380	U	190	J	140	J	50	J
Pentachlorophenol	2100	U	930	U	960	U	910	U	920	U	1200	U
PERYLENE		NA		NA		NA		NA		NA		NA
Phenanthrene	1100		370	U	380	U	460		400		280	J
Phenol	820	U	370	U	380	U	52	J	46	J	120	J
Pyrene	830		370	U	380	U	590		490		210	J
Total PAH		NA		NA		NA		NA		NA		NA
Total Semi-Volatile Organics		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW06-0608		CM-SO-MW07-0304		CM-SO-MW07-0406		CM-SO-MW07-0608		CM-SO-MW08-0102		CM-SO-MW08-0204	
Sample Location	MW06		MW07		MW07		MW07		MW08		MW08	
Date Sampled	12/19/2000		12/21/2000		12/21/2000		12/21/2000		12/26/2000		12/26/2000	
Interval	6.0-8.0		3.0-4.0		4.0-6.0		6.0-8.0		1.0-2.0		2.0-4.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW08-0204	
Semivolatile Organic Analysis (UG/KG)												
1,1'-Biphenyl	230	J	380	U	400	U	390	U			410	U
1,2,4-Trichlorobenzene		NA		NA		NA		NA	420	U		NA
1,2,4- TRIMETHYLBENZENE		NA		NA		NA		NA		NA		NA
1,2-Dichlorobenzene		NA		NA		NA		NA	6635	NJ		NA
1,3-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene		NA		NA		NA		NA		NA		NA
2,2'-oxybis(1-Chloropropane)	410	U	380	U	400	U	390	U		NA	410	U
2,4,5-Trichlorophenol	1000	U	970	U	1000	U	990	U	420	U	1000	U
2,4,6-Trichlorophenol	410	U	380	U	400	U	390	U	1100	U	410	U
2,4-Dichlorophenol	410	U	380	U	400	U	390	U	420	U	410	U
2,4-Dimethylphenol	410	U	380	U	400	U	390	U	420	U	410	U
2,4-Dinitrophenol	1000	UJ	970	UJ	1000	UJ	990	UJ	420	U	1000	U
2,4-Dinitrotoluene	410	U	380	U	400	U	390	U	1100	U	410	U
2,6-Dinitrotoluene	410	U	380	U	400	U	390	U	420	U	410	U
2-Chloronaphthalene	410	U	380	U	400	U	390	U	420	U	410	U
2-Chlorophenol	410	U	380	U	400	U	390	U	420	U	410	U
2-Methylnaphthalene	54	J	380	U	400	U	390	U	420	U	410	U
2-Methylphenol	410	U	380	U	400	U	390	U	50	J	410	U
2-Nitroaniline	1000	U	970	U	1000	U	990	U	420	U	1000	U
2-Nitrophenol	410	U	380	U	400	U	390	U	1100	U	410	U
3+4-Methylphenols		NA		NA		NA		NA	420	U		NA
3,3'-Dichlorobenzidine	410	U	380	U	400	U	390	U		NA	410	U
3-Nitroaniline	1000	U	970	U	1000	U	990	U	420	U	1000	U
4,6-Dinitro-2-methylphenol	1000	U	970	U	1000	U	990	U	1100	U	1000	U
4-Bromophenyl-phenylether	410	U	380	U	400	U	390	U	1100	U	410	U
4-Chloro-3-methylphenol	410	U	380	U	400	U	390	U	420	U	410	U
4-Chloroaniline	410	U	380	U	400	U	390	U	420	U	410	U
4-Chlorophenyl-phenylether	410	U	380	U	400	U	390	U	420	U	410	U
4-Methylphenol		R	99	J		R		R	420	U	200	J

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

US EPA ARCHIVE DOCUMENT

Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW06-0608		CM-SO-MW07-0304		CM-SO-MW07-0406		CM-SO-MW07-0608		CM-SO-MW08-0102		CM-SO-MW08-0204	
Sample Location	MW06		MW07		MW07		MW07		MW08		MW08	
Date Sampled	12/19/2000		12/21/2000		12/21/2000		12/21/2000		12/26/2000		12/26/2000	
Interval	6.0-8.0		3.0-4.0		4.0-6.0		6.0-8.0		1.0-2.0		2.0-4.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW08-0204	
4-Nitroaniline	1000	UJ	970	UJ	1000	UJ	990	UJ	910	J	1000	U
4-Nitrophenol	1000	U	970	U	1000	U	990	U	1100	U	1000	U
Acenaphthene	43	J	80	J	68	J	390	U	1100	U	410	U
Acenaphthylene	410	U	92	J	400	U	390	U	420	U	45	J
Acetophenone	410	U	380	U	400	U	390	U	420	U	410	U
Anthracene	410	U	240	J	93	J	390	U	420	U	63	J
Atrazine	410	U	380	U	400	U	390	U	64	J	410	U
BAPEQ		NA		NA		NA		NA	420	U		NA
Benzaldehyde	410	U	380	U	400	U	390	U		NA	410	U
Benzo(a)anthracene	49	J	710		160	J	390	U	420	U	250	J
Benzo(a)pyrene	48	J	660		130	J	390	U	170	J	240	J
Benzo(b)fluoranthene	62	J	810		140	J	390	U	170	J	230	JEB
Benzo(g,h,i)perylene	43	J	450		79	J	390	U	190	JEB	110	J
Benzo(k)fluoranthene	47	J	590		110	J	390	U	66	J	240	J
Benzoic acid		NA		NA		NA		NA	190	J		NA
Benzyl alcohol		NA		NA		NA		NA		NA		NA
Bis(2-Chloroethoxy)methane	410	U	380	U	400	U	390	U		NA	410	U
Bis(2-Chloroethyl)ether	410	U	380	U	400	U	390	U	420	U	410	U
bis(2-Ethylhexyl)phthalate	11000	*	20000	*	400	U	42	J	420	U	170	J
bis-(2-chloroisopropyl)ether		NA		NA		NA		NA	5400	*J		NA
Butylbenzylphthalate	410	U	75	J	400	U	390	U		NA	67	J
Caprolactam	410	U	380	U	400	U	390	U	420	U	410	U
Carbazole	410	U	180	J	82	J	390	U	420	U	410	UJ
Chrysene	74	J	820		160	J	390	U	420	UJ	280	JEB
Di-n-Butylphthalate	110	J	380	U	400	U	390	U	220	JEB	410	U
Di-n-octylphthalate	170	J	380	U	400	U	390	U	1100		410	U
Dibenzo(a,h)anthracene	410	U	170	J	400	U	390	U	1900		410	U
Dibenzofuran	410	U	61	J	55	J	390	U	420	U	410	U
Diethylphthalate	410	U	380	U	400	U	390	U	420	U	410	U
Dimethylphthalate	410	U	380	U	400	U	390	U	420	U	410	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW06-0606		CM-SO-MW07-0304		CM-SO-MW07-0406		CM-SO-MW07-0606		CM-SO-MW08-0102		CM-SO-MW08-0204	
Sample Location	MW06		MW07		MW07		MW07		MW08		MW08	
Date Sampled	12/19/2000		12/21/2000		12/21/2000		12/21/2000		12/26/2000		12/26/2000	
Interval	6.0-6.0		3.0-4.0		4.0-6.0		6.0-6.0		1.0-2.0		2.0-4.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW08-0204	
Fluoranthene	130	J	1700		380	J	390	U	420	U	470	EB
Fluorene	410	U	120	J	79	J	390	U	400	JEB	410	U
Hexachlorobenzene	410	U	380	U	400	U	390	U	420	U	410	U
Hexachlorobutadiene	410	U	380	U	400	U	390	U	420	U	410	U
Hexachlorocyclopentadiene	410	UJ	380	UJ	400	UJ	390	UJ	420	U	410	U
Hexachloroethane	410	U	380	U	400	U	390	U	420	U	410	U
High Molecular Weight PAHs		NA		NA		NA		NA	420	U		NA
Indeno(1,2,3-cd)pyrene	57	J	610		110	J	390	U		NA	180	J
Isophorone	410	U	380	U	400	U	390	U	91	J	410	U
Low Molecular Weight PAHs		NA		NA		NA		NA	100	J		NA
N-Nitroso-di-n-propylamine	410	U	380	U	400	U	390	U		NA	410	U
N-Nitroso-diphenylamine	410	U	380	U	400	U	390	U	420	U	410	U
Naphthalene	53	J	380	U	52	J	390	U	420	U	410	U
Nitrobenzene	410	U	380	U	400	U	390	U	130	J	410	U
Pentachlorophenol	1000	U	970	U	1000	U	990	U	420	U	1000	U
PERYLENE		NA	617.3	NJ		NA		NA	1100	U		NA
Phenanthrene	150	J	1200		490		390	U		NA	260	JEB
Phenol	51	J		R		R		R	320	JEB	410	U
Pyrene	120	J	1400		320	J	390	U	220	J	440	EB
Total PAH		NA		NA		NA		NA	330	JEB		NA
Total Semi-Volatile Organics		NA		NA		NA		NA		NA		NA
										NA		

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02		CM-SO-MW08-0406		CM-SO-MW08-0608		CM-SO-MW09-0406		CM-SO-MW09-1011		CM-SO-MW14-0102	
Sample Location	MW08		MW08		MW08		MW09		MW09		MW14	
Date Sampled	12/26/2000		12/26/2000		12/26/2000		12/18/2000		12/18/2000		7/13/2001	
Interval	2.0-4.0		4.0-6.0		6.0-8.0		4.0-6.0		10.0-11.0		1.0-2.0	
QC Identifier	Field Dup. CM-SO-MW08-0204		None		None		None		None		Field Dup. CM-SO-MW14-0102	
Semivolatile Organic Analysis (UG/KG)												
1,1'-Biphenyl	450	U	450	U	380	U	850	U	360	U	330	U
1,2,4-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,4- TRIMETHYLBENZENE		NA		NA		NA		NA		NA		NA
1,2-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene		NA		NA		NA		NA		NA		NA
2,2'-oxybis(1-Chloropropane)	450	U	450	U	380	U	850	U	360	U	330	U
2,4,5-Trichlorophenol	1100	U	1100	U	970	U	2100	U	910	U	840	U
2,4,6-Trichlorophenol	450	U	450	U	380	U	850	U	360	U	330	U
2,4-Dichlorophenol	450	U	450	U	380	U	850	U	360	U	330	U
2,4-Dimethylphenol	450	U	450	U	380	U	850	U	360	U	330	U
2,4-Dinitrophenol	1100	U	1100	U	970	U	2100	UJ	910	UJ	840	U
2,4-Dinitrotoluene	450	U	450	U	380	U	850	U	360	U	330	U
2,6-Dinitrotoluene	450	U	450	U	380	U	850	U	360	U	330	U
2-Chloronaphthalene	450	U	450	U	380	U	850	U	360	U	330	U
2-Chlorophenol	450	U	450	U	380	U	850	U	360	U	330	U
2-Methylnaphthalene	450	U	450	U	380	U	850	U	360	U	180	J
2-Methylphenol	450	U	450	U	380	U	850	U	360	U	330	U
2-Nitroaniline	1100	U	1100	U	970	U	2100	U	910	U	840	U
2-Nitrophenol	450	U	450	U	380	U	850	U	360	U	330	U
3+4-Methylphenols		NA		NA		NA		NA		NA		NA
3,3'-Dichlorobenzidine	450	U	450	U	380	U	850	U	360	U	330	U
3-Nitroaniline	1100	U	1100	U	970	U	2100	U	910	U	840	U
4,6-Dinitro-2-methylphenol	1100	U	1100	U	970	U	2100	U	910	U	840	U
4-Bromophenyl-phenylether	450	U	450	U	380	U	850	U	360	U	330	U
4-Chloro-3-methylphenol	450	U	450	U	380	U	850	U	360	U	330	U
4-Chloroaniline	450	U	450	U	380	U	850	U	360	U	330	U
4-Chlorophenyl-phenylether	450	U	450	U	380	U	850	U	360	U	330	U
4-Methylphenol	310	J		R		R		R		R	330	U

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02		CM-SO-MW08-0406		CM-SO-MW08-0608		CM-SO-MW09-0406		CM-SO-MW09-1011		CM-SO-MW14-0102	
Sample Location	MW08		MW08		MW08		MW09		MW09		MW14	
Date Sampled	12/26/2000		12/26/2000		12/26/2000		12/18/2000		12/18/2000		7/13/2001	
Interval	2.0-4.0		4.0-6.0		6.0-8.0		4.0-6.0		10.0-11.0		1.0-2.0	
QC Identifier	Field Dup. CM-SO-MW08-0204		None		None		None		None		Field Dup. CM-SO-MW14-0102	
4-Nitroaniline	1100	U	1100	U	970	U	2100	UJ	910	UJ	840	U
4-Nitrophenol	1100	U	1100	U	970	U	2100	U	910	U	840	U
Acenaphthene	450	U	450	U	380	U	850	U	360	U	330	U
Acenaphthylene	66	J	450	U	380	U	130	J	360	U	330	U
Acetophenone	60	J	450	U	380	U	850	U	360	U	330	U
Anthracene	80	J	450	U	380	U	110	J	360	U	63	J
Atrazine	450	U	450	U	380	U	850	U	360	U	330	U
BAPEQ		NA		NA		NA		NA		NA		NA
Benzaldehyde	450	U	450	U	380	U	850	U	360	U	330	U
Benzo(a)anthracene	390	J	450	U	380	U	360	J	360	U	240	J
Benzo(a)pyrene	340	J	450	U	380	U	390	J	360	U	260	J
Benzo(b)fluoranthene	300	JEB	450	U	380	U	410	J	360	U	430	
Benzo(g,h,i)perylene	130	J	450	U	380	U	400	J	360	U	69	J
Benzo(k)fluoranthene	350	J	450	U	380	U	350	J	360	U	200	J
Benzoic acid		NA		NA		NA		NA		NA		NA
Benzyl alcohol		NA		NA		NA		NA		NA		NA
Bis(2-Chloroethoxy)methane	450	U	450	U	380	U	850	U	360	U	330	U
Bis(2-Chloroethyl)ether	450	U	450	U	380	U	850	U	360	U	330	U
bis(2-Ethylhexyl)phthalate	260	J	130	J	190	J	110	J	360	U	1000	
bis-(2-chloroisopropyl)ether		NA		NA		NA		NA		NA		NA
Butylbenzylphthalate	120	J	450	U	380	U	850	U	360	U	330	U
Caprolactam	450	U	450	U	380	U	850	U	360	U	330	U
Carbazole	450	UJ	450	UJ	380	UJ	850	U	360	U	330	U
Chrysene	400	JEB	450	U	380	U	500	J	360	U	360	
Di-n-Butylphthalate	84	J	450	U	380	U	850	U	360	U	290	J
Di-n-octylphthalate	450	U	450	U	380	U	850	U	360	U	330	U
Dibenzo(a,h)anthracene	450	U	450	U	380	U	110	J	360	U	330	U
Dibenzofuran	450	U	450	U	380	U	850	U	360	U	45	J
Diethylphthalate	450	U	450	U	380	U	850	U	360	U	330	U
Dimethylphthalate	450	U	450	U	380	U	850	U	360	U	330	U

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02		CM-SO-MW08-0406		CM-SO-MW08-0608		CM-SO-MW09-0406		CM-SO-MW09-1011		CM-SO-MW14-0102	
Sample Location	MW08		MW08		MW08		MW09		MW09		MW14	
Date Sampled	12/26/2000		12/26/2000		12/26/2000		12/18/2000		12/18/2000		7/13/2001	
Interval	2.0-4.0		4.0-6.0		6.0-8.0		4.0-6.0		10.0-11.0		1.0-2.0	
QC Identifier	Field Dup. CM-SO-MW08-0204		None		None		None		None		Field Dup. CM-SO-MW14-0102	
Fluoranthene	630	EB	76	JEB	380	U	780	J	360	U	580	
Fluorene	450	U	450	U	380	U	850	U	360	U	36	J
Hexachlorobenzene	450	U	450	U	380	U	850	U	360	U	330	U
Hexachlorobutadiene	450	U	450	U	380	U	850	U	360	U	330	U
Hexachlorocyclopentadiene	450	U	450	U	380	U	850	UJ	360	UJ	330	U
Hexachloroethane	450	U	450	U	380	U	850	U	360	U	330	U
High Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
Indeno(1,2,3-cd)pyrene	250	J	450	U	380	U	380	J	360	U	53	J
Isophorone	450	U	450	U	380	U	850	U	360	U	330	U
Low Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
N-Nitroso-di-n-propylamine	450	U	450	U	380	U	850	U	360	U	330	U
N-Nitroso-diphenylamine	450	U	450	U	380	U	850	U	360	U	330	U
Naphthalene	46	J	450	U	380	U	850	U	360	U	65	J
Nitrobenzene	450	U	450	U	380	U	850	U	360	U	330	U
Pentachlorophenol	1100	U	1100	U	970	U	2100	U	910	U	840	U
PERYLENE		NA		NA		NA	1265	NJ		NA		NA
Phenanthrene	260	JEB	450	U	380	U	390	J	360	U	410	
Phenol	450	U	450	U	380	U		R		R	330	U
Pyrene	590	EB	69	JEB	380	U	850	J	360	U	350	
Total PAH		NA		NA		NA		NA		NA		NA
Total Semi-Volatile Organics		NA		NA		NA		NA		NA		NA

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* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP03-0701		CM-SO-MW14-0204		CM-SO-MW14-0607		CM-SO-MW14-0608		CM-SO-MW14-0708		CM-SO-MW14-5252.75	
Sample Location	MW14		MW14		MW14		MW14		MW14		MW14	
Date Sampled	7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/18/2001	
Interval	1.0-2.0		2.0-4.0		6.0-7.0		6.0-8.0		7.0-8.0		52.0-52.6	
QC Identifier	Field Dup. CM-SO-MW14-0102		None		None		None		None		None	
Semivolatile Organic Analysis (UG/KG)												
1,1'-Biphenyl	340	U	380	U		NA	340	U		NA		NA
1,2,4-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,4- TRIMETHYLBENZENE		NA		NA		NA		NA		NA		NA
1,2-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene		NA		NA		NA		NA		NA		NA
2,2'-oxybis(1-Chloropropane)	340	U	380	U		NA	340	U		NA		NA
2,4,5-Trichlorophenol	860	U	940	U		NA	69	J		NA		NA
2,4,6-Trichlorophenol	340	U	380	U		NA	340	U		NA		NA
2,4-Dichlorophenol	340	U	380	U		NA	340	U		NA		NA
2,4-Dimethylphenol	340	U	380	U		NA	340	U		NA		NA
2,4-Dinitrophenol	860	U	940	U		NA	860	U		NA		NA
2,4-Dinitrotoluene	340	U	380	U		NA	340	U		NA		NA
2,6-Dinitrotoluene	340	U	380	U		NA	340	U		NA		NA
2-Chloronaphthalene	340	U	380	U		NA	340	U		NA		NA
2-Chlorophenol	340	U	380	U		NA	340	U		NA		NA
2-Methylnaphthalene	240	J	380	U		NA	340	U		NA		NA
2-Methylphenol	340	U	380	U		NA	340	U		NA		NA
2-Nitroaniline	860	U	940	U		NA	860	U		NA		NA
2-Nitrophenol	340	U	380	U		NA	340	U		NA		NA
3+4-Methylphenols		NA		NA		NA		NA		NA		NA
3,3'-Dichlorobenzidine	340	U	380	U		NA	340	U		NA		NA
3-Nitroaniline	860	U	940	U		NA	860	U		NA		NA
4,6-Dinitro-2-methylphenol	860	U	940	U		NA	860	U		NA		NA
4-Bromophenyl-phenylether	340	U	380	U		NA	340	U		NA		NA
4-Chloro-3-methylphenol	340	U	380	U		NA	340	U		NA		NA
4-Chloroaniline	340	U	380	U		NA	340	U		NA		NA
4-Chlorophenyl-phenylether	340	U	380	U		NA	340	U		NA		NA
4-Methylphenol	340	U	380	U		NA	340	U		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP03-0701		CM-SO-MW14-0204		CM-SO-MW14-0607		CM-SO-MW14-0608		CM-SO-MW14-0708		CM-SO-MW14-5252.75	
Sample Location	MW14		MW14		MW14		MW14		MW14		MW14	
Date Sampled	7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/18/2001	
Interval	1.0-2.0		2.0-4.0		6.0-7.0		6.0-8.0		7.0-8.0		52.0-52.8	
QC Identifier	Field Dup. CM-SO-MW14-0102		None		None		None		None		None	
4-Nitroaniline	860	U	940	U		NA	860	U		NA		NA
4-Nitrophenol	860	U	940	U		NA	860	U		NA		NA
Acenaphthene	41	J	380	U		NA	340	U		NA		NA
Acenaphthylene	340	U	380	U		NA	340	U		NA		NA
Acetophenone	340	U	380	U		NA	340	U		NA		NA
Anthracene	94	J	47	J		NA	340	U		NA		NA
Atrazine	340	U	380	U		NA	340	U		NA		NA
BAPEQ		NA		NA		NA		NA		NA		NA
Benzaldehyde	340	U	380	U		NA	340	U		NA		NA
Benzo(a)anthracene	350		200	J		NA	340	U		NA		NA
Benzo(a)pyrene	350		160	J		NA	340	U		NA		NA
Benzo(b)fluoranthene	590		190	J		NA	340	U		NA		NA
Benzo(g,h,i)perylene	56	J	380	U		NA	340	U		NA		NA
Benzo(k)fluoranthene	300	J	140	J		NA	340	U		NA		NA
Benzoic acid		NA		NA		NA		NA		NA		NA
Benzyl alcohol		NA		NA		NA		NA		NA		NA
Bis(2-Chloroethoxy)methane	340	U	380	U		NA	340	U		NA		NA
Bis(2-Chloroethyl)ether	340	U	380	U		NA	340	U		NA		NA
bis(2-Ethylhexyl)phthalate	1700		64	J		NA	53	J		NA		NA
bis-(2-chloroisopropyl)ether		NA		NA		NA		NA		NA		NA
Butylbenzylphthalate	340	U	380	U		NA	340	U		NA		NA
Caprolactam	340	U	380	U		NA	340	U		NA		NA
Carbazole	49	J	380	U		NA	340	U		NA		NA
Chrysene	490		200	J		NA	340	U		NA		NA
Di-n-Butylphthalate	390		380	U		NA	340	U		NA		NA
Di-n-octylphthalate	340	U	380	U		NA	340	U		NA		NA
Dibenzo(a,h)anthracene	340	U	380	U		NA	340	U		NA		NA
Dibenzofuran	62	J	380	U		NA	340	U		NA		NA
Diethylphthalate	340	U	380	U		NA	340	U		NA		NA
Dimethylphthalate	340	U	380	U		NA	340	U		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP03-0701		CM-SO-MW14-0204		CM-SO-MW14-0607		CM-SO-MW14-0608		CM-SO-MW14-0708		CM-SO-MW14-5252.75	
Sample Location	MW14		MW14		MW14		MW14		MW14		MW14	
Date Sampled	7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/18/2001	
Interval	1.0-2.0		2.0-4.0		6.0-7.0		6.0-8.0		7.0-8.0		52.0-52.8	
QC Identifier	Field Dup. CM-SO-MW14-0102		None		None		None		None		None	
Fluoranthene	650		320	J		NA	340	U		NA		NA
Fluorene	50	J	380	U		NA	340	U		NA		NA
Hexachlorobenzene	340	U	380	U		NA	340	U		NA		NA
Hexachlorobutadiene	340	U	380	U		NA	340	U		NA		NA
Hexachlorocyclopentadiene	340	U	380	U		NA	340	U		NA		NA
Hexachloroethane	340	U	380	U		NA	340	U		NA		NA
High Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
Indeno(1,2,3-cd)pyrene	53	J	380	U		NA	340	U		NA		NA
Isophorone	340	U	380	U		NA	340	U		NA		NA
Low Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
N-Nitroso-di-n-propylamine	340	U	380	U		NA	340	U		NA		NA
N-Nitroso-diphenylamine	340	U	380	U		NA	340	U		NA		NA
Naphthalene	93	J	380	U		NA	340	U		NA		NA
Nitrobenzene	340	U	380	U		NA	340	U		NA		NA
Pentachlorophenol	660	U	940	U		NA	660	U		NA		NA
PERYLENE		NA		NA		NA		NA		NA		NA
Phenanthrene	660		260	J		NA	340	U		NA		NA
Phenol	340	U	380	U		NA	340	U		NA		NA
Pyrene	540		280	J		NA	340	U		NA		NA
Total PAH		NA		NA		NA		NA		NA		NA
Total Semi-Volatile Organics		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW15D-0204		CM-SO-MW15D-0406		CM-SO-DUP-05		CM-SO-DUP05-0601		CM-SO-MW15D-0608		CM-SO-MW15D-4850
Sample Location	MW15D		MW15D		MW15D		MW15D		MW15D		MW15D
Date Sampled	8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/8/2001
Interval	2.0-4.0		4.0-6.0		4.0-6.0		4.0-6.0		6.0-8.0		48.0-50.0
QC Identifier	None		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		None		None
Semivolatile Organic Analysis (UG/KG)											
1,1'-Biphenyl	370	U	350	J		NA	300	J	380	U	
1,2,4-Trichlorobenzene		NA		NA		NA		NA		NA	
1,2,4- TRIMETHYLBENZENE		NA		NA		NA		NA		NA	
1,2-Dichlorobenzene		NA		NA		NA		NA		NA	
1,3-Dichlorobenzene		NA		NA		NA		NA		NA	
1,4-Dichlorobenzene		NA		NA		NA		NA		NA	
2,2'-oxybis(1-Chloropropane)	370	U	350	U		NA	400	U	380	U	
2,4,5-Trichlorophenol	930	U	890	U		NA	1000	U	950	U	
2,4,6-Trichlorophenol	370	U	350	U		NA	400	U	380	U	
2,4-Dichlorophenol	370	U	350	U		NA	400	U	380	U	
2,4-Dimethylphenol	370	U	48	J		NA	44	J	380	U	
2,4-Dinitrophenol	930	U	890	UJ		NA	1000	UJ	950	U	
2,4-Dinitrotoluene	370	U	350	U		NA	400	U	380	U	
2,6-Dinitrotoluene	370	U	350	U		NA	400	U	380	U	
2-Chloronaphthalene	370	U	350	U		NA	400	U	380	U	
2-Chlorophenol	370	U	350	U		NA	400	U	380	U	
2-Methylnaphthalene	370	U	210	J		NA	250	J	380	U	
2-Methylphenol	370	U	350	U		NA	400	U	380	U	
2-Nitroaniline	930	U	890	U		NA	1000	U	950	U	
2-Nitrophenol	370	U	350	U		NA	400	U	380	U	
3+4-Methylphenols		NA		NA		NA		NA		NA	
3,3'-Dichlorobenzidine	370	U	350	U		NA	400	U	380	U	
3-Nitroaniline	930	UJ	890	U		NA	1000	U	950	UJ	
4,6-Dinitro-2-methylphenol	930	U	890	UJ		NA	1000	UJ	950	U	
4-Bromophenyl-phenylether	370	U	350	U		NA	400	U	380	U	
4-Chloro-3-methylphenol	370	U	350	U		NA	400	U	380	U	
4-Chloroaniline	370	U	59	J		NA	76	J	380	U	
4-Chlorophenyl-phenylether	370	U	350	U		NA	400	U	380	U	
4-Methylphenol	370	U	58	J		NA	43	J	380	U	

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW15D-0204		CM-SO-MW15D-0406		CM-SO-DUP-05		CM-SO-DUP05-0601		CM-SO-MW15D-0808		CM-SO-MW15D-4850
Sample Location	MW15D		MW15D		MW15D		MW15D		MW15D		MW15D
Date Sampled	8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/8/2001
Interval	2.0-4.0		4.0-6.0		4.0-6.0		4.0-6.0		6.0-8.0		48.0-50.0
QC Identifier	None		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		None		None
4-Nitroaniline	930	U	890	UJ		NA	1000	UJ	950	UJ	
4-Nitrophenol	930	U	890	U		NA	1000	U	950	U	
Acenaphthene	370	U	49	J		NA	66	J	380	U	
Acenaphthylene	370	U	310	J		NA	260	J	380	U	
Acetophenone	370	U	350	U		NA	400	U	380	U	
Anthracene	51	J	320	J		NA	400	J	380	U	
Atrazine	370	UJ	350	UJ		NA	400	UJ	380	UJ	
BAPEQ		NA		NA		NA		NA		NA	
Benzaldehyde	370	UJ	46	JEB		NA	42	JEB	380	UJ	
Benzo(a)anthracene	140	J	650	J		NA	1100	J	54	J	
Benzo(a)pyrene	130	J	730			NA	960		51	J	
Benzo(b)fluoranthene	190	J	1100			NA	1300		67	J	
Benzo(g,h,i)perylene	77	J	440			NA	470		59	J	
Benzo(k)fluoranthene	79	J	490			NA	790		40	J	
Benzoic acid		NA		NA		NA		NA		NA	
Benzyl alcohol		NA		NA		NA		NA		NA	
Bis(2-Chloroethoxy)methane	370	U	350	U		NA	400	U	380	U	
Bis(2-Chloroethyl)ether	370	U	350	U		NA	400	U	380	U	
bis(2-Ethylhexyl)phthalate	490	JEB	2100	JEB		NA	1200	JEB	110	JEB	
bis-(2-chloroisopropyl)ether		NA		NA		NA		NA		NA	
Butylbenzylphthalate	370	U	350	U		NA	400	U	380	U	
Caprolactam	370	U	350	U		NA	400	U	380	U	
Carbazole	99	J	240	J		NA	330	J	46	J	
Chrysene	160	J	820			NA	1300		62	J	
Di-n-Butylphthalate	370	U	39	J		NA	400	U	380	U	
Di-n-octylphthalate	370	U	350	U		NA	400	U	380	U	
Dibenzo(a,h)anthracene	370	U	45	J		NA	220	J	380	U	
Dibenzofuran	370	U	58	J		NA	70	J	380	U	
Diethylphthalate	370	U	350	U		NA	400	U	380	U	
Dimethylphthalate	370	U	350	U		NA	400	U	380	U	

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW15D-0204		CM-SO-MW15D-0406		CM-SO-DUP-05		CM-SO-DUP05-0801		CM-SO-MW15D-0608		CM-SO-MW15D-4850
Sample Location	MW15D		MW15D		MW15D		MW15D		MW15D		MW15D
Date Sampled	8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/8/2001
Interval	2.0-4.0		4.0-6.0		4.0-6.0		4.0-6.0		6.0-8.0		48.0-50.0
QC Identifier	None		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		None		None
Fluoranthene	330	J	1400	J		NA	2500	J	130	J	
Fluorene	370	U	100	J		NA	130	J	380	U	
Hexachlorobenzene	370	U	350	U		NA	400	U	380	U	
Hexachlorobutadiene	370	U	350	U		NA	400	U	380	U	
Hexachlorocyclopentadiene	370	UJ	350	UJ		NA	400	UJ	380	UJ	
Hexachloroethane	370	U	350	U		NA	400	U	380	U	
High Molecular Weight PAHs		NA		NA		NA		NA		NA	
Indeno(1,2,3-cd)pyrene	94	J	620			NA	700		41	J	
Isophorone	370	U	350	U		NA	400	U	380	U	
Low Molecular Weight PAHs		NA		NA		NA		NA		NA	
N-Nitroso-di-n-propylamine	370	UJ	350	UJ		NA	400	UJ	380	UJ	
N-Nitroso-diphenylamine	370	U	350	U		NA	400	U	380	U	
Naphthalene	370	U	190	J		NA	230	J	380	U	
Nitrobenzene	370	U	350	U		NA	400	U	380	U	
Pentachlorophenol	930	U	890	U		NA	1000	U	950	U	
PERYLENE		NA	531.5	NJ		NA		NA		NA	
Phenanthrene	180	J	760			NA	1000		82	J	
Phenol	370	U	350	U		NA	400	U	380	U	
Pyrene	230	J	1100			NA	1800		95	J	
Total PAH		NA		NA		NA		NA		NA	
Total Semi-Volatile Organics		NA		NA		NA		NA		NA	

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

US EPA ARCHIVE DOCUMENT

Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number		CM-SO-SB-14-271-0102		CM-SO-SB-14-271-0204		CM-SO-SB-14-271-0406		CM-SO-SB-14-271-0608		CM-SO-SB-14-271-1416	
Sample Location		SB-14-271		SB-14-271		SB-14-271		SB-14-271		SB-14-271	
Date Sampled		6/21/2001		6/21/2001		6/21/2001		6/21/2001		6/21/2001	
Interval		1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		14.0-16.0	
QC Identifier		None		None		None		None		None	
Semivolatile Organic Analysis (UG/KG)											
1,1'-Biphenyl	NA	400	U	450	U	400	U	430	U		NA
1,2,4-Trichlorobenzene	NA		NA		NA		NA		NA		NA
1,2,4- TRIMETHYLBENZENE	NA		NA		NA		NA		NA		NA
1,2-Dichlorobenzene	NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	NA		NA		NA		NA		NA		NA
2,2'-oxybis(1-Chloropropane)	NA	400	U	450	U	400	U	430	U		NA
2,4,5-Trichlorophenol	NA	1000	U	1100	U	1000	U	1100	U		NA
2,4,6-Trichlorophenol	NA	400	U	450	U	400	U	430	U		NA
2,4-Dichlorophenol	NA	400	U	450	U	400	U	430	U		NA
2,4-Dimethylphenol	NA	400	UJ	450	UJ	400	UJ	430	UJ		NA
2,4-Dinitrophenol	NA	1000	U	1100	U	1000	U	1100	U		NA
2,4-Dinitrotoluene	NA	400	U	450	U	400	U	430	U		NA
2,6-Dinitrotoluene	NA	400	U	450	U	400	U	430	U		NA
2-Chloronaphthalene	NA	400	U	450	U	400	U	430	U		NA
2-Chlorophenol	NA	400	U	450	U	400	U	430	U		NA
2-Methylnaphthalene	NA	400	U	450	U	400	U	430	U		NA
2-Methylphenol	NA	400	U	450	U	400	U	430	U		NA
2-Nitroaniline	NA	1000	U	1100	U	1000	U	1100	U		NA
2-Nitrophenol	NA	400	U	450	U	400	U	430	U		NA
3+4-Methylphenols	NA		NA		NA		NA		NA		NA
3,3'-Dichlorobenzidine	NA	400	U	450	U	400	U	430	U		NA
3-Nitroaniline	NA	1000	U	1100	U	1000	U	1100	U		NA
4,6-Dinitro-2-methylphenol	NA	1000	U	1100	U	1000	U	1100	U		NA
4-Bromophenyl-phenylether	NA	400	U	450	U	400	U	430	U		NA
4-Chloro-3-methylphenol	NA	400	U	450	U	400	U	430	U		NA
4-Chloroaniline	NA	400	U	450	U	400	U	430	U		NA
4-Chlorophenyl-phenylether	NA	400	U	450	U	400	U	430	U		NA
4-Methylphenol	NA	400	U	450	U	400	U	430	U		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number		CM-SO-SB-14-271-0102		CM-SO-SB-14-271-0204		CM-SO-SB-14-271-0406		CM-SO-SB-14-271-0608		CM-SO-SB-14-271-1416	
Sample Location		SB-14-271		SB-14-271		SB-14-271		SB-14-271		SB-14-271	
Date Sampled		6/21/2001		6/21/2001		6/21/2001		6/21/2001		6/21/2001	
Interval		1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		14.0-16.0	
QC Identifier		None		None		None		None		None	
4-Nitroaniline	NA	1000	U	1100	U	1000	U	1100	U		NA
4-Nitrophenol	NA	1000	U	1100	U	1000	U	1100	U		NA
Acenaphthene	NA	400	U	450	U	400	U	430	U		NA
Acenaphthylene	NA	60	J	450	U	400	U	430	U		NA
Acetophenone	NA	400	U	450	U	400	U	430	U		NA
Anthracene	NA	400	U	450	U	400	U	430	U		NA
Atrazine	NA	400	U	450	U	400	U	430	U		NA
BAPEQ	NA		NA		NA		NA		NA		NA
Benzaldehyde	NA	45	JEB	450	U	400	U	430	U		NA
Benzo(a)anthracene	NA	210	J	450	U	400	U	430	U		NA
Benzo(a)pyrene	NA	170	J		R		R		R		NA
Benzo(b)fluoranthene	NA	360	J	450	U	400	U	430	U		NA
Benzo(g,h,i)perylene	NA	400	U	450	U	400	U	430	U		NA
Benzo(k)fluoranthene	NA	110	J	450	U	400	U	430	U		NA
Benzoic acid	NA		NA		NA		NA		NA		NA
Benzyl alcohol	NA		NA		NA		NA		NA		NA
Bis(2-Chloroethoxy)methane	NA	400	U	450	U	400	U	430	U		NA
Bis(2-Chloroethyl)ether	NA	400	U	450	U	400	U	430	U		NA
bis(2-Ethylhexyl)phthalate	NA	400	U	450	U	400	U	430	U		NA
bis-(2-chloroisopropyl)ether	NA		NA		NA		NA		NA		NA
Butylbenzylphthalate	NA	400	U	450	U	400	U	430	U		NA
Caprolactam	NA	400	U	450	U	400	U	430	U		NA
Carbazole	NA	400	U	450	U	400	U	430	U		NA
Chrysene	NA	260	J	450	U	400	U	430	U		NA
Di-n-Butylphthalate	NA	400	U	450	U	400	U	430	U		NA
Di-n-octylphthalate	NA	400	U	450	U	400	U	430	U		NA
Dibenzo(a,h)anthracene	NA	400	U	450	U	400	U	430	U		NA
Dibenzofuran	NA	400	U	450	U	400	U	430	U		NA
Diethylphthalate	NA	400	U	450	U	400	U	430	U		NA
Dimethylphthalate	NA	400	U	450	U	400	U	430	U		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number		CM-SO-SB-14-271-0102		CM-SO-SB-14-271-0204		CM-SO-SB-14-271-0406		CM-SO-SB-14-271-0608		CM-SO-SB-14-271-1416	
Sample Location		SB-14-271		SB-14-271		SB-14-271		SB-14-271		SB-14-271	
Date Sampled		6/21/2001		6/21/2001		6/21/2001		6/21/2001		6/21/2001	
Interval		1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		14.0-16.0	
QC Identifier		None		None		None		None		None	
Fluoranthene	NA	330	J	450	U	42	J	430	U		NA
Fluorene	NA	400	U	450	U	400	U	430	U		NA
Hexachlorobenzene	NA	400	U	450	U	400	U	430	U		NA
Hexachlorobutadiene	NA	400	U	450	U	400	U	430	U		NA
Hexachlorocyclopentadiene	NA	400	U	450	U	400	U	430	U		NA
Hexachloroethane	NA	400	U	450	U	400	U	430	U		NA
High Molecular Weight PAHs	NA		NA		NA		NA		NA		NA
Indeno(1,2,3-cd)pyrene	NA	400	U	450	U	400	U	430	U		NA
Isophorone	NA	400	U	450	U	400	U	430	U		NA
Low Molecular Weight PAHs	NA		NA		NA		NA		NA		NA
N-Nitroso-di-n-propylamine	NA	400	U	450	U	400	U	430	U		NA
N-Nitroso-diphenylamine	NA	400	U	450	U	400	U	430	U		NA
Naphthalene	NA	400	U	450	U	400	U	430	U		NA
Nitrobenzene	NA	400	U	450	U	400	U	430	U		NA
Pentachlorophenol	NA	1000	U	1100	U	1000	U	1100	U		NA
PERYLENE	NA		NA		NA		NA		NA		NA
Phenanthrene	NA	130	J	450	U	400	U	430	U		NA
Phenol	NA	400	U	450	U	400	U	430	U		NA
Pyrene	NA	430		450	U	44	J	430	U		NA
Total PAH	NA		NA		NA		NA		NA		NA
Total Semi-Volatile Organics	NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB02-0204		CM-SO-DUP03		CM-SO-SB02-0406		CM-SO-SB02-0606		CM-SO-SB03-0204		CM-SO-SB03-0406	
Sample Location	SB02		SB02		SB02		SB02		SB03		SB03	
Date Sampled	1/3/2001		1/3/2001		1/3/2001		1/3/2001		1/9/2001		1/9/2001	
Interval	2.0-4.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-SB02-0204		Field Dup. CM-SO-SB02-0204		None		None		None		Field Dup. CM-SO-SB03-0406	
Semivolatile Organic Analysis (UG/KG)												
1,1'-Biphenyl	2200	U	2300	U	230	J	120	J	990	U	380	U
1,2,4-Trichlorobenzene		NA		NA		NA		NA		NA		NA
1,2,4- TRIMETHYLBENZENE		NA		NA		NA		NA		NA		NA
1,2-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene		NA		NA		NA		NA		NA		NA
2,2'-oxybis(1-Chloropropane)	2200	U	2300	U	830	U	400	U	990	U	380	U
2,4,5-Trichlorophenol	5500	U	5800	U	2100	U	1000	U	2500	U	940	U
2,4,6-Trichlorophenol	2200	U	2300	U	830	U	400	U	990	U	380	U
2,4-Dichlorophenol	2200	U	2300	U	830	U	400	U	990	U	380	U
2,4-Dimethylphenol	2200	U	2300	U	85	J	400	U	990	U	380	U
2,4-Dinitrophenol	5500	U	5800	U	2100	U	1000	U	2500	UJ	940	U
2,4-Dinitrotoluene	2200	U	2300	U	830	U	400	U	990	U	380	U
2,6-Dinitrotoluene	2200	U	2300	U	830	U	400	U	990	U	380	U
2-Chloronaphthalene	2200	U	2300	U	830	U	400	U	990	U	380	U
2-Chlorophenol	2200	U	2300	U	830	U	400	U	990	U	380	U
2-Methylnaphthalene	2200	U	2300	U	120	J	53	J	990	U	380	U
2-Methylphenol	2200	U	2300	U	830	U	400	U	990	U	380	U
2-Nitroaniline	5500	U	5800	U	2100	U	1000	U	2500	UJ	940	U
2-Nitrophenol	2200	U	2300	U	830	U	400	U	990	U	380	U
3+4-Methylphenols		NA		NA		NA		NA		NA		NA
3,3'-Dichlorobenzidine	2200	U	2300	U	830	U	400	U	990	U	380	U
3-Nitroaniline	5500	U	5800	U	2100	U	1000	U	2500	U	940	U
4,6-Dinitro-2-methylphenol	5500	U	5800	U	2100	U	1000	U	2500	UJ	940	U
4-Bromophenyl-phenylether	2200	U	2300	U	830	U	400	U	990	U	380	U
4-Chloro-3-methylphenol	2200	U	2300	U	830	U	400	U	990	U	380	U
4-Chloroaniline	2200	U	2300	U	830	U	400	U	990	U	380	U
4-Chlorophenyl-phenylether	2200	U	2300	U	830	U	400	U	990	U	380	U
4-Methylphenol	2200	U	2300	U	200	J	81	J	990	U	380	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

US EPA ARCHIVE DOCUMENT

Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB02-0204		CM-SO-DUP03		CM-SO-SB02-0406		CM-SO-SB02-0608		CM-SO-SB03-0204		CM-SO-SB03-0406	
Sample Location	SB02		SB02		SB02		SB02		SB03		SB03	
Date Sampled	1/3/2001		1/3/2001		1/3/2001		1/3/2001		1/9/2001		1/9/2001	
Interval	2.0-4.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-SB02-0204		Field Dup. CM-SO-SB02-0204		None		None		None		Field Dup. CM-SO-SB03-0406	
4-Nitroaniline	5500	U	5800	U	2100	U	1000	U	2500	U	940	U
4-Nitrophenol	5500	U	5800	U	2100	U	1000	U	2500	UJ	940	U
Acenaphthene	2200	U	2300	U	830	U	400	U	390	J	380	U
Acenaphthylene	2200	U	2300	U	830	U	58	J	170	J	380	U
Acetophenone	2200	U	2300	U	830	U	400	U	990	U	380	U
Anthracene	2200	U	2300	U	97	J	54	J	660	J	380	U
Atrazine	2200	U	2300	U	830	U	400	U	990	U	380	U
BAPEQ		NA		NA		NA		NA		NA		NA
Benzaldehyde	2200	U	2300	U	830	U	400	U	990	U	380	U
Benzo(a)anthracene	700	J	600	J	390	J	330	J	3400		380	U
Benzo(a)pyrene	550	J	440	J	240	J	190	J	2900		380	U
Benzo(b)fluoranthene	680	J	550	J	310	J	270	J	3100		380	U
Benzo(g,h,i)perylene	270	J	2300	U	99	J	82	J	1400		380	U
Benzo(k)fluoranthene	450	J	410	J	190	J	170	J	2200		380	U
Benzoic acid		NA		NA		NA		NA		NA		NA
Benzyl alcohol		NA		NA		NA		NA		NA		NA
Bis(2-Chloroethoxy)methane	2200	U	2300	U	830	U	400	U	990	U	380	U
Bis(2-Chloroethyl)ether	2200	U	2300	U	830	U	400	U	990	U	380	U
bis(2-Ethylhexyl)phthalate	6000		4800		3500		3100		990	U	380	U
bis-(2-chloroisopropyl)ether		NA		NA		NA		NA		NA		NA
Butylbenzylphthalate	2200	U	2300	U	830	U	400	U	990	U	380	U
Caprolactam	2200	U	2300	U	110	J	400	U	990	U	380	U
Carbazole	2200	U	2300	U	91	J	400	U	350	J	380	U
Chrysene	1000	J	880	J	530	J	400		3500		380	U
Di-n-Butylphthalate	2200	U	2300	U	830	U	400	U	990	U	380	U
Di-n-octylphthalate	2200	U	2300	U	150	J	400	U	990	U	380	U
Dibenzo(a,h)anthracene	2200	U	2300	U	830	U	400	U	640	J	380	U
Dibenzofuran	2200	U	2300	U	830	U	400	U	210	J	380	U
Diethylphthalate	2200	U	2300	U	830	U	400	U	990	U	380	U
Dimethylphthalate	2200	U	2300	U	830	U	400	U	990	U	380	U

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB02-0204		CM-SO-DUP03		CM-SO-SB02-0406		CM-SO-SB02-0608		CM-SO-SB03-0204		CM-SO-SB03-0406	
Sample Location	SB02		SB02		SB02		SB02		SB03		SB03	
Date Sampled	1/3/2001		1/3/2001		1/3/2001		1/3/2001		1/9/2001		1/9/2001	
Interval	2.0-4.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-SB02-0204		Field Dup. CM-SO-SB02-0204		None		None		None		Field Dup. CM-SO-SB03-0406	
Fluoranthene	1500	J	1400	J	780	J	800		5200		380	U
Fluorene	2200	U	2300	U	88	J	400	U	480	J	380	U
Hexachlorobenzene	2200	U	2300	U	830	U	400	U	990	U	380	U
Hexachlorobutadiene	2200	U	2300	U	830	U	400	U	990	U	380	U
Hexachlorocyclopentadiene	2200	U	2300	U	830	U	400	U	990	U	380	U
Hexachloroethane	2200	U	2300	U	830	U	400	U	990	U	380	U
High Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
Indeno(1,2,3-cd)pyrene	260	J	2300	U	89	J	75	J	1400		380	U
Isophorone	2200	U	2300	U	830	U	400	U	990	U	380	U
Low Molecular Weight PAHs		NA		NA		NA		NA		NA		NA
N-Nitroso-di-n-propylamine	2200	U	2300	U	830	U	400	U	990	U	380	U
N-Nitroso-diphenylamine	2200	U	2300	U	85	J	400	U	990	U	380	U
Naphthalene	2200	U	2300	U	830	U	400	U	140	J	380	U
Nitrobenzene	2200	U	2300	U	150	J	67	J	990	U	380	U
Pentachlorophenol	5500	U	650	J	2100	U	1000	U	2500	U	940	U
PERYLENE		NA	950	JN		NA		NA		NA		NA
Phenanthrene	520	J	490	J	340	J	270	J	3600		380	U
Phenol	2200	U	2300	U	830	U	400	U	990	U	380	U
Pyrene	1900	J	1600	J	1100		910		6300		380	U
Total PAH		NA		NA		NA		NA		NA		NA
Total Semi-Volatile Organics		NA		NA		NA		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP05		CM-SO-SB03-0608		CM-SO-SB03-1820	
Sample Location	SB03		SB03		SB03	
Date Sampled	1/9/2001		1/9/2001		1/9/2001	
Interval	4.0-6.0		6.0-8.0		18.0-20.0	
QC Identifier	Field Dup. CM-SO-SB03-0406		None		None	
Semivolatile Organic Analysis (UG/KG)						
1,1'-Biphenyl	370	U	380	U	400	U
1,2,4-Trichlorobenzene		NA		NA		NA
1,2,4- TRIMETHYLBENZENE		NA		NA		NA
1,2-Dichlorobenzene		NA		NA		NA
1,3-Dichlorobenzene		NA		NA		NA
1,4-Dichlorobenzene		NA		NA		NA
2,2'-oxybis(1-Chloropropane)	370	U	380	U	400	U
2,4,5-Trichlorophenol	930	U	940	U	1000	U
2,4,6-Trichlorophenol	370	U	380	U	400	U
2,4-Dichlorophenol	370	U	380	U	400	U
2,4-Dimethylphenol	370	U	380	U	400	U
2,4-Dinitrophenol	930	U	940	U	1000	U
2,4-Dinitrotoluene	370	U	380	U	400	U
2,6-Dinitrotoluene	370	U	380	U	400	U
2-Chloronaphthalene	370	U	380	U	400	U
2-Chlorophenol	370	U	380	U	400	U
2-Methylnaphthalene	370	U	380	U	400	U
2-Methylphenol	370	U	380	U	400	U
2-Nitroaniline	930	U	940	U	1000	U
2-Nitrophenol	370	U	380	U	400	U
3+4-Methylphenols		NA		NA		NA
3,3'-Dichlorobenzidine	370	U	380	U	400	U
3-Nitroaniline	930	U	940	U	1000	U
4,6-Dinitro-2-methylphenol	930	U	940	U	1000	U
4-Bromophenyl-phenylether	370	U	380	U	400	U
4-Chloro-3-methylphenol	370	U	380	U	400	U
4-Chloroaniline	370	U	380	U	400	U
4-Chlorophenyl-phenylether	370	U	380	U	400	U
4-Methylphenol	370	U	380	U	400	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP05		CM-SO-SB03-0608		CM-SO-SB03-1820	
Sample Location	SB03		SB03		SB03	
Date Sampled	1/9/2001		1/9/2001		1/9/2001	
Interval	4.0-6.0		6.0-8.0		18.0-20.0	
QC Identifier	Field Dup. CM-SO-SB03-0406		None		None	
4-Nitroaniline	930	U	940	U	1000	U
4-Nitrophenol	930	U	940	U	1000	U
Acenaphthene	370	U	380	U	400	U
Acenaphthylene	370	U	380	U	400	U
Acetophenone	370	U	380	U	400	U
Anthracene	370	U	380	U	400	U
Atrazine	370	U	380	U	400	U
BAPEQ		NA		NA		NA
Benzaldehyde	370	U	380	U	400	U
Benzo(a)anthracene	370	U	380	U	400	U
Benzo(a)pyrene	370	U	380	U	400	U
Benzo(b)fluoranthene	370	U	380	U	400	U
Benzo(g,h,i)perylene	370	U	380	U	400	U
Benzo(k)fluoranthene	370	U	380	U	400	U
Benzoic acid		NA		NA		NA
Benzyl alcohol		NA		NA		NA
Bis(2-Chloroethoxy)methane	370	U	380	U	400	U
Bis(2-Chloroethyl)ether	370	U	380	U	400	U
bis(2-Ethylhexyl)phthalate	370	U	380	U	400	U
bis-(2-chloroisopropyl)ether		NA		NA		NA
Butylbenzylphthalate	370	U	380	U	400	U
Caprolactam	370	U	380	U	400	U
Carbazole	370	U	380	U	400	U
Chrysene	370	U	380	U	400	U
Di-n-Butylphthalate	370	U	380	U	400	U
Di-n-octylphthalate	370	U	380	U	400	U
Dibenzo(a,h)anthracene	370	U	380	U	400	U
Dibenzofuran	370	U	380	U	400	U
Diethylphthalate	370	U	380	U	400	U
Dimethylphthalate	370	U	380	U	400	U

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Analytical SVOC Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP05		CM-SO-SB03-0606		CM-SO-SB03-1820	
Sample Location	SB03		SB03		SB03	
Date Sampled	1/9/2001		1/9/2001		1/9/2001	
Interval	4.0-6.0		6.0-6.0		18.0-20.0	
QC Identifier	Field Dup. CM-SO-SB03-0406		None		None	
Fluoranthene	370	U	380	U	400	U
Fluorene	370	U	380	U	400	U
Hexachlorobenzene	370	U	380	U	400	U
Hexachlorobutadiene	370	U	380	U	400	U
Hexachlorocyclopentadiene	370	U	380	U	400	U
Hexachloroethane	370	U	380	U	400	U
High Molecular Weight PAHs		NA		NA		NA
Indeno(1,2,3-cd)pyrene	370	U	380	U	400	U
Isophorone	370	U	380	U	400	U
Low Molecular Weight PAHs		NA		NA		NA
N-Nitroso-di-n-propylamine	370	U	380	U	400	U
N-Nitroso-diphenylamine	370	U	380	U	400	U
Naphthalene	370	U	380	U	400	U
Nitrobenzene	370	U	380	U	400	U
Pentachlorophenol	930	U	940	U	1000	U
PERYLENE		NA		NA		NA
Phenanthrene	370	U	380	U	400	U
Phenol	370	U	380	U	400	U
Pyrene	370	U	380	U	400	U
Total PAH		NA		NA		NA
Total Semi-Volatile Organics		NA		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

US EPA ARCHIVE DOCUMENT

Analytical Pesticide/PCB Results from Subsurface Sampling
Centredale Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW01-0102		CM-SO-MW01-0204		CM-SO-MW01-0406		CM-SO-MW01-0606		CM-SO-MW02-0204		CM-SO-MW02-0406
Sample Location	MW01		MW01		MW01		MW01		MW02		MW02
Date Sampled	12/28/2000		12/28/2000		12/28/2000		12/28/2000		1/5/2001		1/5/2001
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW02-0406
Pesticide/PCB Analysis (UG/KG)											
4,4'-DDD	3.4	J	3.9	U	4.0	U	2.3	J	0.25	J	
4,4'-DDE	1.6	J	4.4		4.0	U	1.6	J	0.77	J	
4,4'-DDT	3.8	U	3.9	U	4.0	U	3.8	U	3.8	U	
Aldrin	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	
alpha-BHC	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	
alpha-Chlordane	2.0	U	2.0	U	2.0	U	2.0	U	0.98	J	
Aroclor, Total		NA		NA		NA		NA		NA	
Aroclor-1016	38	U	39	U	40	U	38	U	38	U	
Aroclor-1221	77	U	80	U	81	U	77	U	76	U	
Aroclor-1232	38	U	39	U	40	U	38	U	38	U	
Aroclor-1242	38	U	39	U	40	U	38	U	38	U	
Aroclor-1248	38	U	39	U	40	U	38	U	96		
Aroclor-1254	110		390		470		180		89		
Aroclor-1260	38	U	39	U	40	U	38	U	38	U	
beta-BHC	10		17		10		2.3		2.1	EB	
delta-BHC	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	
Dieldrin	4.8		16		4.8		1.6	J	2.0	JEB	
Endosulfan I	2.0	U	2.0	U	1.8	J	0.52	J	2.0	U	
Endosulfan II	3.8	U	3.9	U	4.0	U	3.8	U	3.8	U	
Endosulfan Sulfate	3.8	U	3.9	U	3.9	J	3.8	U	0.92	J	
Endrin	3.8	U	3.9	U	4.0	U	3.8	U	3.8	U	
Endrin Aldehyde	2.1	J	3.9	U	2.0	J	1.8	J	3.8	U	
Endrin Ketone	8.8		9.6		11		3.8	U	0.67	J	
gamma-BHC	2.0	U	2.0	U	2.0	U	2.0	U	0.96	J	
gamma-Chlordane	2.0	U	2.0	U	2.0	U	2.0	U	1.2	J	
Heptachlor	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	
Heptachlor Epoxide	2.0	U	2.0	U	2.0	U	2.0	U	0.054	J	
Methoxychlor	20	U	20	U	34		20	U	20	U	
Technical Chlordane		NA		NA		NA		NA		NA	
Toxaphene	200	U	200	U	200	U	200	U	200	U	

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Analytical Pesticide/PCB Results from Subsurface Sampling
Centredale Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number		CM-SO-DUP04		CM-SO-MW02-0608		CM-SO-MW02-0810		CM-SO-MW02-1820		CM-SO-MW02-6163		CM-SO-MW02-6466	
Sample Location		MW02		MW02		MW02		MW02		MW02		MW02	
Date Sampled		1/5/2001		1/5/2001		1/5/2001		1/5/2001		6/26/2001		7/2/2001	
Interval		4.0-6.0		6.0-8.0		8.0-10.0		18.0-20.0		61.0-63.0		64.0-66.0	
QC Identifier		Field Dup. CM-SO-MW02-0406		None		None		None		None		Field Dup. CM-SO-MW02-6466	
Pesticide/PCB Analysis (UG/KG)													
4,4'-DDD	NA		NA	0.59	J	0.33	J	3.8	U		NA		NA
4,4'-DDE	NA		NA	1.7	J	1.1	J	0.15	J		NA		NA
4,4'-DDT	NA		NA	3.7	U	4.0	U	3.8	U		NA		NA
Aldrin	NA		NA	0.12	J	2.0	U	1.9	U		NA		NA
alpha-BHC	NA		NA	0.62	J	0.34	J	0.30	J		NA		NA
alpha-Chlordane	NA		NA	0.42	J	0.33	J	0.17	J		NA		NA
Aroclor, Total	NA		NA		NA		NA		NA		NA		NA
Aroclor-1016	NA		NA	37	U	40	U	38	U		NA		NA
Aroclor-1221	NA		NA	75	U	81	U	76	U		NA		NA
Aroclor-1232	NA		NA	37	U	40	U	38	U		NA		NA
Aroclor-1242	NA		NA	37	U	40	U	38	U		NA		NA
Aroclor-1248	NA		NA	96		40	U	38	U		NA		NA
Aroclor-1254	NA		NA	150		40	U	38	U		NA		NA
Aroclor-1260	NA		NA	37	U	40	U	38	U		NA		NA
beta-BHC	NA		NA	1.9	U	2.0	U	1.9	U		NA		NA
delta-BHC	NA		NA	1.9	U	2.0	U	1.9	U		NA		NA
Dieldrin	NA		NA	5.0	EB	0.71	JEB	3.8	U		NA		NA
Endosulfan I	NA		NA	1.9	U	0.60	J	0.40	J		NA		NA
Endosulfan II	NA		NA	0.79	J	0.21	J	3.8	U		NA		NA
Endosulfan Sulfate	NA		NA	3.7	U	4.0	U	3.8	U		NA		NA
Endrin	NA		NA	3.7	U	4.0	U	3.8	U		NA		NA
Endrin Aldehyde	NA		NA	1.8	J	0.37	J	3.8	U		NA		NA
Endrin Ketone	NA		NA	3.2	J	1.8	J	3.8	U		NA		NA
gamma-BHC	NA		NA	1.9	U	0.82	J	1.9	U		NA		NA
gamma-Chlordane	NA		NA	1.8	J	2.0	U	1.9	U		NA		NA
Heptachlor	NA		NA	1.9	U	2.0	U	1.9	U		NA		NA
Heptachlor Epoxide	NA		NA	1.9	U	0.22	J	1.9	U		NA		NA
Methoxychlor	NA		NA	19	U	20	U	19	U		NA		NA
Technical Chlordane	NA		NA		NA		NA		NA		NA		NA
Toxaphene	NA		NA	190	U	200	U	190	U		NA		NA

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* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical Pesticide/PCB Results from Subsurface Sampling
Centredale Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02-0701		CM-SO-MW02-7272.2		CM-SO-MW03-0406		CM-SO-MW03-0608		CM-SO-MW04-0204		CM-SO-MW04-0406	
Sample Location	MW02		MW02		MW03		MW03		MW04		MW04	
Date Sampled	7/2/2001		7/3/2001		12/27/2000		12/27/2000		6/12/2001		6/12/2001	
Interval	64.0-66.0		72.0-72.2		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-MW02 6466		None		None		None		None		None	
Pesticide/PCB Analysis (UG/KG)												
4,4'-DDD		NA		NA	7.1		13			NA	4.3	UJ
4,4'-DDE		NA		NA	2.3	J	3.4	J		NA	4.3	UJ
4,4'-DDT		NA		NA	15		3.8	U		NA	4.3	UJ
Aldrin		NA		NA	2.1	U	2.0	U		NA	2.2	UJ
alpha-BHC		NA		NA	2.1	U	2.0	U		NA	2.2	UJ
alpha-Chlordane		NA		NA	3.6		2.3			NA	2.2	UJ
Aroclor, Total		NA		NA		NA		NA		NA		NA
Aroclor-1016		NA		NA	40	U	38	U		NA	43	U
Aroclor-1221		NA		NA	82	U	77	U		NA	87	U
Aroclor-1232		NA		NA	40	U	38	U		NA	43	U
Aroclor-1242		NA		NA	40	U	38	U		NA	43	U
Aroclor-1248		NA		NA	40	U	38	U		NA	43	U
Aroclor-1254		NA		NA	40	U	170			NA	43	U
Aroclor-1260		NA		NA	40	U	38	U		NA	43	U
beta-BHC		NA		NA	2.1	U	27	J		NA	2.2	UJ
delta-BHC		NA		NA	2.1	U	2.0	U		NA	2.2	UJ
Dieldrin		NA		NA	2.5	J	5.7			NA	4.3	UJ
Endosulfan I		NA		NA	2.1	U	2.0	U		NA	2.2	UJ
Endosulfan II		NA		NA	4.0	U	3.8	U		NA	4.3	UJ
Endosulfan Sulfate		NA		NA	4.0	U	3.1	J		NA	4.3	UJ
Endrin		NA		NA	4.0	U	3.8	U		NA	4.3	UJ
Endrin Aldehyde		NA		NA	2.9	J	1.6	J		NA	4.3	UJ
Endrin Ketone		NA		NA	3.8	J	3.8	U		NA	4.3	UJ
gamma-BHC		NA		NA	2.1	U	2.0	U		NA	2.2	UJ
gamma-Chlordane		NA		NA	2.1	U	2.0	U		NA	2.2	UJ
Heptachlor		NA		NA	2.1	U	2.0	U		NA	2.2	UJ
Heptachlor Epoxide		NA		NA	2.1	U	2.0	U		NA	2.2	UJ
Methoxychlor		NA		NA	20		17	J		NA	22	UJ
Technical Chlordane		NA		NA		NA		NA		NA		NA
Toxaphene		NA		NA	210	U	200	U		NA	220	UJ

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Sample Number	CM-SO-MW04-0608		CM-SO-MW04B-4244		CM-SO-DUP-04		CM-SO-MW05-0102		CM-SO-DUP-01		CM-SO-MW05-0204	
Sample Location	MW04		MW04B		MW04B		MW05		MW05		MW05	
Date Sampled	6/12/2001		8/2/2001		8/2/2001		6/18/2001		6/18/2001		6/18/2001	
Interval	6.0-8.0		42.0-44.0		42.0-44.0		1.0-2.0		1.0-2.0		2.0-4.0	
QC Identifier	None		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW05-0102		Field Dup. CM-SO-MW05-0102		None	
Pesticide/PCB Analysis (UG/KG)												
4,4'-DDD	3.6	U		NA		NA	3.6	U	3.6	U	4.3	
4,4'-DDE	3.6	U		NA		NA	3.6	U	3.6	U	3.6	U
4,4'-DDT	3.6	U		NA		NA	3.6	U	3.6	U	6.1	
Aldrin	1.8	U		NA		NA	1.9	U	1.9	U	1.9	U
alpha-BHC	1.8	U		NA		NA	1.9	U	1.9	U	1.9	U
alpha-Chlordane	1.8	U		NA		NA	1.9	U	1.9	U	1.9	U
Aroclor, Total		NA		NA		NA		NA		NA		NA
Aroclor-1016	36	U		NA		NA	36	U	36	U	38	U
Aroclor-1221	73	U		NA		NA	74	U	73	U	77	U
Aroclor-1232	36	U		NA		NA	36	U	36	U	38	U
Aroclor-1242	36	U		NA		NA	36	U	36	U	38	U
Aroclor-1248	36	U		NA		NA	36	U	36	U	38	U
Aroclor-1254	36	U		NA		NA	36	U	36	U	38	U
Aroclor-1260	36	U		NA		NA	36	U	36	U	38	U
beta-BHC	1.8	U		NA		NA	1.9	U	1.9	U	1.9	U
delta-BHC	1.8	U		NA		NA	1.9	U	1.9	U	1.9	U
Dieldrin	3.6	U		NA		NA	3.6	U	3.6	U	3.6	U
Endosulfan I	1.8	U		NA		NA	1.9	U	1.9	U	1.9	U
Endosulfan II	3.6	U		NA		NA	3.6	U	3.6	U	3.6	U
Endosulfan Sulfate	3.6	U		NA		NA	3.6	U	3.6	U	3.6	U
Endrin	3.6	U		NA		NA	3.6	U	3.6	U	3.6	U
Endrin Aldehyde	3.6	U		NA		NA	3.6	U	3.6	U	3.6	U
Endrin Ketone	3.6	U		NA		NA	3.6	U	3.6	U	6.1	
gamma-BHC	1.8	U		NA		NA	1.9	U	1.9	U	1.9	U
gamma-Chlordane	1.8	U		NA		NA	1.9	U	1.9	U	1.9	U
Heptachlor	1.8	U		NA		NA	1.9	U	1.9	U	1.9	U
Heptachlor Epoxide	1.8	U		NA		NA	1.9	U	1.9	U	1.9	U
Methoxychlor	18	U		NA		NA	19	U	19	U	19	U
Technical Chlordane		NA		NA		NA		NA		NA		NA
Toxephene	180	U		NA		NA	190	U	190	U	190	U

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Sample Number	CM-SO-MW05-0406		CM-SO-MW05-0810		CM-SO-MW05-1012		CM-SO-MW06-0204		CM-SO-MW06-DUP01		CM-SO-MW06-0406	
Sample Location	MW05		MW05		MW05		MW06		MW06		MW06	
Date Sampled	6/19/2001		6/19/2001		6/19/2001		12/19/2000		12/19/2000		12/19/2000	
Interval	4.0-6.0		8.0-10.0		10.0-12.0		2.0-4.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		Field Dup. CM-SO-MW06-0204		Field Dup. CM-SO-MW06-0204		None	
Pesticide/PCB Analysis (UG/KG)												
4,4'-DDD	410	U	3.7	U	3.8	U	7.3	U	7.3	U	4.6	U
4,4'-DDE	410	U	3.7	U	3.8	U	220	*J	400	*J	41	
4,4'-DDT	410	U	3.7	U	3.8	U	7.3	U	7.3	U	4.6	U
Aldrin	210	U	1.9	U	2.0	U	3.7	U	3.8	U	2.4	U
alpha-BHC	210	U	1.9	U	2.0	U	6.7		* 12		4.7	
alpha-Chlordane	210	U	1.9	U	2.0	U	11		21		3.0	
Aroclor, Total		NA		NA		NA		NA		NA		NA
Aroclor-1016	17	U	37	U	38	U	840		1400		320	
Aroclor-1221	17	U	74	U	76	U	150	U	150	U	93	U
Aroclor-1232	17	U	37	U	38	U	73	U	73	U	46	U
Aroclor-1242	17	U	37	U	38	U	73	U	73	U	46	U
Aroclor-1248	17	U	37	U	38	U	73	U	73	U	46	U
Aroclor-1254	17	U	37	U	38	U	4800	*J	8800	*J	4100	*
Aroclor-1260	17	U	37	U	38	U	1100		1700		46	U
beta-BHC	210	U	1.9	U	2.0	U	3.7	U	3.8	U	2.4	U
delta-BHC		R	1.9	U	2.0	U	3.7	U	3.8	U	2.4	U
Dieldrin	410	U	3.7	U	3.8	U	260	*J	520	*J	65	J
Endosulfan I		R	1.9	U	2.0	U	3.7	U	5.7		2.3	J
Endosulfan II	410	U	3.7	U	3.8	U	7.3	U	7.3	U	10	
Endosulfan Sulfate	410	U	3.7	U	3.8	U	7.3	U	7.3	U	74	
Endrin	410	U	3.7	U	3.8	U	7.3	U	7.3	U	4.6	U
Endrin Aldehyde		R	3.7	U	3.8	U	7.3	U	7.3	U	4.6	U
Endrin Ketone	410	U	3.7	U	3.8	U	7.3	U	7.3	U	4.6	U
gamma-BHC	210	U	1.9	U	2.0	U	3.7	U	3.8	U	2.4	U
gamma-Chlordane	210	U	1.9	U	2.0	U	3.7	U	3.8	U	2.4	U
Heptachlor	210	U	1.9	U	2.0	U	3.7	U	3.8	U	2.4	U
Heptachlor Epoxide	210	U	1.9	U	2.0	U	3.7	U	2.2	J	2.4	U
Methoxychlor	2100	U	19	U	20	U	37	U	38	U	24	U
Technical Chlordane		NA		NA		NA		NA		NA		NA
Toxaphene	4100	U	190	U	200	U	370	U	380	U	240	U

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Sample Number	CM-SO-MW06-0606		CM-SO-MW07-0304		CM-SO-MW07-0406		CM-SO-MW07-0606		CM-SO-MW08-0102		CM-SO-MW08-0204	
Sample Location	MW06		MW07		MW07		MW07		MW08		MW08	
Date Sampled	12/19/2000		12/21/2000		12/21/2000		12/21/2000		12/26/2000		12/26/2000	
Interval	6.0-6.0		3.0-4.0		4.0-6.0		6.0-8.0		1.0-2.0		2.0-4.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW08-0204	
Pesticide/PCB Analysis (UG/KG)												
4,4'-DDD	4.1	U	3.8	U	4.0	U	3.9	U	4.2	U	4.1	U
4,4'-DDE	17		5.1		15		1.3	J	20		4.1	U
4,4'-DDT	4.1	U	3.8	U	4.0	U	3.9	U	4.2	U	4.1	U
Aldrin	2.1	U	1.4	J	2.1	U	2.0	U	2.2	U	2.1	U
alpha-BHC	2.4		2.0	U	2.1	U	1.1	J	1.8	J	2.3	
alpha-Chlordane	1.0	J	8.6		2.1	U	2.0	U	2.2	U	2.1	U
Aroclor, Total		NA		NA		NA		NA		NA		NA
Aroclor-1016	150		38	U	40	U	39	U	42	U	41	U
Aroclor-1221	83	U	78	U	82	U	80	U	85	U	83	U
Aroclor-1232	41	U	38	U	40	U	39	U	42	U	41	U
Aroclor-1242	41	U	38	U	40	U	39	U	42	U	41	U
Aroclor-1248	41	U	38	U	40	U	39	U	42	U	41	U
Aroclor-1254	1300		120		32	J	39	U	1300		130	
Aroclor-1260	300		38	U	40	U	39	U	500		41	U
beta-BHC	2.1	U	4.6		2.1	U	2.0	U	7.8		2.1	U
delta-BHC	2.1	U	2.0	U	2.1	U	2.0	U	2.2	U	2.1	U
Dieldrin	28		2.9	J	4.0	U	3.9	U	20		1.9	J
Endosulfan I	1.1	J	2.0	U	2.1	U	2.0	U	2.2	U	0.44	J
Endosulfan II	6.1		2.1	J	4.0	U	3.9	U	4.2	U	4.1	U
Endosulfan Sulfate	4.1	U	4.5		4.0	U	3.9	U	4.2	U	2.4	J
Endrin	4.1	U	9.2		4.0	U	3.9	U	4.2	U	4.1	U
Endrin Aldehyde	4.1	U	3.8	U	4.0	U	3.9	U	4.2	U	1.4	J
Endrin Ketone	4.1	U	3.8	U	4.0	U	3.9	U	4.2	U	5.5	
gamma-BHC	2.1	U	2.0	U	2.1	U	0.96	J	2.2	U	2.1	U
gamma-Chlordane	2.1	U	2.0	U	2.1	U	2.0	U	2.2	U	2.1	U
Heptachlor	2.1	U	2.0	U	2.1	U	2.0	U	4.1		2.1	U
Heptachlor Epoxide	2.1	U	2.0	U	2.1	U	2.0	U	2.2	U	1.4	J
Methoxychlor	21	U	20	U	21	U	20	U	22	U	21	U
Technical Chlordane		NA		NA		NA		NA		NA		NA
Toxaphene	210	U	200	U	210	U	200	U	220	U	210	U

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Sample Number	CM-SO-DUP02		CM-SO-MW08-0406		CM-SO-MW08-0608		CM-SO-MW09-0406		CM-SO-MW09-1011		CM-SO-MW14-0102	
Sample Location	MW08		MW08		MW08		MW09		MW09		MW14	
Date Sampled	12/26/2000		12/26/2000		12/26/2000		12/18/2000		12/18/2000		7/13/2001	
Interval	2.0-4.0		4.0-6.0		6.0-8.0		4.0-6.0		10.0-11.0		1.0-2.0	
QC Identifier	Field Dup. CM-SO-MW08-0204		None		None		None		None		Field Dup. CM-SO-MW14-0102	
Pesticide/PCB Analysis (UG/KG)												
4,4'-DDD	4.5	U	4.4	U	3.8	U	4.2	U	3.6	U	16	
4,4'-DDE	3.3	J	4.4	U	3.8	U	2.4	J	3.6	U	41	
4,4'-DDT	4.5	U	4.4	U	3.8	U	4.2	U	3.6	U	330	UJ
Aldrin	2.3	U	2.3	U	2.0	U	2.2	U	1.9	U	0.54	J
alpha-BHC	2.3	U	2.3	U	2.0	U	2.2	U	1.9	U	2.0	J
alpha-Chlordane	2.3	U	2.3	U	2.0	U	3.1		1.9	U	7.2	
Aroclor, Total		NA		NA		NA		NA		NA		NA
Aroclor-1016	45	U	44	U	38	U	42	U	36	U	33	U
Aroclor-1221	92	U	90	U	78	U	86	U	74	U	68	U
Aroclor-1232	45	U	44	U	38	U	42	U	36	U	33	U
Aroclor-1242	45	U	44	U	38	U	42	U	36	U	33	U
Aroclor-1248	45	U	44	U	38	U	42	U	36	U	33	U
Aroclor-1254	130		44	U	38	U	150		36	U	3700	
Aroclor-1260	45	U	44	U	38	U	42	U	36	U	33	U
beta-BHC	2.3	U	2.3	U	2.0	U	2.2	U	1.9	U	1.3	U
delta-BHC	2.3	U	2.3	U	2.0	U	2.2	U	1.9	U	1.7	U
Dieldrin	2.4	J	4.4	U	3.8	U	8.8		3.6	U	90	*J
Endosulfan I	2.3	U	2.3	U	2.0	U	2.2	U	1.9	U		R
Endosulfan II	4.5	U	4.4	U	3.8	U	4.2	U	3.6	U	3.3	U
Endosulfan Sulfate	3.6	J	4.4	U	3.8	U	5.8		3.6	U	60	*
Endrin	4.5	U	4.4	U	3.8	U	4.2	U	3.6	U	2.5	J
Endrin Aldehyde	0.92	J	4.4	U	3.8	U	1.8	J	3.6	U		R
Endrin Ketone	2.6	J	4.4	U	3.8	U	1.4	J	3.6	U	5.2	
gamma-BHC	2.3	U	2.3	U	2.0	U	2.2	U	1.9	U	1.4	JEB
gamma-Chlordane	2.3	U	2.3	U	2.0	U	2.2	U	1.9	U	33	*
Heptachlor	2.3	U	2.3	U	2.0	U	2.2	U	1.9	U	2.5	
Heptachlor Epoxide	2.3	U	2.3	U	2.0	U	2.2	U	1.9	U	0.49	J
Methoxychlor	23	U	23	U	20	U	22	U	19	U	6.0	J
Technical Chlordane		NA		NA		NA		NA		NA		NA
Toxaphene	230	U	230	U	200	U	220	U	190	U	170	U

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Sample Number	CM-SO-DUP03-0701		CM-SO-MW14-0204		CM-SO-MW14-0607		CM-SO-MW14-0608		CM-SO-MW14-0708		CM-SO-MW14-5252.75	
Sample Location	MW14		MW14		MW14		MW14		MW14		MW14	
Date Sampled	7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/18/2001	
Interval	1.0-2.0		2.0-4.0		6.0-7.0		6.0-8.0		7.0-8.0		52.0-52.8	
QC Identifier	Field Dup. CM-SO-MW14-0102		None		None		None		None		None	
Pesticide/PCB Analysis (UG/KG)												
4,4'-DDD	15		1.0	J		NA	3.4	U		NA		NA
4,4'-DDE	37		0.55	J		NA	1.9	J		NA		NA
4,4'-DDT	330	UJ	3.8	UJ		NA	3.4	U		NA		NA
Aldrin	0.56	J	1.9	U		NA	1.8	U		NA		NA
alpha-BHC	2.1	J	1.9	U		NA	1.8	U		NA		NA
alpha-Chlordane	6.0		1.9	U		NA	1.2	J		NA		NA
Aroclor, Total		NA		NA		NA		NA		NA		NA
Aroclor-1016	34	U	38	U		NA	34	U		NA		NA
Aroclor-1221	69	U	76	U		NA	70	U		NA		NA
Aroclor-1232	34	U	38	U		NA	34	U		NA		NA
Aroclor-1242	34	U	38	U		NA	34	U		NA		NA
Aroclor-1248	34	U	38	U		NA	34	U		NA		NA
Aroclor-1254	3300		38	U		NA	34	U		NA		NA
Aroclor-1260	34	U	38	U		NA	34	U		NA		NA
beta-BHC	1.8	U	0.82	U		NA	3.4			NA		NA
delta-BHC	0.24	J	1.9	U		NA	1.8	U		NA		NA
Dieldrin	78	*	0.95	J		NA	8.0			NA		NA
Endosulfan I	1.8	U	1.9	U		NA	1.4	J		NA		NA
Endosulfan II	3.4	U	0.45	J		NA	3.4	U		NA		NA
Endosulfan Sulfate	57	*	0.59	J		NA	2.7	J		NA		NA
Endrin	3.4	U	3.8	U		NA	3.4	U		NA		NA
Endrin Aldehyde	3.4	U	3.8	U		NA	4.6	J		NA		NA
Endrin Ketone	1.9	J	1.6	J		NA	3.4	U		NA		NA
gamma-BHC	1.2	J	1.9	U		NA	1.8	U		NA		NA
gamma-Chlordane	28	*	1.0	J		NA	1.8	U		NA		NA
Heptachlor	1.7	J	1.9	U		NA	1.8	U		NA		NA
Heptachlor Epoxide	1.8	U	0.19	J		NA	2.1			NA		NA
Methoxychlor	20	B	19	U		NA	2.8	U		NA		NA
Technical Chlordane		NA		NA		NA		NA		NA		NA
Toxaphene	180	U	190	U		NA	180	U		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical Pesticide/PCB Results from Subsurface Sampling
Centredale Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW15D-0204		CM-SO-MW15D-0406		CM-SO-DUP-05		CM-SO-DUP05-0801		CM-SO-MW15D-0606		CM-SO-MW15D-4850	
Sample Location	MW15D		MW15D		MW15D		MW15D		MW15D		MW15D	
Date Sampled	8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/8/2001	
Interval	2.0-4.0		4.0-6.0		4.0-6.0		4.0-6.0		6.0-8.0		46.0-50.0	
QC Identifier	None		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		None		None	
Pesticide/PCB Analysis (UG/KG)												
4,4'-DDD	3.7	U	3.5	U		NA	4.0	U	3.8	U		NA
4,4'-DDE	3.7	U	3.5	U		NA	4.0	U	3.8	U		NA
4,4'-DDT	3.7	U	3.5	U		NA	4.0	U	3.8	U		NA
Aldrin	1.9	U	1.8	U		NA	2.1	U	2.0	U		NA
alpha-BHC	1.9	U	1.8	U		NA	2.1	U	2.0	U		NA
alpha-Chlordane	1.9	U	1.8	U		NA	2.1	U	2.0	U		NA
Aroclor, Total		NA		NA		NA		NA		NA		NA
Aroclor-1016	37	U	35	U		NA	40	U	38	U		NA
Aroclor-1221	75	U	72	U		NA	82	U	77	U		NA
Aroclor-1232	37	U	35	U		NA	40	U	38	U		NA
Aroclor-1242	37	U	35	U		NA	40	U	38	U		NA
Aroclor-1248	37	U	35	U		NA	40	U	38	U		NA
Aroclor-1254	37	U	35	U		NA	40	U	38	U		NA
Aroclor-1260	42		35	U		NA	40	U	38	U		NA
beta-BHC	1.9	U	1.8	U		NA	2.1	U	2.0	U		NA
delta-BHC	1.9	U	1.8	U		NA	2.1	U	2.0	U		NA
Dieldrin	3.7	U	3.5	U		NA	4.0	U	3.8	U		NA
Endosulfan I	1.9	U	1.8	U		NA	2.1	U	2.0	U		NA
Endosulfan II	3.7	U	3.5	U		NA	4.0	U	3.8	U		NA
Endosulfan Sulfate	3.7	U	3.5	U		NA	4.0	U	3.8	U		NA
Endrin	3.7	U	3.5	U		NA	4.0	U	3.8	U		NA
Endrin Aldehyde	3.7	U	3.5	U		NA	4.0	U	3.8	U		NA
Endrin Ketone	3.7	U	3.5	U		NA	4.0	U	3.8	U		NA
gamma-BHC	1.9	U	1.8	U		NA	2.1	U	2.0	U		NA
gamma-Chlordane	0.49	J	1.8	U		NA	2.1	U	2.0	U		NA
Heptachlor	1.9	U	1.8	U		NA	2.1	U	2.0	U		NA
Heptachlor Epoxide	1.9	U	1.8	U		NA	2.1	U	2.0	U		NA
Methoxychlor	19	U	18	U		NA	21	U	20	U		NA
Technical Chlordane		NA		NA		NA		NA		NA		NA
Toxaphene	190	U	180	U		NA	210	U	200	U		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical Pesticide/PCB Results from Subsurface Sampling
Centredale Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB-14-271-0102		CM-SO-SB-14-271-0204		CM-SO-SB-14-271-0406		CM-SO-SB-14-271-0608		CM-SO-SB-14-271-1416	
Sample Location	SB-14-271		SB-14-271		SB-14-271		SB-14-271		SB-14-271	
Date Sampled	6/21/2001		6/21/2001		6/21/2001		6/21/2001		6/21/2001	
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		14.0-16.0	
QC Identifier	None		None		None		None		None	
Pesticide/PCB Analysis (UG/KG)										
4,4'-DDD	31		4.4	U	3.9	U	4.2	U		NA
4,4'-DDE	23		4.4	U	3.9	U	4.2	U		NA
4,4'-DDT	24		4.4	U	3.9	U	4.2	U		NA
Aldrin	2.1	U	2.3	U	2.0	U	2.2	U		NA
alpha-BHC	2.1	U	2.3	U	2.0	U	2.2	U		NA
alpha-Chlordane	120	*	2.3	U	2.0	U	2.2	U		NA
Aroclor, Total		NA		NA		NA		NA		NA
Aroclor-1016	40	U	44	U	39	U	42	U		NA
Aroclor-1221	61	U	90	U	80	U	85	U		NA
Aroclor-1232	40	U	44	U	39	U	42	U		NA
Aroclor-1242	40	U	44	U	39	U	42	U		NA
Aroclor-1248	40	U	44	U	39	U	42	U		NA
Aroclor-1254	40	U	44	U	39	U	42	U		NA
Aroclor-1260	40	U	44	U	39	U	42	U		NA
beta-BHC	2.1	U	2.3	U	2.0	U	2.2	U		NA
delta-BHC	2.1	U	2.3	U	2.0	U	2.2	U		NA
Dieldrin	8.3		4.4	U	3.9	U	4.2	U		NA
Endosulfan I	4.3		2.3	U	2.0	U	2.2	U		NA
Endosulfan II	4.0	U	4.4	U	3.9	U	4.2	U		NA
Endosulfan Sulfate	4.0	U	4.4	U	3.9	U	4.2	U		NA
Endrin	4.0	U	4.4	U	3.9	U	4.2	U		NA
Endrin Aldehyde	4.0	U	4.4	U	3.9	U	4.2	U		NA
Endrin Ketone	4.0	U	4.4	U	3.9	U	4.2	U		NA
gamma-BHC	2.1	U	2.3	U	2.0	U	2.2	U		NA
gamma-Chlordane	120	*	2.3	U	2.0	U	2.2	U		NA
Heptachlor	2.1	U	2.3	U	2.0	U	2.2	U		NA
Heptachlor Epoxide	7.6		2.3	U	2.0	U	2.2	U		NA
Methoxychlor	21	U	23	U	20	U	22	U		NA
Technical Chlordane		NA		NA		NA		NA		NA
Toxaphene	210	U	230	U	200	U	220	U		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected: EB/TB- Equipment/Trip blank contamination

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Analytical Pesticide/PCB Results from Subsurface Sampling
Centredale Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB02-0204		CM-SO-DUP03		CM-SO-SB02-0406		CM-SO-SB02-0608		CM-SO-SB03-0204		CM-SO-SB03-0406	
Sample Location	SB02		SB02		SB02		SB02		SB03		SB03	
Date Sampled	1/3/2001		1/3/2001		1/3/2001		1/3/2001		1/9/2001		1/9/2001	
Interval	2.0-4.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-SB02-0204		Field Dup. CM-SO-SB02-0204		None		None		None		Field Dup. CM-SO-SB03-0406	
Pesticide/PCB Analysis (UG/KG)												
4,4'-DDD	4.4	U	4.6	U	4.1	U	4.0	U	1.1	J	3.8	U
4,4'-DDE	46	J	110	*J	46		42		1.2	J	3.8	U
4,4'-DDT	4.4	U	4.6	U	4.1	U	4.0	U	4.9	U	3.8	U
Aldrin	2.0	J	5.8	J	1.2	J	1.7	J	2.5	U	1.9	U
alpha-BHC	0.55	J	0.85	J	0.71	J	0.58	J	2.5	U	1.9	U
alpha-Chlordane	9.7	J	19	J	11		7.1		0.75	J	1.9	U
Aroclor, Total		NA		NA		NA		NA		NA		NA
Aroclor-1016	44	U	46	U	41	U	40	U	49	U	38	U
Aroclor-1221	89	U	94	U	84	U	81	U	100	U	76	U
Aroclor-1232	44	U	46	U	41	U	40	U	49	U	38	U
Aroclor-1242	44	U	46	U	41	U	40	U	49	U	38	U
Aroclor-1248	1500	J	2900	J	1400		1500		49	U	38	U
Aroclor-1254	2800	J	5300	J	2800		2900		49	U	38	U
Aroclor-1260	44	U	46	U	41	U	40	U	49	U	38	U
beta-BHC	3.8	EB	6.9	EB	4.4	EB	4.7	EB	0.50	JEB	1.9	U
delta-BHC	0.19	J	0.36	J	0.28	J	2.0	U	2.5	U	1.9	U
Dieldrin	89	EB	200	*EB	96	*EB	99	*EB	1.6	JEB	0.29	JEB
Endosulfan I	2.3	U	2.4	U	2.1	U	2.0	U	0.33	J	1.9	U
Endosulfan II	4.4	U	4.6	U	4.1	U	4.0	U	0.85	J	3.8	U
Endosulfan Sulfate	26	J	52	J	20		23		4.9	U	3.8	U
Endrin	1.3	J	2.6	J	1.5	J	1.7	J	4.9	U	0.26	J
Endrin Aldehyde	19	J	42	J	20		21		2.6	J	0.36	J
Endrin Ketone	1.8	J	3.6	J	1.9	J	2.0	J	2.6	JB	3.8	U
gamma-BHC	2.3	U	2.4	U	0.94	J	0.82	J	2.5	U	1.9	U
gamma-Chlordane	29	J	70	*J	15		26		1.0	J	0.21	J
Heptachlor	2.3	U	2.4	U	2.1	U	2.0	U	2.5	U	1.9	U
Heptachlor Epoxide	0.60	J	1.2	J	0.75	J	0.48	J	0.39	J	1.9	U
Methoxychlor	23	U	37		21	U	20	U	25	U	19	U
Technical Chlordane		NA		NA		NA		NA		NA		NA
Toxaphene	230	U	240	U	210	U	200	U	250	U	190	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical Pesticide/PCB Results from Subsurface Sampling
Centredale Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP05		CM-SO-SB03-0608		CM-SO-SB03-1820	
Sample Location	SB03		SB03		SB03	
Date Sampled	1/9/2001		1/9/2001		1/9/2001	
Interval	4.0-6.0		6.0-8.0		18.0-20.0	
QC Identifier	Field Dup. CM-SO-SB03-0406		None		None	
Pesticide/PCB Analysis (UG/KG)						
4,4'-DDD	0.51	J	3.8	U	4.0	U
4,4'-DDE	3.7	U	3.8	U	4.0	U
4,4'-DDT	3.7	U	3.8	U	4.0	U
Aldrin	0.21	J	1.9	U	2.0	U
alpha-BHC	0.27	J	1.9	U	0.17	J
alpha-Chlordane	1.9	U	1.9	U	2.0	U
Aroclor, Total		NA		NA		NA
Aroclor-1016	37	U	38	U	40	U
Aroclor-1221	75	U	76	U	81	U
Aroclor-1232	37	U	38	U	40	U
Aroclor-1242	37	U	38	U	40	U
Aroclor-1248	37	U	38	U	40	U
Aroclor-1254	37	U	38	U	40	U
Aroclor-1260	37	U	38	U	40	U
beta-BHC	1.9	U	1.9	U	2.0	U
delta-BHC	0.29	J	1.9	U	0.28	J
Dieldrin	0.21	JEB	3.8	U	4.0	U
Endosulfan I	1.9	U	1.9	U	2.0	U
Endosulfan II	3.7	U	3.8	U	4.0	U
Endosulfan Sulfate	0.24	J	0.18	J	4.0	U
Endrin	0.91	J	0.26	J	4.0	U
Endrin Aldehyde	3.7	U	3.8	U	4.0	U
Endrin Ketone	3.7	U	3.8	U	4.0	U
gamma-BHC	1.9	U	1.9	U	2.0	U
gamma-Chlordane	1.9	U	1.9	U	2.0	U
Heptachlor	1.9	U	1.9	U	2.0	U
Heptachlor Epoxide	0.48	J	1.9	U	0.062	J
Methoxychlor	19	U	19	U	20	U
Technical Chlordane		NA		NA		NA
Toxaphene	190	U	190	U	200	U

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected FB/TB- Equipment/Trip blank contamination

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Analytical Metals Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW01-0102		CM-SO-MW01-0204		CM-SO-MW01-0406		CM-SO-MW01-0606		CM-SO-MW02-0204		CM-SO-MW02-0406	
Sample Location	MW01		MW01		MW01		MW01		MW02		MW02	
Date Sampled	12/28/2000		12/28/2000		12/28/2000		12/28/2000		1/5/2001		1/5/2001	
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW02-0406	
TAL Metal Analysis (MG/KG)												
Aluminum	6320			NA	2360		4600		2660			NA
Antimony	4.9	U		NA	5.3	U	5.2	U	0.88	J		NA
Arsenic	2.7			NA	1.4	U	1.6	U	5.1			NA
Barium	78.2			NA	13.9		23.4		25.5			NA
Beryllium	0.050	U		NA	0.050	UJ	0.050	U	0.30	U		NA
Cadmium	0.64			NA	0.35	U	0.14	UJ	0.066	U		NA
Calcium	7660	J		NA	603	J	614	J	491			NA
Chromium	35.3	J		NA	6.3	J	7.1	J	5.2			NA
Cobalt	5.3	J		NA	1.9	J	3.0	J	3.4			NA
Copper	42.3	J		NA	7.1	J	5.5	J	19.8	J		NA
Cyanide		NA		NA		NA		NA		NA		NA
Iron	10700	J		NA	5640	J	5620	J	8600			NA
Lead	118			NA	36.2		18.3		13.8			NA
Magnesium	3700	J		NA	604	J	1240	J	764			NA
Manganese	197	J		NA	76.9	J	83.2	J	101			NA
Mercury	0.15			NA	0.060	U	0.060	U	0.050	U		NA
Molybdenum		NA		NA		NA		NA		NA		NA
Nickel	19.6			NA	2.1		3.8		8.2			NA
Potassium	2980			NA	430		760		603			NA
Selenium	0.54	J		NA	0.50	U	0.48	U	1.0	UJ		NA
Silver	0.32	U		NA	0.35	U	0.34	U	0.088	U		NA
Sodium	279	J		NA	238	U	344	J	167	U		NA
Thallium	0.64	U		NA	0.92	U	0.89	U	8.4			NA
Vanadium	29.1			NA	5.3		6.9		5.6			NA
Zinc	112			NA	21.5		22.6		26.8	J		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical Metals Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP04		CM-SO-MW02-0608		CM-SO-MW02-0810		CM-SO-MW02-1820		CM-SO-MW02-6163		CM-SO-MW02-6466	
Sample Location	MW02		MW02		MW02		MW02		MW02		MW02	
Date Sampled	1/5/2001		1/5/2001		1/5/2001		1/5/2001		6/26/2001		7/2/2001	
Interval	4.0-6.0		6.0-8.0		8.0-10.0		18.0-20.0		61.0-63.0		64.0-66.0	
QC Identifier	Field Dup. CM-SO-MW02-0406		None		None		None		None		Field Dup. CM-SO-MW02-6466	
TAL Metal Analysis (MG/KG)												
Aluminum		NA	1710		3630		1670			NA		NA
Antimony		NA	0.56	U	0.51	U	0.55	U		NA		NA
Arsenic		NA	2.9		1.2	J	0.81	U		NA		NA
Barium		NA	17.7		25.4		11.6			NA		NA
Beryllium		NA	0.18	U	0.24	U	0.15	U		NA		NA
Cadmium		NA	0.073	U	0.067	U	0.072	U		NA		NA
Calcium		NA	438		1150		461			NA		NA
Chromium		NA	7.7		7.3		1.9			NA		NA
Cobalt		NA	2.0		2.7		1.2			NA		NA
Copper		NA	19.6	J	6.3	J	2.9	J		NA		NA
Cyanide		NA		NA		NA		NA		NA		NA
Iron		NA	6850		6270		3610			NA		NA
Lead		NA	35.1		10.2		3.9			NA		NA
Magnesium		NA	451		1440		569			NA		NA
Manganese		NA	45.0		82.0		64.7			NA		NA
Mercury		NA	0.061	U	0.044	U	0.048	U		NA		NA
Molybdenum		NA		NA		NA		NA		NA		NA
Nickel		NA	4.9		5.0		1.6			NA		NA
Potassium		NA	254		793		380			NA		NA
Selenium		NA	1.0	U	0.96	U	1.0	U		NA		NA
Silver		NA	0.097	U	0.089	U	0.096	U		NA		NA
Sodium		NA	185	U	218	U	181	U		NA		NA
Thallium		NA	7.1	J	6.2	J	2.8	J		NA		NA
Vanadium		NA	5.0		11.7		4.0			NA		NA
Zinc		NA	36.0	J	25.1	J	9.0	J		NA		NA

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

US EPA ARCHIVE DOCUMENT

Analytical Metals Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-DUP02-0701		CM-SO-MW02-7272.2		CM-SO-MW03-0406		CM-SO-MW03-0606		CM-SO-MW04-0204		CM-SO-MW04-0406	
Sample Location	MW02		MW02		MW03		MW03		MW04		MW04	
Date Sampled	7/2/2001		7/3/2001		12/27/2000		12/27/2000		6/12/2001		6/12/2001	
Interval	64.0-66.0		72.0-72.2		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-MW02-6466		None		None		None		None		None	
TAL Metal Analysis (MG/KG)												
Aluminum		NA		NA	1770		2240			NA	3770	
Antimony		NA		NA	5.1	U	5.0	U		NA	0.40	UJ
Arsenic		NA		NA	2.2		2.4			NA	7.1	
Barium		NA		NA	16.4		23.6			NA	9.7	
Beryllium		NA		NA	0.050	U	0.050	U		NA	1.0	
Cadmium		NA		NA	0.43		0.30	U		NA	0.44	J
Calcium		NA		NA	679	J	3230	J		NA	270	
Chromium		NA		NA	7.5	J	8.7	J		NA	4.9	J
Cobalt		NA		NA	1.8	J	2.1	J		NA	3.6	
Copper		NA		NA	34.8	J	20.9	J		NA	2.5	UJ
Cyanide		NA		NA		NA		NA		NA		NA
Iron		NA		NA	9160	J	8020	J		NA	16000	
Lead		NA		NA	204		122			NA	4.6	J
Magnesium		NA		NA	964	J	936	J		NA	375	
Manganese		NA		NA	57.1	J	96.3	J		NA	226	J
Mercury		NA		NA	0.060	U	0.060	U		NA	0.060	U
Molybdenum		NA		NA		NA		NA		NA		NA
Nickel		NA		NA	8.4		6.3			NA	1.6	
Potassium		NA		NA	405		542			NA	167	
Selenium		NA		NA	0.67	J	0.47	U		NA	4.1	U
Silver		NA		NA	0.33	U	0.33	U		NA	0.80	UJ
Sodium		NA		NA	262	J	223	U		NA	59.6	U
Thallium		NA		NA	0.89	U	0.86	U		NA	0.40	U
Vanadium		NA		NA	36.1		36.1			NA	6.7	
Zinc		NA		NA	55.8		42.0			NA	53.7	

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

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Analytical Metals Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
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Sample Number	CM-SO-MW04-0608		CM-SO-MW04B-4244		CM-SO-DUP-04		CM-SO-MW05-0102		CM-SO-DUP-01		CM-SO-MW05-0204	
Sample Location	MW04		MW04B		MW04B		MW05		MW05		MW05	
Date Sampled	6/12/2001		6/2/2001		6/2/2001		6/18/2001		6/18/2001		6/18/2001	
Interval	6.0-8.0		42.0-44.0		42.0-44.0		1.0-2.0		1.0-2.0		2.0-4.0	
QC Identifier	None		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW04B-4244		Field Dup. CM-SO-MW05-0102		Field Dup. CM-SO-MW05-0102		None	
TAL Metal Analysis (MG/KG)												
Aluminum	2060			NA		NA	4860		3830		5090	
Antimony	0.31	UJ		NA		NA	0.32	UJ	0.16	UJ	0.40	UJ
Arsenic	0.88	J		NA		NA	1.8	J	1.8	J	4.7	J
Barium	10.6			NA		NA	28.6		26.0		53.9	
Beryllium	0.36			NA		NA	0.39		0.27		0.60	
Cadmium	0.44	J		NA		NA	0.56	J	0.67	J	1.0	J
Calcium	339			NA		NA	742		674		1420	
Chromium	6.6	J		NA		NA	2.4	J	2.5	J	18.2	J
Cobalt	1.4			NA		NA	3.4		2.5		4.4	
Copper	2.3	UJ		NA		NA	5.6	UJ	4.0	UJ	90.5	J
Cyanide		NA		NA		NA		NA		NA		NA
Iron	4900			NA		NA	10000		7140		10700	
Lead	5.7	J		NA		NA	3.9	J	3.5	J	99.0	J
Magnesium	525			NA		NA	1410		1080		1120	
Manganese	66.7	J		NA		NA	161	J	122	J	225	J
Mercury	0.049	U		NA		NA	0.051	U	0.050	U	0.10	J
Molybdenum		NA		NA		NA		NA		NA		NA
Nickel	2.6			NA		NA	3.0		2.2		9.7	
Potassium	331			NA		NA	1570		947		511	
Selenium	1.2	UJ		NA		NA	1.8	UJ	1.9	UJ	3.0	UJ
Silver	0.62	UJ		NA		NA	0.65	UJ	0.16	UJ	0.80	UJ
Sodium	76.6	U		NA		NA	91.6	U	48.0	U	165	
Thallium	0.31	U		NA		NA	0.32	U	0.48	UJ	0.40	U
Vanadium	2.7			NA		NA	6.2		5.2		16.0	
Zinc	37.7			NA		NA	56.3		42.1		97.1	

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
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Analytical Metals Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
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Sample Number	CM-SO-MW05-0406		CM-SO-MW05-0810		CM-SO-MW05-1012		CM-SO-MW06-0204		CM-SO-MW06-DUP01		CM-SO-MW06-0406	
Sample Location	MW05		MW05		MW05		MW06		MW06		MW06	
Date Sampled	6/19/2001		6/19/2001		6/19/2001		12/19/2000		12/19/2000		12/19/2000	
Interval	4.0-6.0		8.0-10.0		10.0-12.0		2.0-4.0		2.0-4.0		4.0-6.0	
QC Identifier	None		None		None		Field Dup. CM-SO-MW06-0204		Field Dup. CM-SO-MW06-0204		None	
TAL Metal Analysis (MG/KG)												
Aluminum	4650		4910		4530		5030		5680		4820	
Antimony	1.0	J	0.36	UJ	0.48	UJ	5.0	J	4.4	UJ	5.5	UJ
Arsenic	5.1	J	1.9	J	3.3	J	5.9	J	6.9		5.4	J
Barium	123		27.4		35.2	J	142		85.5		259	
Beryllium	0.75	J	0.51		0.49		0.24		0.26		0.44	
Cadmium	0.80	J	0.31	J		R	11.1	J	3.7	J	7.6	J
Calcium	3940		621		482		769		862		1580	
Chromium	69.6		5.0	J	8.0	J	50.6		31.1		33.0	
Cobalt	5.6	J	4.7		4.7	J	3.4		4.5		5.5	
Copper	25.3		6.9	UJ	7.8	UJ	86.1	J	47.4	J	58.7	J
Cyanide		NA		NA		NA		NA		NA		NA
Iron	10300		11700		14000		12400		12300		11100	
Lead	115		6.9	J	47.0	J	204	J	103	J	177	J
Magnesium	892		1300		1240		984		1580		679	
Manganese	259		192	J	380	J	121	J	176	J	162	J
Mercury	0.82		0.047	U	0.052	U	0.20		0.16		0.14	
Molybdenum		NA		NA		NA		NA		NA		NA
Nickel	24.2		5.4		6.1	J	8.8		11.5		21.4	
Potassium	366		1120		1110		814		893		455	
Selenium	0.58	U	2.3	UJ	3.4	UJ	1.2		0.58	J	1.0	J
Silver	0.20	U	0.71	UJ	0.63	UJ	3.7		1.1		0.61	J
Sodium	101	J	189		151	J	117	U	120	U	236	U
Thallium	0.90	U	0.36	U	0.31	U	0.89	U	0.90	U	1.1	U
Vanadium	14.6		4.6		6.0	J	12.0		10.9		26.6	
Zinc	80.1		63.1		56.0	J	454	J	377	J	438	J

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Analytical Metals Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-MW06-0608		CM-SO-MW07-0304		CM-SO-MW07-0406		CM-SO-MW07-0608		CM-SO-MW08-0102		CM-SO-MW08-0204	
Sample Location	MW06		MW07		MW07		MW07		MW08		MW08	
Date Sampled	12/19/2000		12/21/2000		12/21/2000		12/21/2000		12/26/2000		12/26/2000	
Interval	6.0-8.0		3.0-4.0		4.0-6.0		6.0-8.0		1.0-2.0		2.0-4.0	
QC Identifier	None		None		None		None		None		Field Dup. CM-SO-MW08-0204	
TAL Metal Analysis (MG/KG)												
Aluminum	4330		3260		7390		2890		6270		3380	
Antimony	4.6	UJ	4.5	UJ	4.6	UJ	4.6	UJ	6.6	J	5.9	U
Arsenic	2.5	J	1.7	J	3.3	J	2.5	J	8.0		5.8	
Barium	52.0		42.0		24.9		15.3		218		87.2	
Beryllium	0.25		0.29		0.29		0.20	U	0.050	UJ	0.060	UJ
Cadmium	0.37	J	0.36	J	0.17	J	0.14	J	3.5	J	1.7	J
Calcium	1150		732		1170		549	J	2690	J	2190	J
Chromium	7.1		46.3		10.2		3.3		62.8	J	33.6	J
Cobalt	1.7		8.0		3.6		1.5		20.9	J	93.3	J
Copper	8.9	J	20.9	J	10.2	J	2.6	J	166	J	58.4	J
Cyanide		NA		NA		NA		NA		NA		NA
Iron	6670		8720		9150		7830		55200	J	32200	J
Lead	14.0	J	44.1	J	35.6	J	2.7	J	380		298	
Magnesium	619		980		654		779		2440	J	1150	J
Manganese	91.4	J	571	J	140	J	93.7	J	334	J	327	J
Mercury	0.060	U	0.050	U	0.060	U	0.050	U	0.23		0.50	
Molybdenum		NA		NA		NA		NA		NA		NA
Nickel	4.8		8.3		5.1		2.1		28.8	J	11.8	J
Potassium	482		975		460		656		1060		552	
Selenium	0.53	U	0.52	U	1.1	J	0.52	J	2.2		1.3	
Silver	0.30	U	0.54	J	0.38	J	0.30	U	0.66		0.82	
Sodium	178	U	147	U	171	U	130	U	703		511	J
Thallium	0.95	U	0.92	U	0.99	U	0.93	U	3.5		1.5	J
Vanadium	9.0		17.0		10.0		6.4		18.8	J	11.0	J
Zinc	51.6	J	54.1	J	52.0	J	16.2	J	556		308	

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Analytical Metals Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
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Sample Number	CM-SO-DUP02		CM-SO-MW08-0406		CM-SO-MW08-0608		CM-SO-MW09-0406		CM-SO-MW09-1011		CM-SO-MW14-0102	
Sample Location	MW08		MW08		MW08		MW09		MW09		MW14	
Date Sampled	12/26/2000		12/26/2000		12/26/2000		12/18/2000		12/18/2000		7/13/2001	
Interval	2.0-4.0		4.0-6.0		6.0-8.0		4.0-6.0		10.0-11.0		1.0-2.0	
QC Identifier	Field Dup. CM-SO-MW08-0204		None		None		None		None		Field Dup. CM-SO-MW14-0102	
TAL Metal Analysis (MG/KG)												
Aluminum	4310		4910		2850		5910		3890		3220	
Antimony	6.4	U	5.1	U	5.5	U	6.0	UJ	4.4	UJ	1.9	U
Arsenic	9.5		2.8		1.3	U	5.2	J	2.1	J	6.7	
Barium	60.0		26.4		14.4		50.1		38.8		87.2	
Beryllium	0.060	UJ	0.050	U	0.050	U	0.51		0.26		0.83	
Cadmium	2.4	J	0.24	U	0.10	UJ	0.54	J	0.13	J	1.1	
Calcium	2110	J	967	J	624	J	1160		620		1100	
Chromium	67.4	J	10.4	J	16.2	J	40.2		5.6		12.3	
Cobalt	28.1	J	3.3	J	1.8	J	3.1		2.2		4.1	
Copper	56.3	J	4.3	J	4.5	J	27.1	J	3.9	J	53.7	
Cyanide		NA		NA		NA		NA		NA		NA
Iron	50000	J	10300	J	6820	J	12400		10300		8900	
Lead	387		13.7		9.5		110	J	5.4	J	100	
Magnesium	1300	J	1070	J	585	J	1190		1120		739	
Manganese	485	J	168	J	113	J	232	J	161	J	175	
Mercury	0.95		0.060	U	0.060	U	0.15		0.060	U	0.10	UJ
Molybdenum		NA		NA		NA		NA		NA		NA
Nickel	13.1	J	4.3		3.5		6.4		2.8		11.8	
Potassium	460		392		483		1160		1420		508	J
Selenium	2.3		0.48	U	0.51	U	0.69	U	0.51	U	0.35	UJ
Silver	4.9		0.33	U	0.36	U	0.48	J	0.49	J	0.43	J
Sodium	542	J	229	U	246	U	159	U	162	U	78.3	U
Thallium	2.9		0.86	U	0.95	U	1.2	U	0.91	U	0.94	UJ
Vanadium	14.4	J	13.8		4.7		12.5		5.8		12.7	
Zinc	254		22.0		16.6		151	J	23.5	J	131	

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Analytical Metals Results from Subsurface Samples
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Sample Number	CM-SO-DUP03-0701		CM-SO-MW14-0204		CM-SO-MW14-0607		CM-SO-MW14-0608		CM-SO-MW14-0708		CM-SO-MW14-5252.75	
Sample Location	MW14		MW14		MW14		MW14		MW14		MW14	
Date Sampled	7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/13/2001		7/16/2001	
Interval	1.0-2.0		2.0-4.0		6.0-7.0		6.0-8.0		7.0-8.0		52.0-52.8	
QC Identifier	Field Dup. CM-SO-MW14-0102		None		None		None		None		None	
TAL Metal Analysis (MG/KG)												
Aluminum	3250		6710			NA	13400			NA		NA
Antimony	1.9	U	2.2	U		NA	2.0	U		NA		NA
Arsenic	6.0		6.8			NA	6.3			NA		NA
Barium	85.5		93.8			NA	102			NA		NA
Beryllium	0.63		0.64			NA	1.0			NA		NA
Cadmium	1.1		0.36			NA		R		NA		NA
Calcium	979		8070			NA	1670			NA		NA
Chromium	9.3		8.8			NA	7.9			NA		NA
Cobalt	3.7		4.5			NA	14.8	J		NA		NA
Copper	44.5		15.5			NA	13.5			NA		NA
Cyanide		NA		NA		NA		NA		NA		NA
Iron	8520		14200			NA	30300			NA		NA
Lead	97.5		138			NA	9.0			NA		NA
Magnesium	763		1580			NA	3620			NA		NA
Manganese	147		279			NA	1100			NA		NA
Mercury	0.10	UJ	0.17	J		NA	0.11	UJ		NA		NA
Molybdenum		NA		NA		NA		NA		NA		NA
Nickel	7.2		5.7			NA	9.2	J		NA		NA
Potassium	533	J	497	J		NA	4130	J		NA		NA
Selenium	0.34	UJ	0.47	UJ		NA	0.35	UJ		NA		NA
Silver	0.36	U	0.42	U		NA	0.36	U		NA		NA
Sodium	75.6	U	87.9	U		NA	79.1	U		NA		NA
Thallium	0.91	UJ	1.1	UJ		NA	0.95	UJ		NA		NA
Vanadium	11.3		14.2			NA	18.9			NA		NA
Zinc	115		77.0			NA	90.3			NA		NA

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Analytical Metals Results from Subsurface Samples
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North Providence, Rhode Island

Sample Number	CM-SO-MW15D-0204		CM-SO-MW15D-0406		CM-SO-DUP-05		CM-SO-DUP05-0801		CM-SO-MW15D-0608		CM-SO-MW15D-4650	
Sample Location	MW15D		MW15D		MW15D		MW15D		MW15D		MW15D	
Date Sampled	8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/7/2001		8/8/2001	
Interval	2.0-4.0		4.0-6.0		4.0-6.0		4.0-6.0		6.0-8.0		46.0-50.0	
QC Identifier	None		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		Field Dup. CM-SO-MW15D-0406		None		None	
TAL Metal Analysis (MG/KG)												
Aluminum	2840		5070			NA	4900		5200			NA
Antimony	0.38	U	0.48	UJ		NA	0.49	UJ	0.56	UJ		NA
Arsenic	1.4	J	2.6	J		NA	2.6	J	1.8	J		NA
Barium	16.2		38.8			NA	32.3		19.2			NA
Beryllium	0.41	U	0.50	U		NA	0.37	U	0.55	U		NA
Cadmium	0.089	U	0.12	UJ		NA	0.12	UJ	0.085	U		NA
Calcium	508		1620			NA	1490		560			NA
Chromium	3.6	J	5.8	J		NA	5.6	J	5.3	J		NA
Cobalt	1.2		18.0			NA	2.1		2.6			NA
Copper	6.0		12.7			NA	9.6		4.3			NA
Cyanide		NA		NA		NA		NA		NA		NA
Iron	5440		11100			NA	9410		9260			NA
Lead	15.2	J	66.0	J		NA	43.7	J	13.1	J		NA
Magnesium	702		903			NA	847		1080			NA
Manganese	75.9		160			NA	142		158			NA
Mercury	0.056	U	0.049	U		NA	0.094	J	0.047	U		NA
Molybdenum		NA		NA		NA		NA		NA		NA
Nickel	9.4		6.7			NA	4.1		4.2			NA
Potassium	431		496			NA	466		435			NA
Selenium	0.62	UJ	0.92	J		NA	0.60	UJ	0.78	J		NA
Silver	0.11	UJ	0.10	UJ		NA	0.11	UJ	0.11	UJ		NA
Sodium	387	U	439	U		NA	431	U	410	U		NA
Thallium	0.91	UJ	0.85	UJ		NA	0.86	UJ	0.86	UJ		NA
Vanadium	210	J	11.8	J		NA	13.1	J	17.0	J		NA
Zinc	20.1		119			NA	125		30.3			NA

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* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

US EPA ARCHIVE DOCUMENT

Analytical Metals Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
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Sample Number	CM-SO-SB-14-271-0102		CM-SO-SB-14-271-0204		CM-SO-SB-14-271-0406		CM-SO-SB-14-271-0608		CM-SO-SB-14-271-1416	
Sample Location	SB-14-271		SB-14-271		SB-14-271		SB-14-271		SB-14-271	
Date Sampled	6/21/2001		6/21/2001		6/21/2001		6/21/2001		6/21/2001	
Interval	1.0-2.0		2.0-4.0		4.0-6.0		6.0-8.0		14.0-16.0	
QC Identifier	None		None		None		None		None	
TAL Metal Analysis (MG/KG)										
Aluminum	8150		7280		3160		1900			NA
Antimony	0.22	UJ	0.29	UJ	0.29	UJ	0.18	UJ		NA
Arsenic	4.7	J	1.1	J	1.1	J	0.54	J		NA
Barium	76.0		24.3		12.7		8.4			NA
Beryllium	0.48		0.62		0.19		0.13			NA
Cadmium	1.6	J	0.66	J	0.46	J	0.38	J		NA
Calcium	965		1540		325		321			NA
Chromium	10.5	J	6.2	J	8.7	J	4.0	J		NA
Cobalt	4.5		2.4		1.9		1.8			NA
Copper	22.1	J	2.8	UJ	3.1	UJ	3.0	UJ		NA
Cyanide		NA		NA		NA		NA		NA
Iron	11100		6460		5170		4260			NA
Lead	303	J	14.7	J	10.8	J	2.2	J		NA
Magnesium	1430		707		807		633			NA
Manganese	179	J	41.4	J	55.1	J	65.4	J		NA
Mercury	0.095	J	0.065	U	0.051	U	0.055	U		NA
Molybdenum		NA		NA		NA		NA		NA
Nickel	8.1		3.0		3.4		2.7			NA
Potassium	385		200		364		266			NA
Selenium	2.8	UJ	1.0	UJ	1.5	UJ	1.3	UJ		NA
Silver	0.22	UJ	0.29	UJ	0.19	UJ	0.18	UJ		NA
Sodium	218		36.6	UJ	24.1	UJ	36.7	U		NA
Thallium	0.60	UJ	0.71	UJ	0.38	U	0.35	U		NA
Vanadium	19.6		11.6		6.1		4.7			NA
Zinc	162		35.1		25.5		22.0			NA

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US EPA ARCHIVE DOCUMENT

Analytical Metals Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB02-0204		CM-SO-DUP03		CM-SO-SB02-0406		CM-SO-SB02-0608		CM-SO-SB03-0204		CM-SO-SB03-0406		CM-SO-DUP05	
Sample Location	SB02		SB02		SB02		SB02		SB03		SB03		SB03	
Date Sampled	1/3/2001		1/3/2001		1/3/2001		1/3/2001		1/9/2001		1/9/2001		1/9/2001	
Interval	2.0-4.0		2.0-4.0		4.0-6.0		6.0-8.0		2.0-4.0		4.0-6.0		4.0-6.0	
QC Identifier	Field Dup. CM-SO-SB02-0204		Field Dup. CM-SO-SB02-0204		None		None		None		Field Dup. CM-SO-SB03-0406		Field Dup. CM-SO-SB03-0406	
TAL Metal Analysis (MG/KG)														
Aluminum	3700		4060		4080		1860		2360		2500		2660	
Antimony	18.5		3.2		1.0	J	1.5		0.53	U	0.52	U	0.53	U
Arsenic	6.3		6.2		5.4		4.2		1.9		1.0	J	1.1	J
Barium	33.0		47.4		27.5		13.5		23.6		21.5		24.7	
Beryllium	0.58		0.58		0.82		0.37		0.29	U	0.28	U	0.28	U
Cadmium	0.67		1.1		0.34		0.25		0.069	U	0.068	U	0.070	U
Calcium	838		792		702		384		607		834		840	
Chromium	49.3		49.8		37.0		20.2		16.2		12.1		3.7	
Cobalt	16.7		5.5		4.0		2.5		1.9		1.7		1.8	
Copper	28.5	J	37.0	J	15.1	J	9.1	J	15.9	J	558	J	5.5	J
Cyanide		NA		NA		NA		NA		NA		NA		NA
Iron	12500		11500		13400		7520		5290		6940		5780	
Lead	150		211		88.0		53.4		55.6		10.0		7.4	
Magnesium	888		924		984		427		608		1020		1310	
Manganese	168		128		129		92.5		65.2		102		92.3	
Mercury	0.49		0.66		0.21		0.35		0.52		0.055	U	0.049	U
Molybdenum		NA		NA		NA		NA		NA		NA		NA
Nickel	8.4		8.2		5.8		2.6		3.0		4.8		2.9	
Potassium	570		525		528		228		379		716		920	
Selenium	1.3	UJ	1.3	U	1.2	U	0.92	U	0.99	U	0.97	U	1.0	U
Silver	0.10	U	0.19	J	0.11	U	0.085	U	0.092	U	0.090	U	0.093	U
Sodium	665	U	406	U	271	U	220	U	195	U	170	U	213	U
Thallium	11.7		11.3		13.4		6.7		5.1	J	5.9	J	5.3	J
Vanadium	15.0		16.3		16.5		8.3		7.3		4.6		6.1	
Zinc	223	J	329	J	72.4	J	51.8	J	41.1	J	53.2	J	17.3	J

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
* - From dilution analysis; R- Rejected; EB/TB- Equipment/Trip blank contamination

US EPA ARCHIVE DOCUMENT

Analytical Metals Results from Subsurface Samples
Centredale Manor Restoration Project Source Area Investigation
North Providence, Rhode Island

Sample Number	CM-SO-SB03-0606		CM-SO-SB03-1820	
Sample Location	SB03		SB03	
Date Sampled	1/9/2001		1/9/2001	
Interval	6.0-6.0		18.0-20.0	
QC Identifier	None		None	
TAL Metal Analysis (MG/KG)				
Aluminum	2070		1520	
Antimony	0.53	U	0.50	U
Arsenic	0.78	J	0.74	U
Barium	18.6		14.3	
Beryllium	0.27	U	0.22	U
Cadmium	0.069	U	0.065	U
Calcium	684		541	
Chromium	2.4		4.1	
Cobalt	2.5		0.97	
Copper	4.6	J	3.3	J
Cyanide		NA		NA
Iron	5040		3570	
Lead	9.0		5.7	
Magnesium	676		549	
Manganese	82.7		60.2	
Mercury	0.050	U	0.051	U
Molybdenum		NA		NA
Nickel	1.6		1.5	
Potassium	543		377	
Selenium	0.98	U	0.93	U
Silver	0.092	U	0.087	U
Sodium	201	U	164	U
Thallium	5.3	J	3.9	J
Vanadium	4.0		3.1	
Zinc	15.6	J	11.5	J

U- Not detected; UJ- Detection limit approximate; J- Quantitation approximate;
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US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-MW09-RB01		CM-SO-RB01A		CM-SO-RB02		CM-SO-RB03		CM-SO-RB04		CM-SO-RB01		CM-SO-RB02-0601		CM-SO-SB01		CM-SO-RINS3	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	12/18/2000		12/21/2000		12/26/2000		1/4/2001		1/9/2001		6/12/2001		6/19/2001		6/26/2001		7/13/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Source Blank		Rinsate Blank	
Volatile Organic Analysis (UG/L)																		
1,1,1-Trichloroethane		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
1,1,2,2-Tetrachloroethane		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
1,1,2-Trichloro-1,2,2-trifluoroethane		NA	10	U	10	U	10	U	10	U	10	UJ	10	UJ	10	UJ	10	U
1,1,2-Trichloroethane		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
1,1-Dichloroethane		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
1,1-Dichloroethene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
1,2,4-Trichlorobenzene		NA	10	U	10	U	10	UJ	10	U	10	U	10	UJ	10	UJ	10	U
1,2-Dibromo-3-chloropropane		NA	10	U	10	U	10	UJ	10	UJ	10	U	10	U		R		R
1,2-Dibromoethane		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
1,2-Dichlorobenzene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
1,2-Dichloroethane		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
1,2-Dichloropropane		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
1,3-Dichlorobenzene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
1,4-Dichlorobenzene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
2-Butanone		NA	10	UJ	10	U	10	U	10	U	10	U	10	UJ	10	UJ	10	U
2-Hexanone		NA	10	UJ	10	U	10	U	10	U	10	U	10	UJ	10	UJ	10	U
4-Methyl-2-Pentanone		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Acetone		NA	1	J	10	U	2	J	10	U	8	J	27	J	10	UJ	20	
Benzene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Bromodichloromethane		NA	10	U	10	U	10	U	10	U	10	U	10	U	1	J	10	U
Bromoform		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Bromomethane		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Carbon Disulfide		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Carbon Tetrachloride		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Chlorobenzene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Chloroethane		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-MW09-RB01		CM-SO-RB-01A		CM-SO-RB02		CM-SO-RB03		CM-SO-RB04		CM-SO-RB01		CM-SO-RB02-0601		CM-SO-SB01		CM-SO-RINS3	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	12/18/2000		12/21/2000		12/26/2000		1/4/2001		1/9/2001		6/12/2001		6/19/2001		6/26/2001		7/13/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Source Blank		Rinsate Blank	
Chloroform		NA	10	U	10	U	10	U	10	U	10	U	10	U	39	J	10	U
Chloromethane		NA	10	UJ	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
cis-1,2-Dichloroethene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
cis-1,3-Dichloropropene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Cyclohexane		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Dibromochloromethane		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Dichlorodifluoromethane		NA	10	UJ	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Ethylbenzene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Isopropylbenzene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Methyl Acetate		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Methyl tert-Butyl Ether		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Methylcyclohexane		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Methylene Chloride		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Styrene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Tetrachloroethene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Toluene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Total Xylenes		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
trans-1,2-Dichloroethene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
trans-1,3-Dichloropropene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Trichloroethene		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Trichlorofluoromethane		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U
Vinyl Chloride		NA	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ	10	U

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US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-MW09-RB01		CM-SO-RB-01A		CM-SO-RB02		CM-SO-RB03		CM-SO-RB04		CM-SO-RB01		CM-SO-RB02-0601		CM-SO-SB01		CM-SO-RINS3	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	12/18/2000		12/21/2000		12/26/2000		1/4/2001		1/9/2001		6/12/2001		6/19/2001		6/26/2001		7/13/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Source Blank		Rinsate Blank	
Semivolatile Organic Analysis (UG/L)																		
1,1'-Biphenyl	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
2,2'-oxybis(1-Chloropropane)	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
2,4,5-Trichlorophenol	25	U		NA	25	U	25	U	25	U	25	UJ	28	U		NA	25	U
2,4,6-Trichlorophenol	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
2,4-Dichlorophenol	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
2,4-Dimethylphenol	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
2,4-Dinitrophenol	25	UJ		NA	25	U	25	U	25	UJ	25	UJ	28	UJ		NA	25	U
2,4-Dinitrotoluene	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
2,6-Dinitrotoluene	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
2-Chloronaphthalene	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
2-Chlorophenol	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
2-Methylnaphthalene	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
2-Methylphenol	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
2-Nitroaniline	25	U		NA	25	U	25	U	25	UJ	25	UJ	28	U		NA	25	U
2-Nitrophenol	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
3,3'-Dichlorobenzidine	10	U		NA	10	UJ	10	U	10	U	10	UJ		R		NA	10	U
3-Nitroaniline	25	U		NA	25	U	25	U	25	U	25	UJ	28	U		NA	25	U
4,6-Dinitro-2-methylphenol	25	U		NA	25	U	25	U	25	UJ	25	UJ	28	U		NA	25	U
4-Bromophenyl-phenylether	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
4-Chloro-3-methylphenol	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
4-Chloroaniline	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
4-Chlorophenyl-phenylether	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
4-Methylphenol	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
4-Nitroaniline	25	U		NA	25	UJ	25	U	25	U	25	UJ	28	U		NA	25	U
4-Nitrophenol	25	U		NA	25	U	25	U	25	UJ	25	UJ	28	U		NA	25	U
Acenaphthene	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
Acenaphthylene	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
Acetophenone	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
Anthracene	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
Atrazine	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
Benzaldehyde	1	J		NA	10	U	10	U	10	U	1	J	19	J		NA	7	J
Benzo(a)anthracene	10	U		NA	10	U	10	U	10	U	10	UJ	11	U		NA	10	U
Benzo(a)pyrene	10	U		NA	10	U	10	U	10	U		R	11	U		NA	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-MW09-RB01		CM-SO-RB-01A		CM-SO-RB02		CM-SO-RB03		CM-SO-RB04		CM-SO-RB01		CM-SO-RB02-0601		CM-SO-SB01		CM-SO-RINS3	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	12/18/2000		12/21/2000		12/26/2000		1/4/2001		1/9/2001		6/12/2001		6/19/2001		6/26/2001		7/13/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Source Blank		Rinsate Blank	
Benzo(b)fluoranthene	10	U	NA		1	J	10	U	10	U	10	UJ	11	U	NA		10	U
Benzo(g,h,i)perylene	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Benzo(k)fluoranthene	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Bis(2-Chloroethoxy)methane	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Bis(2-Chloroethyl)ether	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
bis(2-Ethylhexyl)phthalate	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		24	
Butylbenzylphthalate	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Caprolactam	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Carbazole	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Chrysene	10	U	NA		1	J	10	U	10	U	10	UJ	11	U	NA		10	U
Di-n-Butylphthalate	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		3	BJ
Di-n-octylphthalate	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Dibenzo(a,h)anthracene	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Dibenzofuran	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Diethylphthalate	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Dimethylphthalate	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Fluoranthene	10	U	NA		4	J	10	U	10	U	10	UJ	11	U	NA		10	U
Fluorene	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Hexachlorobenzene	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Hexachlorobutadiene	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Hexachlorocyclopentadiene	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Hexachloroethane	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Indeno(1,2,3-cd)pyrene	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Isophorone	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
N-Nitroso-di-n-propylamine	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
N-Nitroso-diphenylamine	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Naphthalene	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Nitrobenzene	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Pentachlorophenol	25	U	NA		25	U	25	U	25	U	25	UJ	26	U	NA		25	U
Phenanthrene	10	U	NA		4	J	10	U	10	U	10	UJ	11	U	NA		10	U
Phenol	10	U	NA		10	U	10	U	10	U	10	UJ	11	U	NA		10	U
Pyrene	10	U	NA		2	J	10	U	10	U	10	UJ	11	U	NA		10	U

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US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-MW09-RB01		CM-SO-RB-01A		CM-SO-RB02		CM-SO-RB03		CM-SO-RB04		CM-SO-RB01		CM-SO-RB02-0601		CM-SO-SB01		CM-SO-RINS3	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	12/18/2000		12/21/2000		12/26/2000		1/4/2001		1/9/2001		6/12/2001		6/19/2001		6/26/2001		7/13/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Source Blank		Rinsate Blank	
Pesticide/PCB Analysis (UG/L)																		
4,4'-DDD	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
4,4'-DDE	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
4,4'-DDT	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
Aldrin	0.050	U		NA	0.050	U	0.050	U	0.050	U	0.050	U		NA		NA	0.050	U
alpha-BHC	0.050	U		NA	0.050	U	0.050	U	0.050	U	0.050	U		NA		NA	0.050	U
alpha-Chlordane	0.050	U		NA	0.050	U	0.050	U	0.050	U	0.050	U		NA		NA	0.050	U
Aroclor-1016	1.0	U		NA	1.0	U	1.0	U	1.0	U	1.0	U		NA		NA	1.0	U
Aroclor-1221	2.0	U		NA	2.0	U	2.0	U	2.0	U	2.0	U		NA		NA	2.0	U
Aroclor-1232	1.0	U		NA	1.0	U	1.0	U	1.0	U	1.0	U		NA		NA	1.0	U
Aroclor-1242	1.0	U		NA	1.0	U	1.0	U	1.0	U	1.0	U		NA		NA	1.0	U
Aroclor-1248	1.0	U		NA	1.0	U	1.0	U	1.0	U	1.0	U		NA		NA	1.0	U
Aroclor-1254	1.0	U		NA	1.0	U	1.0	U	1.0	U	1.0	U		NA		NA	1.0	U
Aroclor-1260	1.0	U		NA	1.0	U	1.0	U	1.0	U	1.0	U		NA		NA	1.0	U
beta-BHC	0.050	U		NA	0.050	U	0.050	U	0.010	J	0.050	U		NA		NA	0.012	PJB
delta-BHC	0.050	U		NA	0.050	U	0.050	U	0.050	U	0.050	U		NA		NA	0.050	U
Dieldrin	0.10	U		NA	0.10	U	0.10	U	0.0050	J	0.10	U		NA		NA	0.10	U
Endosulfan I	0.050	U		NA	0.050	U	0.050	U	0.050	U	0.050	U		NA		NA	0.050	U
Endosulfan II	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
Endosulfan Sulfate	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
Endrin	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
Endrin Aldehyde	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.0059	PJB
Endrin Ketone	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
gamma-BHC	0.050	U		NA	0.050	U	0.050	U	0.050	U	0.050	U		NA		NA	0.0024	PJ
gamma-Chlordane	0.050	U		NA	0.050	U	0.050	U	0.050	U	0.050	U		NA		NA	0.050	U
Heptachlor	0.050	U		NA	0.050	U	0.050	U	0.050	U	0.050	U		NA		NA	0.050	U
Heptachlor Epoxide	0.050	U		NA	0.050	U	0.050	U	0.050	U	0.050	U		NA		NA	0.050	U
Methoxychlor	0.50	U		NA	0.50	U	0.50	U	0.015	J	0.50	U		NA		NA	0.50	U
Toxaphene	5.0	U		NA	5.0	U	5.0	U	5.0	U	5.0	U		NA		NA	5.0	U

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US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-MW09-RB01		CM-SO-RB-01A		CM-SO-RB02		CM-SO-RB03		CM-SO-RB04		CM-SO-RB01		CM-SO-RB02-0601		CM-SO-SB01		CM-SO-RINS3	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	12/18/2000		12/21/2000		12/26/2000		1/4/2001		1/9/2001		6/12/2001		6/19/2001		6/26/2001		7/13/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Source Blank		Rinsate Blank	
Dioxin Analysis (pg/L)																		
1,2,3,4,6,7,8-HpCDD	9.9	U		NA	3.5	U	8.6	U	4.3	U	2.3	U	5.0	EMPC		NA	11.9	J
1,2,3,4,6,7,8-HpCDF	6.0	U		NA	1.6	U	4.0	U	2.0	U	1.2	U	1.5	EMPC		NA	8.0	J
1,2,3,4,7,8,9-HpCDF	6.2	U		NA	2.2	U	5.5	U	2.8	U	1.4	U	1.4	U		NA	2.0	EMPC
1,2,3,4,7,8-HxCDD	5.7	U		NA	2.1	U	4.6	U	3.0	U	1.6	U	3.5	U		NA	1.9	J
1,2,3,4,7,8-HxCDF	4.2	U		NA	1.8	JB	2.9	U	1.8	U	1.0	U	3.0	U		NA	4.3	J
1,2,3,6,7,8-HxCDD	5.9	U		NA	2.0	U	4.4	U	3.0	U	1.7	U	1.3	U		NA	2.0	J
1,2,3,6,7,8-HxCDF	4.0	U		NA	1.1	U	2.6	U	1.7	U	0.80	U	2.5	EMPC		NA	3.4	J
1,2,3,7,8,9-HxCDD	5.6	U		NA	2.1	U	4.7	U	2.9	U	1.6	U	1.2	U		NA	2.4	EMPC
1,2,3,7,8,9-HxCDF	5.6	U		NA	1.6	U	3.7	U	2.4	U	1.0	U	0.90	U		NA	2.9	EMPC
1,2,3,7,8-PeCDD	5.0	U		NA	1.9	U	3.0	U	3.7	U	2.3	U	1.1	U		NA	1.9	EMPC
1,2,3,7,8-PeCDF	3.7	U		NA	1.5	U	2.1	U	3.2	U	1.7	U	2.0	EMPC		NA	2.7	EMPC
1,2,4,5,7,8-hexachloro(9H)xanthene		U		NA		NA		NA		U		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF	4.6	U		NA	1.3	U	3.0	U	1.9	U	0.80	U	0.80	U		NA	2.6	J
2,3,4,7,8-PeCDF	3.6	U		NA	1.5	U	2.1	U	3.2	U	1.6	U	3.0	EMPC		NA	2.9	J
2,3,7,8-TCDD	4.0	U		NA	1.6	U	2.2	U	3.8	U	1.7	U	10.2	EMPC		NA	1.9	J
2,3,7,8-TCDF	3.1	U		NA	1.1	U	1.7	U	3.0	U	0.90	U	0.80	U		NA	2.6	EMPC
OCDD	14.4	U		NA	183	B	18.9	J	27.7	J	3.6	U	12.9	J		NA	69.1	J
OCDF	10.7	U		NA	4.0	U	9.5	U	4.8	UJ	4.1	U	5.0	EMPC		NA	35.7	J
Total HpCDD	9.9	UJ		NA	7.6		8.6	UJ	4.3	UJ	2.3	UJ	8.7	EMPC		NA	31.0	J
Total HpCDF	6.9	UJ		NA	1.8	U	4.7	UJ	2.4	UJ	1.3	UJ	1.5	EMPC		NA	14.4	J
Total HxCDD	11.0	EMPC		NA	17.7	EMPC	4.6	UJ	3.0	UJ	3.5	EMPC	3.5	UJ		NA	3.9	J
Total HxCDF	4.5	UJ		NA	1.8		3.0	UJ	1.9	UJ	1.0	UJ	5.5	EMPC		NA	11.8	J
Total PeCDD	5.0	UJ		NA	1.9	U	3.0	UJ	3.7	UJ	2.3	UJ	1.1	UJ		NA	6.0	EMPC
Total PeCDF	3.6	UJ		NA	1.5	U	2.1	UJ	3.2	UJ	1.7	UJ	5.0	EMPC		NA	4.2	J
Total TCDD	4.0	UJ		NA	1.6	U	3.0	EMPC	3.8	UJ	25.0	EMPC	13.4	EMPC		NA	24.5	EMPC
Total TCDF	3.1	UJ		NA	1.1	U	1.7	UJ	3.0	UJ	5.9	EMPC	1.7	EMPC		NA	14.5	J
Toxicity Equivalency	0.00	U		NA		NA	0.0019	J	0.0026	J	0.00	J	10.0	J		NA	7.82	J

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US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-MW09-RB01		CM-SO-RB01A		CM-SO-RB02		CM-SO-RB03		CM-SO-RB04		CM-SO-RB01		CM-SO-RB02-0601		CM-SO-SB01		CM-SO-RINS3	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	12/18/2000		12/21/2000		12/26/2000		1/4/2001		1/9/2001		6/12/2001		6/19/2001		6/26/2001		7/13/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank		Source Blank		Rinsate Blank	
TAL Metal Analysis (UG/L)																		
Aluminum	88.7	UJ		NA	65.9	U	27.1	U	26.9	UJ	7.0	U	29.5	U		NA	17.2	UJ
Antimony	20.0	U		NA	21.5	U	2.3	U	2.3	U	2.0	U	3.6	U		NA	6.9	U
Arsenic	2.5	U		NA	1.6	U	3.4	U	3.4	U	2.0	U	4.3	UJ		NA	6.2	U
Barium	9.4	U		NA	3.9	U	0.73	U	1.7	U	6.2	U	0.40	U		NA	1.3	U
Beryllium	0.20	J		NA	0.20	UJ	0.20	U	0.20	U	0.10	U	0.16	U		NA	0.10	U
Cadmium	0.30	U		NA	0.40	J	0.30	U	0.30	U	0.20	U	0.24	U		NA	0.60	U
Calcium	1290	U		NA	1770	U	25.0	U	25.0	U	69.0	U	98.7	U		NA	270	
Chromium	1.2	U		NA	1.0	J	0.60	U	1.0	J	0.34	UJ	0.66	UJ		NA	0.60	U
Cobalt	2.0	U		NA	2.0	U	0.60	U	0.60	U	1.0	UJ	0.92	U		NA	0.90	U
Copper	5.0	U		NA	1.4	U	0.90	U	0.90	U	5.8	UJ	0.86	UJ		NA	1.5	U
Iron	34.1	U		NA	69.8	U	10.6	U	15.6	UJ	36.3	U	16.5	U		NA	34.5	
Lead	1.3	U		NA	1.9	U	2.1	U	2.1	U	1.0	U	1.5	U		NA	3.0	U
Magnesium	52.9	U		NA	70.0	U	8.0	UJ	7.6	U	8.0	U	16.4	U		NA	48.5	U
Manganese	6.6	U		NA	5.3	U	0.25	U	0.60	U	2.1	UJ	0.31	UJ		NA	1.2	U
Mercury	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.13	U	0.030	U		NA	0.20	UJ
Nickel	2.1	U		NA	1.9	U	0.80	U	0.80	U	0.84	UJ	0.72	U		NA	1.6	U
Potassium	126	U		NA	42.8	J	23.0	U	23.0	U	126	UJ	305	U		NA	34.4	UJ
Selenium	2.3	U		NA	2.0	U	4.3	U	4.3	U	2.0	U	3.0	U		NA	1.7	J
Silver	1.3	U		NA	1.4	U	0.40	U	0.40	U	4.0	UJ	1.0	U		NA	1.7	U
Sodium	339	UJ		NA	956	U	139	U	139	U	132	UJ	54.7	U		NA	357	U
Thallium	4.1	U		NA	3.7	U	5.7	U	5.7	U	3.0	U	7.6	UJ		NA	4.3	UJ
Vanadium	2.6	U		NA	1.7	U	0.70	U	0.70	U	0.50	U	0.52	U		NA	1.4	U
Zinc	14.9	U		NA	10.7	U	1.2	U	2.3	UJ	3.4	UJ	0.57	UJ		NA	10.6	

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US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-SB02		CM-SO-SB03		CM-SO-TB09		CM-SO-RB04-0601	
Sample Location	None		None		None		None	
Date Sampled	7/19/2001		8/7/2001		8/7/2001		8/8/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Source Blank		Source Blank		Trip Blank		Rinsate Blank	
Volatile Organic Analysis (UG/L)								
1,1,1-Trichloroethane	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U	10	U
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	10	U	10	U	10	U	10	U
1,1-Dichloroethane	10	U	10	U	10	U	10	U
1,1-Dichloroethene	10	U	10	U	10	U	10	U
1,2,4-Trichlorobenzene	10	U	10	U	10	U	10	U
1,2-Dibromo-3-chloropropane		R	10	U		R	10	U
1,2-Dibromoethane	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene	10	U	10	U	10	U	10	U
1,2-Dichloroethane	10	U	10	U	10	U	10	U
1,2-Dichloropropane	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene	10	U	10	U	10	U	10	U
2-Butanone	10	U	10	U	10	U	10	U
2-Hexanone	10	U	10	U	10	U	10	U
4-Methyl-2-Pentanone	10	U	10	U	10	U	10	U
Acetone	4	J	10	U	10	U	10	U
Benzene	10	U	10	U	10	U	10	U
Bromodichloromethane	10	U	10	U	10	U	10	U
Bromoform	10	U	10	U	10	U	10	U
Bromomethane	10	U	10	UJ	10	U	10	UJ
Carbon Disulfide	10	U	10	U	10	UJ	10	U
Carbon Tetrachloride	10	U	10	U	10	U	10	U
Chlorobenzene	10	U	10	U	10	U	10	U
Chloroethane	10	U	10	U	2	J	10	U

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US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-SB02		CM-SO-SB03		CM-SO-TB09		CM-SO-RB04-0801	
Sample Location	None		None		None		None	
Date Sampled	7/19/2001		8/7/2001		8/7/2001		8/8/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Source Blank		Source Blank		Trip Blank		Rinsate Blank	
Chloroform	25		17		10	U	10	U
Chloromethane	10	UJ	10	U	10	U	10	U
cis-1,2-Dichloroethene	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	10	U	10	U	10	U	10	U
Cyclohexane	10	U	10	U	10	U	10	U
Dibromochloromethane	10	U	10	U	10	U	10	U
Dichlorodifluoromethane	10	UJ	10	U	10	U	10	U
Ethylbenzene	10	U	10	U	10	U	10	U
Isopropylbenzene	10	U	10	U	10	U	10	U
Methyl Acetate	10	U	10	U	10	U	10	U
Methyl tert-Butyl Ether	10	U	1	J	10	U	10	U
Methylcyclohexane	10	U	10	U	10	U	10	U
Methylene Chloride	10	U	10	U	10	U	10	U
Styrene	10	U	10	U	10	U	10	U
Tetrachloroethene	10	U	10	U	10	U	10	U
Toluene	10	U	10	U	10	U	10	U
Total Xylenes	10	U	10	U	10	U	10	U
trans-1,2-Dichloroethene	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	10	U	10	U	10	U	10	U
Trichloroethene	10	U	10	U	10	U	10	U
Trichlorofluoromethane	10	U	10	U	10	U	10	U
Vinyl Chloride	10	U	10	U	10	U	10	U

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US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-SB02		CM-SO-SB03		CM-SO-TB09		CM-SO-RB04-0901	
Sample Location	None		None		None		None	
Date Sampled	7/19/2001		8/7/2001		8/7/2001		8/8/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Source Blank		Source Blank		Trip Blank		Rinsate Blank	
Semivolatile Organic Analysis (UG/L)								
1,1'-Biphenyl		NA		NA		NA	10	U
2,2'-oxybis(1-Chloropropane)		NA		NA		NA	10	UJ
2,4,5-Trichlorophenol		NA		NA		NA	25	U
2,4,6-Trichlorophenol		NA		NA		NA	10	U
2,4-Dichlorophenol		NA		NA		NA	10	U
2,4-Dimethylphenol		NA		NA		NA	10	U
2,4-Dinitrophenol		NA		NA		NA	25	U
2,4-Dinitrotoluene		NA		NA		NA	10	U
2,6-Dinitrotoluene		NA		NA		NA	10	U
2-Chloronaphthalene		NA		NA		NA	10	U
2-Chlorophenol		NA		NA		NA	10	U
2-Methylnaphthalene		NA		NA		NA	10	U
2-Methylphenol		NA		NA		NA	10	U
2-Nitroaniline		NA		NA		NA	25	U
2-Nitrophenol		NA		NA		NA	10	U
3,3'-Dichlorobenzidine		NA		NA		NA	10	U
3-Nitroaniline		NA		NA		NA	25	U
4,6-Dinitro-2-methylphenol		NA		NA		NA	25	U
4-Bromophenyl-phenylether		NA		NA		NA	10	U
4-Chloro-3-methylphenol		NA		NA		NA	10	U
4-Chloroaniline		NA		NA		NA	10	U
4-Chlorophenyl-phenylether		NA		NA		NA	10	U
4-Methylphenol		NA		NA		NA	10	U
4-Nitroaniline		NA		NA		NA	25	U
4-Nitrophenol		NA		NA		NA	25	U
Acenaphthene		NA		NA		NA	10	U
Acenaphthylene		NA		NA		NA	10	U
Acetophenone		NA		NA		NA	3	J
Anthracene		NA		NA		NA	10	U
Atrazine		NA		NA		NA	10	UJ
Benzaldehyde		NA		NA		NA	2	J
Benzo(a)anthracene		NA		NA		NA	10	U
Benzo(a)pyrene		NA		NA		NA	10	U

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US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-SB02		CM-SO-SB03		CM-SO-TB09		CM-SO-RB04-0601	
Sample Location	None		None		None		None	
Date Sampled	7/19/2001		8/7/2001		8/7/2001		8/8/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Source Blank		Source Blank		Trip Blank		Rinsate Blank	
Benzo(b)fluoranthene		NA		NA		NA	10	U
Benzo(g,h,i)perylene		NA		NA		NA	10	U
Benzo(k)fluoranthene		NA		NA		NA	10	U
Bis(2-Chloroethoxy)methane		NA		NA		NA	10	U
Bis(2-Chloroethyl)ether		NA		NA		NA	10	U
bis(2-Ethylhexyl)phthalate		NA		NA		NA	2	J
Butylbenzylphthalate		NA		NA		NA	10	U
Caprolactam		NA		NA		NA	10	U
Carbazole		NA		NA		NA	10	U
Chrysene		NA		NA		NA	10	U
Di-n-Butylphthalate		NA		NA		NA	10	U
Di-n-octylphthalate		NA		NA		NA	10	U
Dibenzo(a,h)anthracene		NA		NA		NA	10	U
Dibenzofuran		NA		NA		NA	10	U
Diethylphthalate		NA		NA		NA	10	U
Dimethylphthalate		NA		NA		NA	10	U
Fluoranthene		NA		NA		NA	10	U
Fluorene		NA		NA		NA	10	U
Hexachlorobenzene		NA		NA		NA	10	U
Hexachlorobutadiene		NA		NA		NA	10	UJ
Hexachlorocyclopentadiene		NA		NA		NA	10	U
Hexachloroethane		NA		NA		NA	10	U
Indeno(1,2,3-cd)pyrene		NA		NA		NA	10	U
Isophorone		NA		NA		NA	10	U
N-Nitroso-di-n-propylamine		NA		NA		NA	10	UJ
N-Nitroso-diphenylamine		NA		NA		NA	10	U
Naphthalene		NA		NA		NA	10	U
Nitrobenzene		NA		NA		NA	10	U
Pentachlorophenol		NA		NA		NA	25	U
Phenanthrene		NA		NA		NA	10	U
Phenol		NA		NA		NA	2	J
Pyrene		NA		NA		NA	10	U

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US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-SB02		CM-SO-SB03		CM-SO-TB09		CM-SO-RB04-0801	
Sample Location	None		None		None		None	
Date Sampled	7/19/2001		8/7/2001		8/7/2001		8/8/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Source Blank		Source Blank		Trip Blank		Rinsate Blank	
Pesticide/PCB Analysis (UG/L)								
4,4'-DDD		NA		NA		NA	0.10	U
4,4'-DDE		NA		NA		NA	0.10	U
4,4'-DDT		NA		NA		NA	0.10	U
Aldrin		NA		NA		NA	0.050	U
alpha-BHC		NA		NA		NA	0.050	U
alpha-Chlordane		NA		NA		NA	0.050	U
Aroclor-1016		NA		NA		NA	1.0	UJ
Aroclor-1221		NA		NA		NA	2.0	UJ
Aroclor-1232		NA		NA		NA	1.0	UJ
Aroclor-1242		NA		NA		NA	1.0	UJ
Aroclor-1248		NA		NA		NA	1.0	UJ
Aroclor-1254		NA		NA		NA	1.0	UJ
Aroclor-1260		NA		NA		NA	1.0	UJ
beta-BHC		NA		NA		NA	0.050	U
delta-BHC		NA		NA		NA	0.050	U
Dieldrin		NA		NA		NA	0.10	U
Endosulfan I		NA		NA		NA	0.050	U
Endosulfan II		NA		NA		NA	0.10	U
Endosulfan Sulfate		NA		NA		NA	0.10	U
Endrin		NA		NA		NA	0.10	U
Endrin Aldehyde		NA		NA		NA	0.10	U
Endrin Ketone		NA		NA		NA	0.10	U
gamma-BHC		NA		NA		NA	0.050	U
gamma-Chlordane		NA		NA		NA	0.050	U
Heptachlor		NA		NA		NA	0.050	U
Heptachlor Epoxide		NA		NA		NA	0.050	U
Methoxychlor		NA		NA		NA	0.50	UJ
Toxaphene		NA		NA		NA	5.0	UJ

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US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-SB02		CM-SO-SB03		CM-SO-TB09		CM-SO-RB04-0601	
Sample Location	None		None		None		None	
Date Sampled	7/19/2001		8/7/2001		8/7/2001		8/8/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Source Blank		Source Blank		Trip Blank		Rinsate Blank	
Dioxin Analysis (pg/L)								
1,2,3,4,6,7,8-HpCDD		NA		NA		NA	5.2	U
1,2,3,4,6,7,8-HpCDF		NA		NA		NA	2.7	U
1,2,3,4,7,8,9-HpCDF		NA		NA		NA	3.0	U
1,2,3,4,7,8-HxCDD		NA		NA		NA	3.0	U
1,2,3,4,7,8-HxCDF		NA		NA		NA	1.9	U
1,2,3,6,7,8-HxCDD		NA		NA		NA	3.1	U
1,2,3,6,7,8-HxCDF		NA		NA		NA	1.9	U
1,2,3,7,8,9-HxCDD		NA		NA		NA	2.9	U
1,2,3,7,8,9-HxCDF		NA		NA		NA	2.2	U
1,2,3,7,8-PeCDD		NA		NA		NA	2.3	U
1,2,3,7,8-PeCDF		NA		NA		NA	1.9	U
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF		NA		NA		NA	1.8	U
2,3,4,7,8-PeCDF		NA		NA		NA	1.8	U
2,3,7,8-TCDD		NA		NA		NA	2.0	U
2,3,7,8-TCDF		NA		NA		NA	1.4	U
OCDD		NA		NA		NA	6.3	U
OCDF		NA		NA		NA	6.2	U
Total HpCDD		NA		NA		NA	5.2	UJ
Total HpCDF		NA		NA		NA	2.8	UJ
Total HxCDD		NA		NA		NA	18.6	EMPC
Total HxCDF		NA		NA		NA	1.9	UJ
Total PeCDD		NA		NA		NA	4.9	EMPC
Total PeCDF		NA		NA		NA	1.9	UJ
Total TCDD		NA		NA		NA	2.0	UJ
Total TCDF		NA		NA		NA	1.4	UJ
Toxicity Equivalency		NA		NA		NA	0.00	J

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US EPA ARCHIVE DOCUMENT

BLANK AND QC SAMPLE ANALYTICAL RESULTS - SOIL SAMPLING
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-SO-SB02		CM-SO-SB03		CM-SO-TB09		CM-SO-RB04-0601	
Sample Location	None		None		None		None	
Date Sampled	7/19/2001		8/7/2001		8/7/2001		8/8/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Source Blank		Source Blank		Trip Blank		Rinsate Blank	
TAL Metal Analysis (UG/L)								
Aluminum		NA		NA		NA	63.2	UJ
Antimony		NA		NA		NA	3.4	U
Arsenic		NA		NA		NA	1.2	U
Barium		NA		NA		NA	9.3	
Beryllium		NA		NA		NA	0.40	U
Cadmium		NA		NA		NA	0.40	U
Calcium		NA		NA		NA	16.6	UJ
Chromium		NA		NA		NA	1.9	J
Cobalt		NA		NA		NA	0.70	U
Copper		NA		NA		NA	1.6	U
Iron		NA		NA		NA	47.2	U
Lead		NA		NA		NA	1.6	UJ
Magnesium		NA		NA		NA	17.8	UJ
Manganese		NA		NA		NA	1.3	U
Mercury		NA		NA		NA	0.10	U
Nickel		NA		NA		NA	1.9	J
Potassium		NA		NA		NA	40.4	UJ
Selenium		NA		NA		NA	2.6	UJ
Silver		NA		NA		NA	0.50	U
Sodium		NA		NA		NA	334	U
Thallium		NA		NA		NA	4.1	U
Vanadium		NA		NA		NA	0.97	UJ
Zinc		NA		NA		NA	0.70	UJ

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APPENDIX D

ANALYTICAL RESULTS FOR THE GROUNDWATER SAMPLES COLLECTED

US EPA ARCHIVE DOCUMENT

GROUNDWATER RESULTS
NOVEMBER 2000 - OCTOBER 2001
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-GEC2-02		CMS-GW-GEC2F-02		CMS-GW-GEC6-02		CMS-GW-GEC6F-02		CM-GW-MW01-01		CM-GW-MW01-01F	
Sample Location	GEC2		GEC2		GEC6		GEC6		MW01		MW01	
Date Sampled	8/21/2001		8/21/2001		8/21/2001		8/21/2001		2/21/2001		2/21/2001	
QC Identifier	None		None		None		None		Field Dup. CM-GW-MW01-01		Field Dup. CM-GW-MW01-01F	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Volatile Organic Analysis (UG/L)	A0910				A0911				A0454			
1,1,1-Trichloroethane	10	U		NA	10	U		NA	10	U		NA
1,1,2,2-Tetrachloroethane	10	U		NA	10	U		NA	10	U		NA
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U		NA	10	U		NA	10	U		NA
1,1,2-Trichloroethane	10	U		NA	10	U		NA	10	U		NA
1,1-Dichloroethane	10	U		NA	10	U		NA	10	U		NA
1,1-Dichloroethene	10	U		NA	10	U		NA	10	U		NA
1,2,4-Trichlorobenzene	10	U		NA	10	U		NA	10	U		NA
1,2-Dibromo-3-chloropropane	10	UJ		NA	10	UJ		NA	10	U		NA
1,2-Dibromoethane	10	U		NA	10	U		NA	10	U		NA
1,2-Dichlorobenzene	10	U		NA	10	U		NA	10	U		NA
1,2-Dichloroethane	10	U		NA	10	U		NA	10	U		NA
1,2-Dichloropropane	10	U		NA	10	U		NA	10	U		NA
1,3-Dichlorobenzene	10	U		NA	10	U		NA	10	U		NA
1,4-Dichlorobenzene	10	U		NA	10	U		NA	10	U		NA
2-Butanone	10	UJ		NA	10	UJ		NA	10	U		NA
2-Hexanone	10	UJ		NA	10	UJ		NA	10	U		NA
4-Methyl-2-Pentanone	10	UJ		NA	10	UJ		NA	10	U		NA
Acetone	10	UJ		NA	10	UJ		NA	10	U		NA
Benzene	10	U		NA	10	U		NA	10	U		NA
Bromodichloromethane	10	U		NA	10	U		NA	10	U		NA
Bromoform	10	U		NA	10	U		NA	10	U		NA
Bromomethane	10	U		NA	10	U		NA	10	U		NA
Carbon Disulfide	10	UJ		NA	10	UJ		NA	10	U		NA
Carbon Tetrachloride	10	U		NA	10	U		NA	10	U		NA
Chlorobenzene	10	U		NA	10	U		NA	10	U		NA
Chloroethane	10	U		NA	10	U		NA	10	UJ		NA
Chloroform	10	U		NA	10	U		NA	10	U		NA
Chloromethane	10	U		NA	10	U		NA	10	UJ		NA
cis-1,2-Dichloroethene	10	U		NA	18			NA	10	U		NA
cis-1,3-Dichloropropene	10	U		NA	10	U		NA	10	U		NA
Cyclohexane	10	U		NA	10	U		NA	10	U		NA
Dibromochloromethane	10	U		NA	10	U		NA	10	U		NA
Dichlorodifluoromethane	10	U		NA	10	U		NA	10	U		NA
Ethylbenzene	10	U		NA	10	U		NA	10	U		NA
Isopropylbenzene	10	U		NA	10	U		NA	10	U		NA
Methyl Acetate	10	U		NA	10	U		NA	10	U		NA
Methyl tert-Butyl Ether	10	U		NA	10	U		NA	10	U		NA
Methylcyclohexane	10	U		NA	10	U		NA	10	U		NA
Methylene Chloride	10	UJ		NA	10	UJ		NA	10	U		NA
Styrene	10	U		NA	10	U		NA	10	U		NA

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US EPA ARCHIVE DOCUMENT

GROUNDWATER RESULTS
NOVEMBER 2000 - OCTOBER 2001
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-GEC2-02		CMS-GW-GEC2F-02		CMS-GW-GEC6-02		CMS-GW-GEC6F-02		CM-GW-MW01-01		CM-GW-MW01-01F	
Sample Location	GEC2		GEC2		GEC6		GEC6		MW01		MW01	
Date Sampled	8/21/2001		8/21/2001		8/21/2001		8/21/2001		2/21/2001		2/21/2001	
QC Identifier	None		None		None		None		Field Dup. CM-GW-MW01-01		Field Dup. CM-GW-MW01-01F	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Tetrachloroethene	10	U		NA	200	*		NA	10	U		NA
Toluene	10	U		NA	10	U		NA	10	U		NA
Total Xylenes	10	U		NA	10	U		NA	10	U		NA
trans-1,2-Dichloroethene	10	UJ		NA	10	UJ		NA	10	U		NA
trans-1,3-Dichloropropene	10	U		NA	10	U		NA	10	U		NA
Trichloroethene	10	U		NA	10	U		NA	10	U		NA
Trichlorofluoromethane	10	U		NA	10	U		NA	10	U		NA
Vinyl Chloride	10	U		NA	10	U		NA	10	UJ		NA
Semivolatile Organic Analysis (UG/L)	A0910				A0911				A0454			
1,1'-Biphenyl	10	U		NA	10	U		NA	10	U		NA
2,2'-oxybis(1-Chloropropane)	10	U		NA	10	UJ		NA	10	U		NA
2,4,5-Trichlorophenol	25	U		NA	25	U		NA	25	U		NA
2,4,6-Trichlorophenol	10	U		NA	10	U		NA	10	U		NA
2,4-Dichlorophenol	10	U		NA	10	U		NA	10	U		NA
2,4-Dimethylphenol	10	U		NA	10	U		NA	10	U		NA
2,4-Dinitrophenol	25	UJ		NA	25	U		NA	25	UJ		NA
2,4-Dinitrotoluene	10	U		NA	10	U		NA	10	U		NA
2,6-Dinitrotoluene	10	U		NA	10	U		NA	10	U		NA
2-Chloronaphthalene	10	U		NA	10	U		NA	10	U		NA
2-Chlorophenol	10	U		NA	10	U		NA	10	U		NA
2-Methylnaphthalene	10	U		NA	10	U		NA	10	U		NA
2-Methylphenol	10	U		NA	10	U		NA	10	U		NA
2-Nitroaniline	25	U		NA	25	U		NA	25	U		NA
2-Nitrophenol	10	U		NA	10	U		NA	10	U		NA
3,3'-Dichlorobenzidine	10	U		NA	10	U		NA	10	U		NA
3-Nitroaniline	25	U		NA	25	U		NA	25	U		NA
4,6-Dinitro-2-methylphenol	25	U		NA	25	U		NA	25	U		NA
4-Bromophenyl-phenylether	10	U		NA	10	U		NA	10	U		NA
4-Chloro-3-methylphenol	10	U		NA	10	U		NA	10	U		NA
4-Chloroaniline	10	U		NA	10	U		NA	10	U		NA
4-Chlorophenyl-phenylether	10	U		NA	10	U		NA	10	U		NA
4-Methylphenol	10	U		NA	10	U		NA	10	U		NA
4-Nitroaniline	25	U		NA	25	U		NA	25	U		NA
4-Nitrophenol	25	U		NA	25	U		NA	25	U		NA
Acenaphthene	10	U		NA	10	U		NA	10	U		NA
Acenaphthylene	10	U		NA	10	U		NA	10	U		NA
Acetophenone	10	U		NA	10	U		NA	10	U		NA
Anthracene	10	U		NA	10	U		NA	10	U		NA
Atrazine	10	UJ		NA	10	UJ		NA	10	U		NA
Benzaldehyde	10	UJ		NA	10	UJ		NA	10	UJ		NA
Benzo(a)anthracene	10	U		NA	10	U		NA	10	U		NA

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GROUNDWATER RESULTS
NOVEMBER 2000 - OCTOBER 2001
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-GEC2-02		CMS-GW-GEC2F-02		CMS-GW-GEC6-02		CMS-GW-GEC6F-02		CM-GW-MW01-01		CM-GW-MW01-01F	
Sample Location	GEC2		GEC2		GEC6		GEC6		MW01		MW01	
Date Sampled	8/21/2001		8/21/2001		8/21/2001		8/21/2001		2/21/2001		2/21/2001	
QC Identifier	None		None		None		None		Field Dup. CM-GW-MW01-01		Field Dup. CM-GW-MW01-01F	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Benzo(a)pyrene	10	U		NA	10	U		NA	10	U		NA
Benzo(b)fluoranthene	10	U		NA	10	U		NA	10	U		NA
Benzo(g,h,i)perylene	10	U		NA	10	U		NA	10	U		NA
Benzo(k)fluoranthene	10	U		NA	10	U		NA	10	U		NA
Bis(2-Chloroethoxy)methane	10	U		NA	10	U		NA	10	U		NA
Bis(2-Chloroethyl)ether	10	U		NA	10	U		NA	10	U		NA
bis(2-Ethylhexyl)phthalate	10	UJ		NA	10	U		NA	10	U		NA
Butylbenzylphthalate	10	U		NA	10	U		NA	10	U		NA
Caprolactam	10	U		NA	10	U		NA	10	U		NA
Carbazole	10	U		NA	10	U		NA	10	U		NA
Chrysene	10	U		NA	10	U		NA	10	U		NA
Di-n-Butylphthalate	10	U		NA	10	U		NA	10	U		NA
Di-n-octylphthalate	10	UJ		NA	10	U		NA	10	U		NA
Dibenzo(a,h)anthracene	10	U		NA	10	U		NA	10	U		NA
Dibenzofuran	10	U		NA	10	U		NA	10	U		NA
Diethylphthalate	10	U		NA	10	U		NA	10	U		NA
Dimethylphthalate	10	U		NA	10	U		NA	10	U		NA
Fluoranthene	10	U		NA	10	U		NA	10	U		NA
Fluorene	10	U		NA	10	U		NA	10	U		NA
Hexachlorobenzene	10	U		NA	10	U		NA	10	U		NA
Hexachlorobutadiene	10	U		NA	10	U		NA	10	U		NA
Hexachlorocyclopentadiene	10	UJ		NA	10	U		NA	10	U		NA
Hexachloroethane	10	U		NA	10	U		NA	10	U		NA
Indeno(1,2,3-cd)pyrene	10	U		NA	10	U		NA	10	U		NA
Isophorone	10	U		NA	10	U		NA	10	U		NA
N-Nitroso-di-n-propylamine	10	U		NA	10	U		NA	10	U		NA
N-Nitroso-diphenylamine	10	U		NA	10	U		NA	10	U		NA
Naphthalene	10	U		NA	10	U		NA	10	U		NA
Nitrobenzene	10	U		NA	10	U		NA	10	U		NA
Pentachlorophenol	25	U		NA	25	U		NA	25	UJ		NA
Phenanthrene	10	U		NA	10	U		NA	10	U		NA
Phenol	10	U		NA	10	U		NA	10	U		NA
Pyrene	10	U		NA	10	U		NA	10	U		NA
Pesticide/PCB Analysis (UG/L)	A0910				A0911				A0454			
4,4'-DDD	0.10	U		NA	0.10	U		NA	0.10	U		NA
4,4'-DDE	0.10	U		NA	0.10	U		NA	0.10	U		NA
4,4'-DDT	0.10	U		NA	0.10	U		NA	0.10	U		NA
Aldrin	0.050	U		NA	0.050	U		NA	0.050	U		NA
alpha-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA
alpha-Chlordane	0.050	U		NA	0.050	U		NA	0.050	U		NA
Aroclor-1016	1.0	U		NA	1.0	U		NA	1.0	U		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-GEC2-02		CMS-GW-GEC2F-02		CMS-GW-GEC6-02		CMS-GW-GEC6F-02		CM-GW-MW01-01		CM-GW-MW01-01F	
Sample Location	GEC2		GEC2		GEC6		GEC6		MW01		MW01	
Date Sampled	8/21/2001		8/21/2001		8/21/2001		8/21/2001		2/21/2001		2/21/2001	
QC Identifier	None		None		None		None		Field Dup. CM-GW-MW01-01		Field Dup. CM-GW-MW01-01F	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Aroclor-1221	2.0	U		NA	2.0	U		NA	2.0	U		NA
Aroclor-1232	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1242	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1248	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1254	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1260	1.0	U		NA	1.0	U		NA	1.0	U		NA
beta-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA
delta-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA
Dieldrin	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endosulfan I	0.050	U		NA	0.050	U		NA	0.050	U		NA
Endosulfan II	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endosulfan Sulfate	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin Aldehyde	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin Ketone	0.10	U		NA	0.10	U		NA	0.10	U		NA
gamma-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA
gamma-Chlordane	0.050	U		NA	0.050	U		NA	0.050	U		NA
Heptachlor	0.050	U		NA	0.050	U		NA	0.050	U		NA
Heptachlor Epoxide	0.050	U		NA	0.050	U		NA	0.050	U		NA
Methoxychlor	0.50	U		NA	0.50	U		NA	0.50	U		NA
Toxaphene	5.0	U		NA	5.0	U		NA	5.0	U		NA
Dioxin Analysis (pg/L)	D03903				D03904				D02088			
1,2,3,4,6,7,8-HpCDD	3.9	U		NA	6.3	U		NA	10.2	EMPC		NA
1,2,3,4,6,7,8-HpCDF	5.9	U		NA	3.1	U		NA	4.7	U		NA
1,2,3,4,7,8,9-HpCDF	2.4	UJ		NA	3.7	UJ		NA	5.5	U		NA
1,2,3,4,7,8-HxCDD	1.8	EMPC		NA	3.7	U		NA	4.5	U		NA
1,2,3,4,7,8-HxCDF	3.9	U		NA	2.2	U		NA	2.9	U		NA
1,2,3,6,7,8-HxCDD	1.8	EMPC		NA	3.8	U		NA	4.5	U		NA
1,2,3,6,7,8-HxCDF	3.0	U		NA	2.3	U		NA	2.8	U		NA
1,2,3,7,8,9-HxCDD	2.3	U		NA	3.7	U		NA	4.3	U		NA
1,2,3,7,8,9-HxCDF	1.9	U		NA	2.8	U		NA	3.2	U		NA
1,2,3,7,8-PeCDD	2.2	U		NA	3.5	U		NA	3.3	U		NA
1,2,3,7,8-PeCDF	4.7	U		NA	2.5	U		NA	2.3	U		NA
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF	1.5	U		NA	2.2	U		NA	3.0	U		NA
2,3,4,7,8-PeCDF	2.5	EMPC		NA	2.4	U		NA	2.2	U		NA
2,3,7,8-TCDD	3.2	U		NA	10.8	EMPC		NA	6.4	J		NA
2,3,7,8-TCDF	2.4	EMPC		NA	11.1	EMPC		NA	1.7	U		NA
OCDD	20.4	U		NA	7.3	EMPC		NA	72.4	J		NA
OCDF	17.6	U		NA	9.5	U		NA	14.7	J		NA
Total HpCDD	6.9	EMPC		NA	6.3	UJ		NA	10.2	EMPC		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-GEC2-02		CMS-GW-GEC2F-02		CMS-GW-GEC8-02		CMS-GW-GEC8F-02		CM-GW-MW01-01		CM-GW-MW01-01F	
Sample Location	GEC2		GEC2		GEC8		GEC8		MW01		MW01	
Date Sampled	8/21/2001		8/21/2001		8/21/2001		8/21/2001		2/21/2001		2/21/2001	
QC Identifier	None		None		None		None		Field Dup. CM-GW-MW01-01		Field Dup. CM-GW-MW01-01F	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Total HpCDF	5.9	UJ		NA	3.3	UJ		NA	7.1	EMPC		NA
Total HxCDD	16.0	EMPC		NA	3.7	UJ		NA	4.4	U		NA
Total HxCDF	8.4	EMPC		NA	81.1	EMPC		NA	3.0	U		NA
Total PeCDD	2.2	UJ		NA	6.6	UJ		NA	3.3	U		NA
Total PeCDF	7.2	EMPC		NA	18.5	UJ		NA	2.2	U		NA
Total TCDD	9.4	EMPC		NA	32.7	EMPC		NA	6.4			NA
Total TCDF	4.8	EMPC		NA	11.1	EMPC		NA	4.7	EMPC		NA
Toxicity Equivalency	0.00	UJ		NA	0.00	UJ		NA		NA		NA
TAL Metal Analysis (UG/L)	MA0A40		MA0A41		MA0A42		MA0A43		MA04P8		MA04Q1	
Aluminum	69.3		14.4	U	35.6	U	49.5	U	55.4	U	26.5	U
Antimony	4.9	U	4.9	U	4.9	U	4.9	U	2.5	U	3.5	UJ
Arsenic	2.0	U	3.4	UJ	2.0	U	2.0	U	4.4	J	5.4	J
Barium	145		134		42.1		43.0		112		112	
Beryllium	0.26	UJ	0.29	UJ	0.23	UJ	0.26	UJ	0.31	U	0.16	UJ
Cadmium	0.40	U	0.40	U	0.40	U	0.40	U	0.60	U	0.60	U
Calcium	168000		155000		20100		20800		55600		56800	
Chromium	4.1	U	3.4	U	1.7	U	2.3	U	0.94	UJ	0.50	UJ
Cobalt	6.2	U	7.2	U	1.2	UJ	0.71	UJ	3.6		3.5	
Copper	6.3	U	4.7	U	5.4	U	8.6	U	0.70	U	0.70	U
Iron	4410		4040	J	136	U	138	UJ	63300		64200	
Lead	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ	1.7	U	1.7	U
Magnesium	5820		5360		2730		2870		4880		4930	
Manganese	2200		2030		630		638		2430		2480	
Mercury	0.10	U	0.10	U	0.10	U	0.10	U	0.15	UJ	0.18	UJ
Nickel	2.4	U	2.5	U	0.90	U	1.7	UJ	1.3	U	1.3	U
Potassium	16700	J	15300	J	2960	J	3120	J	5580	J	5550	J
Selenium	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ	4.8	U	4.8	U
Silver	0.77	UJ	0.70	U	0.76	UJ	0.72	UJ	0.50	U	0.50	U
Sodium	120000		84700		34500		36200		135000		136000	
Thallium	5.6	UJ	5.6	UJ	5.6	UJ	5.6	UJ	6.5	J	6.2	U
Vanadium	0.90	U	0.90	U	0.90	U	0.90	U	2.2		2.4	
Zinc	41.9	U	25.9	U	28.7	U	16.6	U	7.2	UJ	6.3	UJ
Wet Chemistry Analysis (MG/L)	D03903				D03904				D02068			
Alkalinity	160			NA	26.0			NA	75.0			NA
Sulfide	4.0	U		NA	4.0			NA	4.0	U		NA
Total Organic Carbon	15.0			NA	5.0			NA	7.0			NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-DUP01-01		CM-GW-DUP01-01F		CMS-GW-MW01S-02		CMS-GW-MW01SF-02		CMS-GW-DUP02-02		CMS-GW-DUP02F-02		CM-GW-MW02-01	
Sample Location	MW01		MW01		MW01S		MW01S		MW01S		MW01S		MW02	
Date Sampled	2/21/2001		2/21/2001		8/16/2001		8/16/2001		8/16/2001		8/16/2001		2/22/2001	
QC Identifier	Field Dup. CM-GW-MW01-01		Field Dup. CM-GW-MW01-01F		Field Dup. CMS-GW-MW01S-02		Field Dup. CMS-GW-MW01SF-02		Field Dup. CMS-GW-MW01S-02		Field Dup. CMS-GW-MW01SF-02		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Volatile Organic Analysis (UG/L)	A0455				A0905				A0907				A0451	
1,1,1-Trichloroethane	10	U			NA	10	U		NA	10	U		NA	10	U
1,1,2,2-Tetrachloroethane	10	U			NA	10	U		NA	10	U		NA	10	U
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U			NA	10	U		NA	10	UJ		NA	10	U
1,1,2-Trichloroethane	10	U			NA	10	U		NA	10	U		NA	10	U
1,1-Dichloroethane	10	U			NA	10	U		NA	10	U		NA	10	U
1,1-Dichloroethene	10	U			NA	10	UJ		NA	10	UJ		NA	10	U
1,2,4-Trichlorobenzene	10	U			NA	10	U		NA	10	U		NA	10	U
1,2-Dibromo-3-chloropropane	10	U			NA	10	U		NA	10	U		NA	10	U
1,2-Dibromoethane	10	U			NA	10	U		NA	10	U		NA	10	U
1,2-Dichlorobenzene	10	U			NA	10	U		NA	10	U		NA	10	U
1,2-Dichloroethane	10	U			NA	10	U		NA	10	U		NA	10	U
1,2-Dichloropropane	10	U			NA	10	UJ		NA	10	U		NA	10	U
1,3-Dichlorobenzene	10	U			NA	10	U		NA	10	U		NA	10	U
1,4-Dichlorobenzene	10	U			NA	10	U		NA	10	U		NA	10	U
2-Butanone	10	U			NA	10	U		NA	10	U		NA	10	U
2-Hexanone	10	U			NA	10	UJ		NA	10	U		NA	10	U
4-Methyl-2-Pentanone	10	U			NA	10	UJ		NA	10	U		NA	10	U
Acetone	10	U			NA	10	UJ		NA	18	UJ		NA	10	U
Benzene	10	U			NA	10	U		NA	10	U		NA	10	U
Bromodichloromethane	10	U			NA	10	U		NA	10	U		NA	10	U
Bromoform	10	U			NA	10	U		NA	10	U		NA	10	U
Bromomethane	10	U			NA	10	UJ		NA	10	UJ		NA	10	U
Carbon Disulfide	10	U			NA	10	U		NA	10	UJ		NA	10	U
Carbon Tetrachloride	10	U			NA	10	U		NA	10	U		NA	10	U
Chlorobenzene	10	U			NA	10	U		NA	10	U		NA	10	U
Chloroethane	10	UJ			NA	10	U		NA	10	U		NA	10	UJ
Chloroform	10	U			NA	10	U		NA	10	U		NA	10	U
Chloromethane	10	UJ			NA	10	U		NA	10	U		NA	10	UJ
cis-1,2-Dichloroethene	10	U			NA	10	U		NA	10	UJ		NA	10	U
cis-1,3-Dichloropropene	10	U			NA	10	U		NA	10	U		NA	10	U
Cyclohexane	10	U			NA	10	U		NA	10	U		NA	10	U
Dibromochloromethane	10	U			NA	10	U		NA	10	U		NA	10	U
Dichlorodifluoromethane	10	U			NA	10	UJ		NA	10	UJ		NA	10	U
Ethylbenzene	10	U			NA	10	U		NA	10	U		NA	10	U
Isopropylbenzene	10	U			NA	10	U		NA	10	U		NA	10	U
Methyl Acetate	10	U			NA	10	U		NA	5	UJ		NA	10	U
Methyl tert-Butyl Ether	10	U			NA	10	U		NA	10	UJ		NA	10	U
Methylcyclohexane	10	U			NA	10	U		NA	10	U		NA	10	U
Methylene Chloride	10	U			NA	10	UJ		NA	10	UJ		NA	10	U
Styrene	10	U			NA	10	U		NA	10	U		NA	10	U

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Sample Number	CM-GW-DUP01-01		CM-GW-DUP01-01F		CMS-GW-MW01S-02		CMS-GW-MW01SF-02		CMS-GW-DUP02-02		CMS-GW-DUP02F-02		CM-GW-MW02-01	
Sample Location	MW01		MW01		MW01S		MW01S		MW01S		MW01S		MW02	
Date Sampled	2/21/2001		2/21/2001		8/16/2001		8/16/2001		8/16/2001		8/16/2001		2/22/2001	
QC Identifier	Field Dup. CM-GW-MW01-01		Field Dup. CM-GW-MW01-01F		Field Dup. CMS-GW-MW01S-02		Field Dup. CMS-GW-MW01SF-02		Field Dup. CMS-GW-MW01S-02		Field Dup. CMS-GW-MW01SF-02		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Tetrachloroethene	10	U		NA	10	U		NA	10	U		NA	10	U
Toluene	10	U		NA	10	U		NA	10	U		NA	10	U
Total Xylenes	10	U		NA	10	U		NA	10	U		NA	10	U
trans-1,2-Dichloroethene	10	U		NA	10	UJ		NA	10	UJ		NA	10	U
trans-1,3-Dichloropropene	10	U		NA	10	U		NA	10	U		NA	10	U
Trichloroethene	10	U		NA	10	U		NA	10	U		NA	10	U
Trichlorofluoromethane	10	U		NA	10	UJ		NA	10	U		NA	10	U
Vinyl Chloride	10	UJ		NA	10	U		NA	10	U		NA	10	UJ
Semivolatile Organic Analysis (UG/L)	A0455				A0908				A0907				A0461	
1,1'-Biphenyl	10	U		NA	10	U		NA	10	U		NA	10	U
2,2'-oxybis(1-Chloropropane)	10	U		NA	10	U		NA	10	U		NA	10	U
2,4,5-Trichlorophenol	25	U		NA	25	U		NA	25	U		NA	25	U
2,4,6-Trichlorophenol	10	U		NA	10	U		NA	10	U		NA	10	U
2,4-Dichlorophenol	10	U		NA	10	U		NA	10	U		NA	10	U
2,4-Dimethylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
2,4-Dinitrophenol	25	UJ		NA	25	U		NA	25	U		NA	25	UJ
2,4-Dinitrotoluene	10	U		NA	10	U		NA	10	U		NA	10	U
2,6-Dinitrotoluene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Chloronaphthalene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Chlorophenol	10	U		NA	10	U		NA	10	U		NA	10	U
2-Methylnaphthalene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Methylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
2-Nitroaniline	25	U		NA	25	U		NA	25	U		NA	25	U
2-Nitrophenol	10	U		NA	10	U		NA	10	U		NA	10	U
3,3'-Dichlorobenzidine	10	U		NA	10	U		NA	10	U		NA	10	U
3-Nitroaniline	25	U		NA	25	U		NA	25	U		NA	25	U
4,6-Dinitro-2-methylphenol	25	U		NA	25	U		NA	25	U		NA	25	U
4-Bromophenyl-phenylether	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chloro-3-methylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chloroaniline	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chlorophenyl-phenylether	10	U		NA	10	U		NA	10	U		NA	10	U
4-Methylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
4-Nitroaniline	25	U		NA	25	U		NA	25	U		NA	25	U
4-Nitrophenol	25	U		NA	25	U		NA	25	U		NA	25	U
Acenaphthene	10	U		NA	10	U		NA	10	U		NA	10	U
Acenaphthylene	10	U		NA	10	U		NA	10	U		NA	10	U
Acetophenone	10	U		NA	10	U		NA	10	U		NA	10	U
Anthracene	10	U		NA	10	U		NA	10	U		NA	10	U
Atrazine	10	U		NA	10	UJ		NA	10	UJ		NA	10	U
Benzaldehyde	10	UJ		NA	10	UJ		NA	10	UJ		NA	10	UJ
Benzo(a)anthracene	10	U		NA	10	U		NA	10	U		NA	10	U

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-DUP01-01		CM-GW-DUP01-01F		CMS-GW-MW01S-02		CMS-GW-MW01SF-02		CMS-GW-DUP02-02		CMS-GW-DUP02F-02		CM-GW-MW02-01	
Sample Location	MW01		MW01		MW01S		MW01S		MW01S		MW01S		MW02	
Date Sampled	2/21/2001		2/21/2001		8/16/2001		8/16/2001		8/16/2001		8/16/2001		2/22/2001	
QC Identifier	Field Dup. CM-GW-MW01-01		Field Dup. CM-GW-MW01-01F		Field Dup. CMS-GW-MW01S-02		Field Dup. CMS-GW-MW01SF-02		Field Dup. CMS-GW-MW01S-02		Field Dup. CMS-GW-MW01SF-02		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Benzo(a)pyrene	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(b)fluoranthene	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(g,h,i)perylene	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(k)fluoranthene	10	U		NA	10	U		NA	10	U		NA	10	U
Bis(2-Chloroethoxy)methane	10	U		NA	10	U		NA	10	U		NA	10	U
Bis(2-Chloroethyl)ether	10	U		NA	10	U		NA	10	U		NA	10	U
bis(2-Ethylhexyl)phthalate	4	J		NA	4	J		NA	16			NA	10	U
Butylbenzylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Caprolactam	10	U		NA	10	U		NA	10	U		NA	10	U
Carbazole	10	U		NA	10	U		NA	10	U		NA	10	U
Chrysene	10	U		NA	10	U		NA	10	U		NA	10	U
Di-n-Butylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Di-n-octylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Dibenzo(a,h)anthracene	10	U		NA	10	U		NA	10	U		NA	10	U
Dibenzofuran	10	U		NA	10	U		NA	10	U		NA	10	U
Diethylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Dimethylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Fluoranthene	10	U		NA	10	U		NA	10	U		NA	10	U
Fluorene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorobutadiene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorocyclopentadiene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
Indeno(1,2,3-cd)pyrene	10	U		NA	10	U		NA	10	U		NA	10	U
Isophorone	10	U		NA	10	U		NA	10	U		NA	10	U
N-Nitroso-di-n-propylamine	10	U		NA	10	U		NA	10	U		NA	10	U
N-Nitroso-diphenylamine	10	U		NA	10	U		NA	10	U		NA	10	U
Naphthalene	10	U		NA	10	U		NA	10	U		NA	10	U
Nitrobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
Pentachlorophenol	25	UJ		NA	25	U		NA	25	U		NA	25	UJ
Phenanthrene	10	U		NA	10	U		NA	10	U		NA	10	U
Phenol	10	U		NA	10	U		NA	10	U		NA	10	U
Pyrene	10	U		NA	10	U		NA	10	U		NA	10	U
Pesticide/PCB Analysis (UG/L)	A0455				A0906				A0907				A0461	
4,4'-DDD	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
4,4'-DDE	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
4,4'-DDT	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Aldrin	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
alpha-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
alpha-Chlordane	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Aroclor-1016	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-DUP01-01		CM-GW-DUP01-01F		CMS-GW-MW01S-02		CMS-GW-MW01SF-02		CMS-GW-DUP02-02		CMS-GW-DUP02F-02		CM-GW-MW02-01	
Sample Location	MW01		MW01		MW01S		MW01S		MW01S		MW01S		MW02	
Date Sampled	2/21/2001		2/21/2001		8/16/2001		8/16/2001		8/16/2001		8/16/2001		2/22/2001	
QC Identifier	Field Dup. CM-GW-MW01-01		Field Dup. CM-GW-MW01-01F		Field Dup. CMS-GW-MW01S-02		Field Dup. CMS-GW-MW01SF-02		Field Dup. CMS-GW-MW01S-02		Field Dup. CMS-GW-MW01SF-02		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Aroclor-1221	2.0	U		NA	2.0	U		NA	2.0	U		NA	2.0	U
Aroclor-1232	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1242	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1248	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1254	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1260	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
beta-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
delta-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Dieldrin	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endosulfan I	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Endosulfan II	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endosulfan Sulfate	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin Aldehyde	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin Ketone	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
gamma-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
gamma-Chlordane	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Heptachlor	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Heptachlor Epoxide	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Methoxychlor	0.50	U		NA	0.50	U		NA	0.50	U		NA	0.50	U
Toxaphene	5.0	U		NA	5.0	U		NA	5.0	U		NA	5.0	U
Dioxin Analysis (pg/L)	D02089				D03897				D03898				D02094	
1,2,3,4,6,7,8-HpCDD	5.6	U		NA	6.3	U		NA	5.0	U		NA	5.3	EMPC
1,2,3,4,6,7,8-HpCDF	3.8	U		NA	3.3	U		NA	2.6	U		NA	1.8	U
1,2,3,4,7,8,9-HpCDF	4.6	U		NA	3.9	U		NA	3.1	U		NA	2.1	U
1,2,3,4,7,8-HxCDD	4.1	U		NA	4.0	U		NA	3.0	U		NA	1.8	U
1,2,3,4,7,8-HxCDF	2.6	U		NA	2.6	U		NA	1.7	U		NA	1.2	U
1,2,3,6,7,8-HxCDD	4.1	U		NA	4.1	U		NA	3.0	U		NA	1.8	U
1,2,3,6,7,8-HxCDF	2.6	U		NA	2.7	U		NA	1.8	U		NA	1.2	U
1,2,3,7,8,9-HxCDD	3.9	U		NA	4.0	U		NA	3.0	U		NA	1.7	U
1,2,3,7,8,9-HxCDF	3.0	U		NA	3.3	U		NA	2.2	U		NA	1.4	U
1,2,3,7,8-PeCDD	3.4	U		NA	3.7	U		NA	2.7	U		NA	1.6	U
1,2,3,7,8-PeCDF	2.2	U		NA	2.9	U		NA	2.0	U		NA	1.1	U
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF	2.6	U		NA	2.6	U		NA	1.7	U		NA	1.3	U
2,3,4,7,8-PeCDF	2.2	U		NA	2.7	U		NA	1.9	U		NA	1.1	U
2,3,7,8-TCDD	2.4	U		NA	5.3	EMPC		NA	4.7	EMPC		NA	4.7	J
2,3,7,8-TCDF	1.9	U		NA	2.4	U		NA	1.6	U		NA	0.80	U
OCDD	19.0	J		NA	19.2	U		NA	14.8	U		NA	52.0	J
OCDF	7.2	U		NA	7.9	U		NA	6.7	U		NA	3.7	U
Total HpCDD	5.6	U		NA	6.3	UJ		NA	5.0	UJ		NA	10.8	EMPC

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-DUP01-01		CM-GW-DUP01-01F		CMS-GW-MW01S-02		CMS-GW-MW01SF-02		CMS-GW-DUP02-02		CMS-GW-DUP02F-02		CM-GW-MW02-01	
Sample Location	MW01		MW01		MW01S		MW01S		MW01S		MW01S		MW02	
Date Sampled	2/21/2001		2/21/2001		8/16/2001		8/16/2001		8/16/2001		8/16/2001		2/22/2001	
QC Identifier	Field Dup. CM-GW-MW01-01		Field Dup. CM-GW-MW01-01F		Field Dup. CMS-GW-MW01S-02		Field Dup. CMS-GW-MW01SF-02		Field Dup. CMS-GW-MW01S-02		Field Dup. CMS-GW-MW01SF-02		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Total HpCDF	4.2	U		NA	3.6	UJ		NA	2.6	UJ		NA	4.0	
Total HxCDD	4.1	U		NA	4.0	UJ		NA	3.0	UJ		NA	1.8	U
Total HxCDF	2.7	U		NA	2.6	UJ		NA	1.6	UJ		NA	1.3	U
Total PeCDD	3.4	U		NA	3.7	UJ		NA	2.7	UJ		NA	1.6	U
Total PeCDF	2.2	U		NA	2.6	UJ		NA	1.9	UJ		NA	1.1	U
Total TCDD	23.6	EMPC		NA	5.3	EMPC		NA	4.7	EMPC		NA	4.7	
Total TCDF	6.7	EMPC		NA	2.4	UJ		NA	1.6	UJ		NA	0.60	U
Toxicity Equivalency		NA		NA	5.3	J		NA	4.7	J		NA		NA
TAL Metal Analysis (UG/L)	MA04P9		MA04Q2		MA0A32		MA0A33		MA0A34		MA0A35		MA04Q9	
Aluminum	35.1	U	36.3	U	62.6	J	66.5	J	59.9	J	49.6	J	68.6	U
Antimony	2.5	U	6.6	U	3.7	U	3.7	U	3.7	U	3.7	U	2.5	U
Arsenic	4.5	J	4.2	U	7.1	U	5.7	U	6.3	U	6.4	U	4.2	U
Barium	112		112		32.6		33.5		32.7		30.9		79.3	
Beryllium	0.19	UJ	0.17	UJ	0.10	U	0.10	U	0.10	U	0.10	U	0.23	
Cadmium	0.60	U	0.60	U	0.70	U	0.70	U	0.70	U	0.70	U	0.60	U
Calcium	56300		56100		12200		12600		12300		11700		24700	
Chromium	0.85	UJ	0.50	U	2.2	J	3.6		1.7	J	4.5		1.9	U
Cobalt	3.4		3.6		1.8	U	1.8	U	1.8	U	1.8	U	0.70	U
Copper	0.70	U	0.70	U	2.2	U	2.2	U	2.2	U	2.2	U	0.70	U
Iron	63400		63400		8120		8410		8220		7840		5310	
Lead	1.7	U	1.7	U	2.0	J	1.5	U	1.5	U	1.5	U	1.7	U
Magnesium	4900		4930		893		939		897		861		2010	
Manganese	2460		2450		346		361		351		335		704	
Mercury	0.16	UJ	0.11	U	0.20	U	0.20	U	0.20	U	0.20	U	0.24	U
Nickel	1.3	U	1.3	U	3.0	U	3.0	U	3.0	U	3.0	U	2.5	J
Potassium	5600	J	5550	J	3140	J	3200	J	3170	J	2980	J	2810	J
Selenium	4.8	U	4.8	U	2.2	U	2.2	U	2.2	U	2.2	U	4.8	U
Silver	0.50	U	0.50	U	4.0	U	4.0	U	4.0	U	4.0	U	0.50	U
Sodium	136000		136000		126000	J	129000	J	127000	J	121000	J	65400	
Thallium	6.5	J	6.2	U	5.7	U	5.7	U	5.7	U	5.7	U	6.2	U
Vanadium	2.4		2.1		3.2	U	3.2	U	3.2	U	3.2	U	0.70	U
Zinc	6.2	UJ	6.8	UJ	15.4	J	19.2	U	21.2		12.2	UJ	1.1	UJ
Wet Chemistry Analysis (MG/L)	D02089				D03897				D03898				D02094	
Alkalinity	70.0			NA	120			NA	120			NA	30.0	
Sulfide	6.0	U		NA	4.0			NA	6.0			NA	2.0	
Total Organic Carbon	5.0			NA	15.0			NA	16.0			NA	7.0	

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Sample Number	CM-GW-MW02-01F		CMS-GW-MW02D-02		CMS-GW-MW02DF-02		CMS-GW-MW02M-02		CMS-GW-MW02MF-02		CMS-GW-MW02S-02		CMS-GW-MW02SF-02	
Sample Location	MW02		MW02D		MW02D		MW02M		MW02M		MW02S		MW02S	
Date Sampled	2/22/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Volatile Organic Analysis (UG/L)			A08Y9				A06Y8				A08Z0			
1,1,1-Trichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1,2,2-Tetrachloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1,2-Trichloro-1,2,2-trifluoroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1,2-Trichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1-Dichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1-Dichloroethene		NA	10	U		NA	10	U		NA	10	U		NA
1,2,4-Trichlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dibromo-3-chloropropane		NA		R		NA		R		NA		R		NA
1,2-Dibromoethane		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dichlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dichloropropane		NA	10	UJ		NA	10	UJ		NA	10	UJ		NA
1,3-Dichlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
1,4-Dichlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
2-Butanone		NA	10	UJ		NA	10	UJ		NA	10	UJ		NA
2-Hexanone		NA	10	U		NA	10	U		NA	10	U		NA
4-Methyl-2-Pentanone		NA	10	U		NA	10	U		NA	10	U		NA
Acetone		NA	10	UJ		NA	10	UJ		NA	10	U		NA
Benzene		NA	10	U		NA	10	U		NA	1	J		NA
Bromodichloromethane		NA	10	U		NA	10	U		NA	10	U		NA
Bromoform		NA	10	U		NA	10	U		NA	10	U		NA
Bromomethane		NA	10	U		NA	10	U		NA	10	U		NA
Carbon Disulfide		NA	10	U		NA	10	U		NA	10	U		NA
Carbon Tetrachloride		NA	10	U		NA	10	U		NA	10	U		NA
Chlorobenzene		NA	10	U		NA	10	U		NA	1	J		NA
Chloroethane		NA	10	U		NA	10	U		NA	10	U		NA
Chloroform		NA	10	U		NA	10	U		NA	10	U		NA
Chloromethane		NA	10	U		NA	10	U		NA	10	U		NA
cis-1,2-Dichloroethene		NA	2	J		NA	10	U		NA	10	U		NA
cis-1,3-Dichloropropene		NA	10	U		NA	10	U		NA	10	U		NA
Cyclohexane		NA	10	U		NA	10	U		NA	10	U		NA
Dibromochloromethane		NA	10	U		NA	10	U		NA	10	U		NA
Dichlorodifluoromethane		NA	10	U		NA	10	U		NA	10	U		NA
Ethylbenzene		NA	10	U		NA	10	U		NA	10	U		NA
Isopropylbenzene		NA	10	U		NA	10	U		NA	10	U		NA
Methyl Acetate		NA	10	U		NA	10	U		NA	10	U		NA
Methyl tert-Butyl Ether		NA	4	J		NA	3	J		NA	10	U		NA
Methylcyclohexane		NA	10	U		NA	10	U		NA	10	U		NA
Methylene Chloride		NA	10	U		NA	10	U		NA	10	U		NA
Styrene		NA	10	U		NA	10	U		NA	10	U		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-MW02-01F		CMS-GW-MW02D-02		CMS-GW-MW02DF-02		CMS-GW-MW02M-02		CMS-GW-MW02MF-02		CMS-GW-MW02S-02		CMS-GW-MW02SF-02	
Sample Location	MW02		MW02D		MW02D		MW02M		MW02M		MW02S		MW02S	
Date Sampled	2/22/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001	
QC Identifier	None		None		None		None		None		None		None	
Filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Tetrachloroethene		NA	700	*		NA	110			NA	10	U		NA
Toluene		NA	10	U		NA	10	U		NA	10	U		NA
Total Xylenes		NA	10	U		NA	10	U		NA	10	U		NA
trans-1,2-Dichloroethene		NA	10	U		NA	10	U		NA	10	U		NA
trans-1,3-Dichloropropene		NA	10	U		NA	10	U		NA	10	U		NA
Trichloroethene		NA	27			NA	2	J		NA	10	U		NA
Trichlorofluoromethane		NA	10	U		NA	10	U		NA	10	U		NA
Vinyl Chloride		NA	10	U		NA	10	U		NA	10	U		NA
Semivolatile Organic Analysis (UG/L)			A08Y9				A08Y8				A08Z0			
1,1'-Biphenyl		NA	10	U		NA	10	U		NA	10	U		NA
2,2'-oxybis(1-Chloropropane)		NA	10	U		NA	10	U		NA	10	U		NA
2,4,5-Trichlorophenol		NA	25	U		NA	25	U		NA	25	U		NA
2,4,6-Trichlorophenol		NA	10	U		NA	10	U		NA	10	U		NA
2,4-Dichlorophenol		NA	10	U		NA	10	U		NA	10	U		NA
2,4-Dimethylphenol		NA	10	U		NA	10	U		NA	10	U		NA
2,4-Dinitrophenol		NA	25	U		NA	25	U		NA	25	U		NA
2,4-Dinitrotoluene		NA	10	U		NA	10	U		NA	10	U		NA
2,6-Dinitrotoluene		NA	10	U		NA	10	U		NA	10	U		NA
2-Chloronaphthalene		NA	10	U		NA	10	U		NA	10	U		NA
2-Chlorophenol		NA	10	U		NA	10	U		NA	10	U		NA
2-Methylnaphthalene		NA	10	U		NA	10	U		NA	10	U		NA
2-Methylphenol		NA	10	U		NA	10	U		NA	10	U		NA
2-Nitroaniline		NA	25	U		NA	25	U		NA	25	U		NA
2-Nitrophenol		NA	10	U		NA	10	U		NA	10	U		NA
3,3'-Dichlorobenzidine		NA	10	U		NA	10	U		NA	10	U		NA
3-Nitroaniline		NA	25	U		NA	25	U		NA	25	U		NA
4,6-Dinitro-2-methylphenol		NA	25	U		NA	25	U		NA	25	U		NA
4-Bromophenyl-phenylether		NA	10	U		NA	10	U		NA	10	U		NA
4-Chloro-3-methylphenol		NA	10	U		NA	10	U		NA	10	U		NA
4-Chloroaniline		NA	10	U		NA	10	U		NA	10	U		NA
4-Chlorophenyl-phenylether		NA	10	U		NA	10	U		NA	10	U		NA
4-Methylphenol		NA	10	U		NA	10	U		NA	10	U		NA
4-Nitroaniline		NA	25	U		NA	25	U		NA	25	U		NA
4-Nitrophenol		NA	25	U		NA	25	U		NA	25	U		NA
Acenaphthene		NA	10	U		NA	10	U		NA	10	U		NA
Acenaphthylene		NA	10	U		NA	10	U		NA	10	U		NA
Acetophenone		NA	10	U		NA	10	U		NA	10	U		NA
Anthracene		NA	10	UJ		NA	10	U		NA	10	U		NA
Atrazine		NA	10	UJ		NA	10	UJ		NA	10	UJ		NA
Benzaldehyde		NA	10	UJ		NA	10	UJ		NA	10	UJ		NA
Benzo(a)anthracene		NA	10	U		NA	10	U		NA	10	U		NA

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GROUN[illegible]ATER RESULTS
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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-MW02-01F		CMS-GW-MW02D-02		CMS-GW-MW02DF-02		CMS-GW-MW02M-02		CMS-GW-MW02MF-02		CMS-GW-MW02S-02		CMS-GW-MW02SF-02	
Sample Location	MW02		MW02D		MW02D		MW02M		MW02M		MW02S		MW02S	
Date Sampled	2/22/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Benzo(a)pyrene		NA	10	U		NA	10	U		NA	10	U		NA
Benzo(b)fluoranthene		NA	10	U		NA	10	U		NA	10	U		NA
Benzo(g,h,i)perylene		NA	10	U		NA	10	U		NA	10	U		NA
Benzo(k)fluoranthene		NA	10	U		NA	10	U		NA	10	U		NA
Bis(2-Chloroethoxy)methane		NA	10	U		NA	10	U		NA	10	U		NA
Bis(2-Chloroethyl)ether		NA	10	U		NA	10	U		NA	10	U		NA
bis(2-Ethylhexyl)phthalate		NA	10	U		NA	10	U		NA	10	U		NA
Butylbenzylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Caprolactam		NA	10	U		NA	10	U		NA	10	U		NA
Carbazole		NA	10	U		NA	10	U		NA	10	U		NA
Chrysene		NA	10	U		NA	10	U		NA	10	U		NA
Di-n-Butylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Di-n-octylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Dibenzo(a,h)anthracene		NA	10	U		NA	10	U		NA	10	U		NA
Dibenzofuran		NA	10	U		NA	10	U		NA	10	U		NA
Diethylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Dimethylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Fluoranthene		NA	10	U		NA	10	U		NA	10	U		NA
Fluorene		NA	10	U		NA	10	U		NA	10	U		NA
Hexachlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
Hexachlorobutadiene		NA	10	U		NA	10	U		NA	10	U		NA
Hexachlorocyclopentadiene		NA	10	U		NA	10	U		NA	10	U		NA
Hexachloroethane		NA	10	U		NA	10	U		NA	10	U		NA
Indeno(1,2,3-cd)pyrene		NA	10	U		NA	10	U		NA	10	U		NA
Isophorone		NA	10	U		NA	10	U		NA	10	U		NA
N-Nitroso-di-n-propylamine		NA	10	U		NA	10	U		NA	10	U		NA
N-Nitroso-diphenylamine		NA	10	U		NA	10	U		NA	10	U		NA
Naphthalene		NA	10	U		NA	10	U		NA	10	U		NA
Nitrobenzene		NA	10	U		NA	10	U		NA	10	U		NA
Pentachlorophenol		NA	25	U		NA	25	U		NA	25	U		NA
Phenanthrene		NA	10	U		NA	10	U		NA	10	U		NA
Phenol		NA	10	U		NA	10	U		NA	10	U		NA
Pyrene		NA	10	U		NA	10	U		NA	10	U		NA
Pesticide/PCB Analysis (UG/L)			A08Y8				A08Y8				A06Z0			
4,4'-DDD		NA	0.10	UJ		NA	0.10	U		NA	0.10	U		NA
4,4'-DDE		NA	0.10	UJ		NA	0.10	U		NA	0.10	U		NA
4,4'-DDT		NA	0.10	UJ		NA	0.10	U		NA	0.10	U		NA
Aldrin		NA	0.050	UJ		NA	0.050	U		NA	0.050	U		NA
alpha-BHC		NA	0.050	UJ		NA	0.050	U		NA	0.050	U		NA
alpha-Chlordane		NA	0.050	UJ		NA	0.050	U		NA	0.050	U		NA
Aroclor-1016		NA	1.0	UJ		NA	1.0	U		NA	1.0	U		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-MW02-01F		CMS-GW-MW02D-02		CMS-GW-MW02DF-02		CMS-GW-MW02M-02		CMS-GW-MW02MF-02		CMS-GW-MW02S-02		CMS-GW-MW02SF-02	
Sample Location	MW02		MW02D		MW02D		MW02M		MW02M		MW02S		MW02S	
Date Sampled	2/22/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Aroclor-1221		NA	2.0	UJ		NA	2.0	U		NA	2.0	U		NA
Aroclor-1232		NA	1.0	UJ		NA	1.0	U		NA	1.0	U		NA
Aroclor-1242		NA	1.0	UJ		NA	1.0	U		NA	1.0	U		NA
Aroclor-1248		NA	1.0	UJ		NA	1.0	U		NA	1.0	U		NA
Aroclor-1254		NA	1.0	UJ		NA	1.0	U		NA	1.0	U		NA
Aroclor-1260		NA	1.0	UJ		NA	1.0	U		NA	1.0	U		NA
beta-BHC		NA	0.050	UJ		NA	0.050	U		NA	0.050	U		NA
delta-BHC		NA	0.050	UJ		NA	0.050	U		NA	0.050	U		NA
Dieldrin		NA	0.10	UJ		NA	0.10	U		NA	0.10	U		NA
Endosulfan I		NA	0.050	UJ		NA	0.050	U		NA	0.050	U		NA
Endosulfan II		NA	0.10	UJ		NA	0.10	U		NA	0.10	U		NA
Endosulfan Sulfate		NA	0.10	UJ		NA	0.10	U		NA	0.10	U		NA
Endrin		NA	0.10	UJ		NA	0.10	U		NA	0.10	U		NA
Endrin Aldehyde		NA	0.10	UJ		NA	0.10	U		NA	0.10	U		NA
Endrin Ketone		NA	0.10	UJ		NA	0.10	U		NA	0.10	U		NA
gamma-BHC		NA	0.050	UJ		NA	0.050	U		NA	0.050	U		NA
gamma-Chlordane		NA	0.050	UJ		NA	0.050	U		NA	0.050	U		NA
Heptachlor		NA	0.050	UJ		NA	0.050	U		NA	0.050	U		NA
Heptachlor Epoxide		NA	0.050	UJ		NA	0.050	U		NA	0.050	U		NA
Methoxychlor		NA	0.50	UJ		NA	0.50	U		NA	0.50	U		NA
Toxaphene		NA	5.0	UJ		NA	5.0	U		NA	5.0	U		NA
Dioxin Analysis (pg/L)			D03884				D03883				D03885			
1,2,3,4,6,7,8-HpCDD		NA	2.3	U		NA	3.2	U		NA	4.2	U		NA
1,2,3,4,6,7,8-HpCDF		NA	1.1	U		NA	1.4	U		NA	2.2	U		NA
1,2,3,4,7,8,9-HpCDF		NA	1.2	U		NA	1.6	U		NA	2.8	U		NA
1,2,3,4,7,8-HxCDD		NA	1.3	U		NA	1.6	U		NA	2.5	U		NA
1,2,3,4,7,8-HxCDF		NA	0.57	U		NA	0.67	EMPC		NA	1.8	U		NA
1,2,3,6,7,8-HxCDD		NA	1.3	U		NA	1.7	U		NA	2.6	U		NA
1,2,3,6,7,8-HxCDF		NA	0.80	U		NA	1.1	U		NA	1.8	U		NA
1,2,3,7,8,9-HxCDD		NA	1.2	U		NA	1.6	U		NA	2.5	U		NA
1,2,3,7,8,9-HxCDF		NA	0.90	U		NA	1.3	U		NA	2.2	U		NA
1,2,3,7,8-PeCDD		NA	0.80	U		NA	1.2	U		NA	1.9	U		NA
1,2,3,7,8-PeCDF		NA	0.70	U		NA	1.0	U		NA	1.6	U		NA
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF		NA	0.70	U		NA	1.1	U		NA	1.8	U		NA
2,3,4,7,8-PeCDF		NA	0.60	U		NA	0.60	J		NA	1.5	U		NA
2,3,7,8-TCDD		NA	1.2	J		NA	1.2	U		NA	1.8	U		NA
2,3,7,8-TCDF		NA	0.60	U		NA	0.90	U		NA	1.8	U		NA
OCDD		NA	3.2	EMPC		NA	3.2	U		NA	13.5	U		NA
OCDF		NA	2.7	U		NA	3.8	U		NA	3.8	U		NA
Total HpCDD		NA	2.3	UJ		NA	3.2	UJ		NA	4.2	UJ		NA

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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-MW02-01F		CMS-GW-MW02D-02		CMS-GW-MW02DF-02		CMS-GW-MW02M-02		CMS-GW-MW02MF-02		CMS-GW-MW02S-02		CMS-GW-MW02SF-02	
Sample Location	MW02		MW02D		MW02D		MW02M		MW02M		MW02S		MW02S	
Date Sampled	2/22/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001		8/13/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Total HpCDF		NA	1.2	UJ		NA	1.5	UJ		NA	2.5	UJ		NA
Total HxCDD		NA	18.5	EMPC		NA	17.4	EMPC		NA	2.5	UJ		NA
Total HxCDF		NA	0.57	UJ		NA	0.67	EMPC		NA	1.9	UJ		NA
Total PeCDD		NA	5.9	EMPC		NA	3.8	EMPC		NA	1.9	UJ		NA
Total PeCDF		NA	0.70	UJ		NA	0.60	J		NA	1.5	UJ		NA
Total TCDD		NA	4.4	EMPC		NA	2.3	EMPC		NA	1.8	UJ		NA
Total TCDF		NA	3.1	EMPC		NA	4.1	EMPC		NA	1.6	UJ		NA
Toxicity Equivalency		NA	1.2	J		NA	0.30	J		NA	0.00	U		NA
TAL Metal Analysis (UG/L)	MA04R4		MA0A05		MA0A14		MA0A04		MA0A13		MA0A06		MA0A15	
Aluminum	41.4	U	93.7		100		45.7	U	45.7	U	45.7	U	45.7	U
Antimony	2.5	U	3.7	U	3.7	U	3.7	U	3.7	U	3.7	U	3.7	U
Arsenic	4.2	U	2.8	UJ	2.6	U	2.6	U	2.6	U	2.6	U	2.6	U
Barium	80.4		32.1	U	31.9		55.0	U	51.9	U	168		171	
Beryllium	0.27	U	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Cadmium	0.80	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U
Calcium	24200		36900		38300		36700		34200		47700		47800	
Chromium	0.50	U	1.3	U	1.3	U	5.4	U	1.3	U	1.5	UJ	1.3	U
Cobalt	0.70	U	3.7	U	3.2	J	34.0		14.4		1.8	U	1.8	U
Copper	0.70	U	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U	5.3	
Iron	4950		191		144		60.4	U	13.1	U	9960		10000	
Lead	1.7	U	1.5	UJ	1.5	U	1.5	UJ	2.2	UJ	1.5	UJ	1.8	UJ
Magnesium	1950		4360		4290		5330		4960		4130		4170	
Manganese	654		672		666		1500		1410		1450		1460	
Mercury	0.24	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	1.6	J	9.5		9.4		15.0		10.2		3.0	U	3.0	U
Potassium	2740	J	6220	J	5990	J	7440	J	6960	J	4410	J	4470	J
Selenium	4.8	U	2.2	UJ	2.2	U	2.5	UJ	2.2	UJ	2.2	UJ	2.2	UJ
Silver	0.50	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Sodium	67300		96800		91000	J	111000		104000		61300		61600	
Thallium	6.2	U	5.7	U	5.7	U	5.7	U	5.7	U	5.7	U	5.7	U
Vanadium	0.70	U	3.2	U	3.2	U	3.2	U	3.2	U	3.2	U	3.2	U
Zinc	1.1	UJ	11.0	UJ	19.0	U	11.3	UJ	10.1	UJ	16.0	UJ	35.2	UJ
Wet Chemistry Analysis (MG/L)			D03864				D03863				D03865			
Alkalinity		NA	52.0			NA	38.0			NA	56.0			NA
Sulfide		NA	5.4			NA	4.0	U		NA	4.0	U		NA
Total Organic Carbon		NA	2.0			NA	5.0			NA	10.0			NA

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GROUNDWATER RESULTS
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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-MW03-01		CM-GW-MW03-01F		CMS-GW-MW03S-02		CMS-MW03S-02		CMS-GW-MW03SF-02		CMS-GW-MW04B-02		CMS-GW-MW04BF-02	
Sample Location	MW03		MW03		MW03S		MW03S		MW03S		MW04B		MW04B	
Date Sampled	2/21/2001		2/21/2001		8/16/2001		8/16/2001		8/16/2001		8/14/2001		8/14/2001	
QC Identifier	None		None		None		None		None		None		None	
Filtered	Unfiltered		Filtered		Unfiltered		Unfiltered		Filtered		Unfiltered		Filtered	
Volatile Organic Analysis (UG/L)	A0457						A0909				A05Z4			
1,1,1-Trichloroethane	10	U		NA		NA	10	U		NA	10	U		NA
1,1,2,2-Tetrachloroethane	10	U		NA		NA	10	U		NA	10	U		NA
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U		NA		NA	10	UJ		NA	10	U		NA
1,1,2-Trichloroethane	10	U		NA		NA	10	U		NA	10	U		NA
1,1-Dichloroethane	10	U		NA		NA	10	U		NA	10	U		NA
1,1-Dichloroethene	10	U		NA		NA	10	UJ		NA	10	U		NA
1,2,4-Trichlorobenzene	10	U		NA		NA	10	U		NA	10	U		NA
1,2-Dibromo-3-chloropropane	10	U		NA		NA	10	U		NA		R		NA
1,2-Dibromoethane	10	U		NA		NA	10	U		NA	10	U		NA
1,2-Dichlorobenzene	10	U		NA		NA	10	U		NA	10	U		NA
1,2-Dichloroethane	10	U		NA		NA	10	U		NA	10	U		NA
1,2-Dichloropropane	10	U		NA		NA	10	U		NA	10	UJ		NA
1,3-Dichlorobenzene	10	U		NA		NA	10	U		NA	10	U		NA
1,4-Dichlorobenzene	10	U		NA		NA	10	U		NA	10	U		NA
2-Butanone	10	U		NA		NA	10	U		NA	10	UJ		NA
2-Hexanone	10	U		NA		NA	10	U		NA	10	U		NA
4-Methyl-2-Pentanone	10	U		NA		NA	10	U		NA	10	U		NA
Acetone	24	U		NA		NA	10	UJ		NA	10	UJ		NA
Benzene	10	U		NA		NA	10	U		NA	10	U		NA
Bromodichloromethane	10	U		NA		NA	10	U		NA	10	U		NA
Bromoform	10	U		NA		NA	10	U		NA	10	U		NA
Bromomethane	10	U		NA		NA	10	UJ		NA	10	U		NA
Carbon Disulfide	10	U		NA		NA	10	UJ		NA	10	U		NA
Carbon Tetrachloride	10	U		NA		NA	10	U		NA	10	U		NA
Chlorobenzene	10	U		NA		NA	10	U		NA	10	U		NA
Chloroethane	10	UJ		NA		NA	10	U		NA	10	U		NA
Chloroform	10	U		NA		NA	10	U		NA	10	U		NA
Chloromethane	10	UJ		NA		NA	10	U		NA	10	U		NA
cis-1,2-Dichloroethene	10	U		NA		NA	10	UJ		NA	10	U		NA
cis-1,3-Dichloropropene	10	U		NA		NA	10	U		NA	10	U		NA
Cyclohexane	10	U		NA		NA	10	U		NA	10	U		NA
Dibromochloromethane	10	U		NA		NA	10	U		NA	10	U		NA
Dichlorodifluoromethane	10	U		NA		NA	10	UJ		NA	10	U		NA
Ethylbenzene	10	U		NA		NA	10	U		NA	10	U		NA
Isopropylbenzene	10	U		NA		NA	10	U		NA	10	U		NA
Methyl Acetate	10	U		NA		NA	10	UJ		NA	10	U		NA
Methyl tert-Butyl Ether	11			NA		NA	10	UJ		NA	4	J		NA
Methylcyclohexane	10	U		NA		NA	10	U		NA	10	U		NA
Methylene Chloride	10	U		NA		NA	10	UJ		NA	10	U		NA
Styrene	10	U		NA		NA	10	U		NA	10	U		NA

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GROUNDWATER RESULTS
NOVEMBER 2000 - OCTOBER 2001
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-MW03-01		CM-GW-MW03-01F		CMS-GW-MW03S-02		CMS-MW03S-02		CMS-GW-MW03SF-02		CMS-GW-MW04B-02		CMS-GW-MW04BF-02	
Sample Location	MW03		MW03		MW03S		MW03S		MW03S		MW04B		MW04B	
Date Sampled	2/21/2001		2/21/2001		8/16/2001		8/16/2001		8/16/2001		8/14/2001		8/14/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Filtered		Unfiltered		Unfiltered		Filtered		Unfiltered		Filtered	
Tetrachloroethene	10	U		NA		NA	10	U		NA	63			NA
Toluene	10	U		NA		NA	10	U		NA	10	U		NA
Total Xylenes	10	U		NA		NA	10	U		NA	10	U		NA
trans-1,2-Dichloroethene	10	U		NA		NA	10	UJ		NA	10	U		NA
trans-1,3-Dichloropropene	10	U		NA		NA	10	U		NA	10	U		NA
Trichloroethene	10	U		NA		NA	10	U		NA	0.9	J		NA
Trichlorofluoromethane	10	U		NA		NA	10	U		NA	10	U		NA
Vinyl Chloride	10	UJ		NA		NA	10	U		NA	10	U		NA
Semivolatile Organic Analysis (UG/L)	A0457						A0909				A08Z4			
1,1'-Biphenyl	10	U		NA		NA	10	U		NA	10	U		NA
2,2'-oxybis(1-Chloropropene)	10	U		NA		NA	10	U		NA	10	U		NA
2,4,5-Trichlorophenol	25	U		NA		NA	25	U		NA	25	U		NA
2,4,6-Trichlorophenol	10	U		NA		NA	10	U		NA	10	U		NA
2,4-Dichlorophenol	10	U		NA		NA	10	U		NA	10	U		NA
2,4-Dimethylphenol	10	U		NA		NA	10	U		NA	10	U		NA
2,4-Dinitrophenol	25	UJ		NA		NA	25	U		NA	25	U		NA
2,4-Dinitrotoluene	10	U		NA		NA	10	U		NA	10	U		NA
2,6-Dinitrotoluene	10	U		NA		NA	10	U		NA	10	U		NA
2-Chloronaphthalene	10	U		NA		NA	10	U		NA	10	U		NA
2-Chlorophenol	10	U		NA		NA	10	U		NA	10	U		NA
2-Methylnaphthalene	10	U		NA		NA	10	U		NA	10	U		NA
2-Methylphenol	10	U		NA		NA	10	U		NA	10	U		NA
2-Nitroaniline	25	U		NA		NA	25	U		NA	25	U		NA
2-Nitrophenol	10	U		NA		NA	10	U		NA	10	U		NA
3,3'-Dichlorobenzidine	10	U		NA		NA	10	U		NA	10	U		NA
3-Nitroaniline	25	U		NA		NA	25	U		NA	25	U		NA
4,6-Dinitro-2-methylphenol	25	U		NA		NA	25	U		NA	25	U		NA
4-Bromophenyl-phenylether	10	U		NA		NA	10	U		NA	10	U		NA
4-Chloro-3-methylphenol	10	U		NA		NA	10	U		NA	10	U		NA
4-Chloroaniline	10	U		NA		NA	10	U		NA	10	U		NA
4-Chlorophenyl-phenylether	10	U		NA		NA	10	U		NA	10	U		NA
4-Methylphenol	10	U		NA		NA	10	U		NA	10	U		NA
4-Nitroaniline	25	U		NA		NA	25	U		NA	25	U		NA
4-Nitrophenol	25	U		NA		NA	25	U		NA	25	U		NA
Acenaphthene	10	U		NA		NA	10	U		NA	10	U		NA
Acenaphthylene	10	U		NA		NA	10	U		NA	10	U		NA
Acetophenone	10	U		NA		NA	10	U		NA	10	U		NA
Anthracene	10	U		NA		NA	10	U		NA	10	UJ		NA
Atrazine	10	U		NA		NA	10	UJ		NA	10	UJ		NA
Benzaldehyde	10	UJ		NA		NA	10	UJ		NA	10	UJ		NA
Benzo(a)anthracene	10	U		NA		NA	10	U		NA	10	U		NA

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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-MW03-01		CM-GW-MW03-01F		CMS-GW-MW03S-02		CMS-MW03S-02		CMS-GW-MW03SF-02		CMS-GW-MW04B-02		CMS-GW-MW04BF-02	
Sample Location	MW03		MW03		MW03S		MW03S		MW03S		MW04B		MW04B	
Date Sampled	2/21/2001		2/21/2001		8/16/2001		8/16/2001		8/16/2001		8/14/2001		8/14/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Filtered		Unfiltered		Unfiltered		Filtered		Unfiltered		Filtered	
Benzo(a)pyrene	10	U		NA		NA	10	U		NA	10	U		NA
Benzo(b)fluoranthene	10	U		NA		NA	10	U		NA	10	U		NA
Benzo(g,h,i)perylene	10	U		NA		NA	10	U		NA	10	U		NA
Benzo(k)fluoranthene	10	U		NA		NA	10	U		NA	10	U		NA
Bis(2-Chloroethoxy)methane	10	U		NA		NA	10	U		NA	10	U		NA
Bis(2-Chloroethyl)ether	10	U		NA		NA	10	U		NA	10	U		NA
bis(2-Ethylhexyl)phthalate	1	J		NA		NA	10	U		NA	10	U		NA
Butylbenzylphthalate	10	U		NA		NA	10	U		NA	10	U		NA
Caprolactam	10	U		NA		NA	10	U		NA	10	U		NA
Carbazole	10	U		NA		NA	10	U		NA	10	U		NA
Chrysene	10	U		NA		NA	10	U		NA	10	U		NA
Di-n-Butylphthalate	10	U		NA		NA	10	U		NA	10	U		NA
Di-n-octylphthalate	10	U		NA		NA	10	U		NA	10	U		NA
Dibenzo(a,h)anthracene	10	U		NA		NA	10	U		NA	10	U		NA
Dibenzofuran	10	U		NA		NA	10	U		NA	10	U		NA
Diethylphthalate	10	U		NA		NA	10	U		NA	10	U		NA
Dimethylphthalate	10	U		NA		NA	10	U		NA	10	U		NA
Fluoranthene	10	U		NA		NA	10	U		NA	10	U		NA
Fluorene	10	U		NA		NA	10	U		NA	10	U		NA
Hexachlorobenzene	10	U		NA		NA	10	U		NA	10	U		NA
Hexachlorobutadiene	10	U		NA		NA	10	U		NA	10	U		NA
Hexachlorocyclopentadiene	10	U		NA		NA	10	U		NA	10	U		NA
Hexachloroethane	10	U		NA		NA	10	U		NA	10	U		NA
Indeno(1,2,3-cd)pyrene	10	U		NA		NA	10	U		NA	10	U		NA
Isophorone	10	U		NA		NA	10	U		NA	10	U		NA
N-Nitroso-di-n-propylamine	10	U		NA		NA	10	U		NA	10	U		NA
N-Nitroso-diphenylamine	10	U		NA		NA	10	U		NA	10	U		NA
Naphthalene	10	U		NA		NA	10	U		NA	10	U		NA
Nitrobenzene	10	U		NA		NA	10	U		NA	10	U		NA
Pentachlorophenol	25	UJ		NA		NA	25	U		NA	25	U		NA
Phenanthrene	10	U		NA		NA	10	U		NA	10	U		NA
Phenol	10	U		NA		NA	10	U		NA	10	U		NA
Pyrene	10	U		NA		NA	10	U		NA	10	U		NA
Pesticide/PCB Analysis (UGR/L)	A0457						A0909				A08Z4			
4,4'-DDD	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
4,4'-DDE	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
4,4'-DDT	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
Aldrin	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
alpha-BHC	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
alpha-Chlordane	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
Aroclor-1016	1.0	U		NA		NA	1.0	U		NA	1.0	U		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-MW03-01		CM-GW-MW03-01F		CMS-GW-MW03S-02		CMS-MW03S-02		CMS-GW-MW03SF-02		CMS-GW-MW04B-02		CMS-GW-MW04BF-02	
Sample Location	MW03		MW03		MW03S		MW03S		MW03S		MW04B		MW04B	
Date Sampled	2/21/2001		2/21/2001		8/16/2001		8/16/2001		8/16/2001		8/14/2001		8/14/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Filtered		Unfiltered		Unfiltered		Filtered		Unfiltered		Filtered	
Aroclor-1221	2.0	U		NA		NA	2.0	U		NA	2.0	U		NA
Aroclor-1232	1.0	U		NA		NA	1.0	U		NA	1.0	U		NA
Aroclor-1242	1.0	U		NA		NA	1.0	U		NA	1.0	U		NA
Aroclor-1248	1.0	U		NA		NA	1.0	U		NA	1.0	U		NA
Aroclor-1254	1.0	U		NA		NA	1.0	U		NA	1.0	U		NA
Aroclor-1260	1.0	U		NA		NA	1.0	U		NA	1.0	U		NA
beta-BHC	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
delta-BHC	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
Dieldrin	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
Endosulfan I	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
Endosulfan II	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
Endosulfan Sulfate	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
Endrin	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
Endrin Aldehyde	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
Endrin Ketone	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
gamma-BHC	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
gamma-Chlordane	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
Heptachlor	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
Heptachlor Epoxide	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
Methoxychlor	0.50	U		NA		NA	0.50	U		NA	0.50	U		NA
Toxaphene	5.0	U		NA		NA	5.0	U		NA	5.0	U		NA
Dioxin Analysis (pg/L)	D02091				D03900						D03889			
1,2,3,4,6,7,8-HpCDD	6.0	U		NA	8.4	U		NA		NA	4.0	U		NA
1,2,3,4,6,7,8-HpCDF	3.9	U		NA	3.9	U		NA		NA	2.3	U		NA
1,2,3,4,7,8,9-HpCDF	4.6	U		NA	4.9	U		NA		NA	2.8	U		NA
1,2,3,4,7,8-HxCDD	3.9	U		NA	5.3	U		NA		NA	2.5	U		NA
1,2,3,4,7,8-HxCDF	2.7	U		NA	3.3	U		NA		NA	1.7	U		NA
1,2,3,6,7,8-HxCDD	4.0	U		NA	5.4	U		NA		NA	2.6	U		NA
1,2,3,6,7,8-HxCDF	2.6	U		NA	3.4	U		NA		NA	1.7	U		NA
1,2,3,7,8,9-HxCDD	3.8	U		NA	5.3	U		NA		NA	2.5	U		NA
1,2,3,7,8,9-HxCDF	3.0	U		NA	4.2	U		NA		NA	2.1	U		NA
1,2,3,7,8-PeCDD	3.5	U		NA	4.9	U		NA		NA	1.6	U		NA
1,2,3,7,8-PeCDF	2.4	U		NA	3.9	U		NA		NA	1.4	U		NA
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF	2.8	U		NA	3.3	U		NA		NA	1.7	U		NA
2,3,4,7,8-PeCDF	2.4	U		NA	3.7	U		NA		NA	1.4	U		NA
2,3,7,8-TCDD	3.6	EMPC		NA	11.3			NA		NA	1.6	U		NA
2,3,7,8-TCDF	1.9	U		NA	3.4	U		NA		NA	1.5	U		NA
OCDD	15.5	J		NA	16.7	EMPC		NA		NA	10.4	U		NA
OCDF	7.2	U		NA	10.7	U		NA		NA	3.7	U		NA
Total HpCDD	6.0	U		NA	8.4	UJ		NA		NA	4.0	UJ		NA

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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-MW03-01		CM-GW-MW03-01F		CMS-GW-MW03S-02		CMS-MW03S-02		CMS-GW-MW03SF-02		CMS-GW-MW04B-02		CMS-GW-MW04BF-02	
Sample Location	MW03		MW03		MW03S		MW03S		MW03S		MW04B		MW04B	
Date Sampled	2/21/2001		2/21/2001		8/16/2001		8/16/2001		8/16/2001		8/14/2001		8/14/2001	
QC Identifier	None		None		None		None		None		None		None	
Filtered	Unfiltered		Filtered		Unfiltered		Unfiltered		Filtered		Unfiltered		Filtered	
Total HpCDF	4.2	U		NA	3.9	UJ		NA		NA	2.5	UJ		NA
Total HxCDD	3.9	U		NA	5.3	UJ		NA		NA	2.5	UJ		NA
Total HxCDF	2.8	U		NA	5.3	UJ		NA		NA	1.8	UJ		NA
Total PeCDD	3.5	U		NA	4.9	UJ		NA		NA	4.6	EMPC		NA
Total PeCDF	2.4	U		NA	3.8	UJ		NA		NA	1.4	UJ		NA
Total TCDD	3.6	EMPC		NA	11.3	UJ		NA		NA	1.6	UJ		NA
Total TCDF	4.1			NA	10.7	UJ		NA		NA	1.5	UJ		NA
Toxicity Equivalency		NA		NA	11.0			NA		NA	0.00	U		NA
TAL Metal Analysis (UG/L)	MA04Q4		MA04Q6		MA0A38				MA0A39		MA0A10		MA0A19	
Aluminum	146	U	66.6	U	118			NA	96.9		45.7	U	45.7	U
Antimony	2.5	U	5.0	U	3.7	U		NA	3.7	U	3.7	U	3.7	U
Arsenic	4.2	U	4.2	U	3.9	UJ		NA	5.3	U	2.6	U	2.6	U
Barium	82.7		100		44.8			NA	44.4		35.7	U	33.9	U
Beryllium	0.16	UJ	0.17	UJ	0.10	U		NA	0.10	U	0.10	U	0.10	U
Cadmium	0.99	J	1.0	J	0.70	U		NA	0.70	U	0.70	U	0.70	U
Calcium	12900		15900		15200			NA	15500		42200		42200	
Chromium	6.6		1.0	U	2.8			NA	2.6		1.3	U	1.3	U
Cobalt	0.85	J	0.70	J	1.8	U		NA	1.8	U	2.7	UJ	1.8	U
Copper	20.2		15.2		50.0			NA	40.1		2.2	U	10.5	
Iron	2580		2180		6830			NA	6850		66.5	U	32.7	U
Lead	12.2		1.7	U	37.0			NA	27.7		1.5	UJ	1.5	UJ
Magnesium	764		896		1110			NA	1140		5130		5100	
Manganese	60.5		63.1		118			NA	121		194		194	
Mercury	0.15	U	0.19	U	0.20	U		NA	0.20	U	0.20	U	0.20	U
Nickel	11.8		10.5		5.0	J		NA	5.3	J	5.2	J	4.3	J
Potassium	8940	J	9080	J	2850	J		NA	2890	J	5270	J	5020	J
Selenium	4.8	U	4.8	U	2.2	U		NA	2.2	U	2.2	UJ	2.2	UJ
Silver	0.50	U	0.50	U	4.0	U		NA	4.0	U	4.0	U	4.0	U
Sodium	371000		378000		55000	J		NA	54800	J	83000		80800	
Thallium	6.2	U	6.2	U	5.7	U		NA	5.7	U	5.7	U	5.7	U
Vanadium	6.4		2.4		38.7			NA	36.2		3.2	U	3.2	U
Zinc	169	J	174	J	54.0			NA	52.9	U	19.5	UJ	17.7	UJ
Wet Chemistry Analysis (MG/L)	D02091				D03900						D03869			
Alkalinity	40.0			NA	100			NA		NA	54.0			NA
Sulfide	1.0	U		NA	4.0	U		NA		NA	4.0	U		NA
Total Organic Carbon	9.0			NA	30.0			NA		NA	2.0			NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW04D-02		CMS-GW-MW04DF-02		CMS-GW-MW04S-02		CMS-GW-MW04SF-02		CMS-GW-DUP1-02		CMS-GW-DUP01F-02		CMS-GW-MW05S-02	
Sample Location	MW04D		MW04D		MW04S		MW04S		MW04S		MW04S		MW05S	
Date Sampled	8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/15/2001	
QC Identifier	None		None		Field Dup. CMS-GW-MW04S-02		Field Dup. CMS-GW-MW04SF-02		Field Dup. CMS-GW-MW04S-02		Field Dup. CMS-GW-MW04SF-02		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Volatile Organic Analysis (UG/L)	A08Z3				A08Z1				A08Z2				A0903	
1,1,1-Trichloroethane	10	U		NA	10	U		NA	10	U		NA	1700	U
1,1,2,2-Tetrachloroethane	10	U		NA	10	U		NA	10	U		NA	1700	U
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U		NA	10	U		NA	10	U		NA	1700	U
1,1,2-Trichloroethane	10	U		NA	10	U		NA	10	U		NA	1700	U
1,1-Dichloroethane	10	U		NA	10	U		NA	10	U		NA	1700	U
1,1-Dichloroethene	10	U		NA	10	U		NA	10	U		NA	1700	UJ
1,2,4-Trichlorobenzene	10	U		NA	10	U		NA	10	U		NA	1700	U
1,2-Dibromo-3-chloropropane		R		NA		R		NA		R		NA	1700	U
1,2-Dibromoethane	10	U		NA	10	U		NA	10	U		NA	1700	U
1,2-Dichlorobenzene	10	U		NA	10	U		NA	10	U		NA	1700	U
1,2-Dichloroethane	10	U		NA	10	U		NA	10	U		NA	1700	U
1,2-Dichloropropene	10	UJ		NA	10	UJ		NA	10	UJ		NA	1700	UJ
1,3-Dichlorobenzene	10	U		NA	10	U		NA	10	U		NA	1700	U
1,4-Dichlorobenzene	10	U		NA	10	U		NA	10	U		NA	1700	U
2-Butanone	10	UJ		NA	10	UJ		NA	10	UJ		NA	1700	U
2-Hexanone	10	U		NA	10	U		NA	10	U		NA	1700	UJ
4-Methyl-2-Pentanone	10	U		NA	10	U		NA	10	U		NA	1700	UJ
Acetone	10	UJ		NA	10	UJ		NA	10	UJ		NA	3300	UJ
Benzene	10	U		NA	2	J		NA	2	J		NA	1700	U
Bromodichloromethane	10	U		NA	10	U		NA	10	U		NA	1700	U
Bromoform	10	U		NA	10	U		NA	10	U		NA	1700	U
Bromomethane	10	U		NA	10	U		NA	10	U		NA	1700	UJ
Carbon Disulfide	10	U		NA	10	U		NA	10	U		NA	1700	U
Carbon Tetrachloride	10	U		NA	10	U		NA	10	U		NA	1700	U
Chlorobenzene	10	U		NA	5	J		NA	5	J		NA	1700	U
Chloroethane	10	U		NA	10	U		NA	10	U		NA	1700	U
Chloroform	10	U		NA	10	U		NA	10	U		NA	1700	U
Chloromethane	10	U		NA	10	U		NA	10	U		NA	1700	U
cis-1,2-Dichloroethene	10	U		NA	7	J		NA	7	J		NA	1200	J
cis-1,3-Dichloropropene	10	U		NA	10	U		NA	10	U		NA	1700	U
Cyclohexane	10	U		NA	10	U		NA	10	U		NA	1700	U
Dibromochloromethane	10	U		NA	10	U		NA	10	U		NA	1700	U
Dichlorodifluoromethane	10	U		NA	10	U		NA	10	U		NA	1700	UJ
Ethylbenzene	10	U		NA	10	U		NA	10	U		NA	1700	U
Isopropylbenzene	10	U		NA	10	U		NA	10	U		NA	1700	U
Methyl Acetate	10	U		NA	10	U		NA	10	U		NA	430	J
Methyl tert-Butyl Ether	4	J		NA	2	J		NA	2	J		NA	1700	U
Methylcyclohexane	10	U		NA	10	U		NA	10	U		NA	1700	U
Methylene Chloride	10	U		NA	10	U		NA	10	U		NA	1700	UJ
Styrene	10	U		NA	10	U		NA	10	U		NA	1700	U

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GROUNDWATER RESULTS
NOVEMBER 2000 - OCTOBER 2001
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW04D-02		CMS-GW-MW04DF-02		CMS-GW-MW04S-02		CMS-GW-MW04SF-02		CMS-GW-DUP1-02		CMS-GW-DUP01F-02		CMS-GW-MW05S-02	
Sample Location	MW04D		MW04D		MW04S		MW04S		MW04S		MW04S		MW05S	
Date Sampled	8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/15/2001	
QC Identifier	None		None		Field Dup. CMS-GW-MW04S-02		Field Dup. CMS-GW-MW04SF-02		Field Dup. CMS-GW-MW04S-02		Field Dup. CMS-GW-MW04SF-02		None	
filtered	*Unfiltered*		*Filtered*		*Unfiltered*		*Filtered*		*Unfiltered*		*Filtered*		*Unfiltered*	
Tetrachloroethene	64			NA	17	U		NA	17	U		NA	61000	*
Toluene	10	U		NA	10	U		NA	10	U		NA	1700	U
Total Xylenes	10	U		NA	10	U		NA	10	U		NA	1700	U
trans-1,2-Dichloroethene	10	U		NA	10	U		NA	10	U		NA	1700	UJ
trans-1,3-Dichloropropene	10	U		NA	10	U		NA	10	U		NA	1700	U
Trichloroethene	1	J		NA	0.8	J		NA	0.8	J		NA	2500	
Trichlorofluoromethane	10	U		NA	10	U		NA	10	U		NA	1700	UJ
Vinyl Chloride	10	U		NA	3	J		NA	3	J		NA	1700	U
Semivolatile Organic Analysis (UG/L)	A06Z3				A06Z1				A08Z2				A0903	
1,1'-Biphenyl	10	U		NA	10	U		NA	10	U		NA	10	U
2,2'-oxybis(1-Chloropropane)	10	U		NA	10	U		NA	10	U		NA	10	U
2,4,5-Trichlorophenol	25	U		NA	25	U		NA	25	U		NA	25	U
2,4,6-Trichlorophenol	10	U		NA	10	U		NA	10	U		NA	2600	*
2,4-Dichlorophenol	10	U		NA	10	U		NA	10	U		NA	60	
2,4-Dimethylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
2,4-Dinitrophenol	25	U		NA	25	U		NA	25	U		NA	25	U
2,4-Dinitrotoluene	10	U		NA	10	U		NA	10	U		NA	10	U
2,6-Dinitrotoluene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Chloronaphthalene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Chlorophenol	10	U		NA	10	U		NA	10	U		NA	10	U
2-Methylnaphthalene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Methylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
2-Nitroaniline	25	U		NA	25	U		NA	25	U		NA	25	U
2-Nitrophenol	10	U		NA	10	U		NA	10	U		NA	10	U
3,3'-Dichlorobenzidine	10	U		NA	10	U		NA	10	U		NA	10	U
3-Nitroaniline	25	U		NA	25	U		NA	25	U		NA	25	U
4,6-Dinitro-2-methylphenol	25	U		NA	25	U		NA	25	U		NA	25	U
4-Bromophenyl-phenylether	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chloro-3-methylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chloroaniline	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chlorophenyl-phenylether	10	U		NA	10	U		NA	10	U		NA	10	U
4-Methylphenol	10	U		NA	10	U		NA	10	U		NA	1	J
4-Nitroaniline	25	U		NA	25	U		NA	25	U		NA	25	U
4-Nitrophenol	25	U		NA	25	U		NA	25	U		NA	25	U
Acenaphthene	10	U		NA	10	U		NA	10	U		NA	10	U
Acenaphthylene	10	U		NA	10	U		NA	10	U		NA	10	U
Acetophenone	10	U		NA	10	U		NA	10	U		NA	10	U
Anthracene	10	U		NA	10	UJ		NA	10	UJ		NA	10	UJ
Atrazine	10	UJ		NA	10	UJ		NA	10	UJ		NA	10	UJ
Benzaldehyde	10	UJ		NA	10	UJ		NA	10	UJ		NA	10	UJ
Benzo(a)anthracene	10	U		NA	10	U		NA	10	U		NA	10	U

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GROUNDWATER RESULTS
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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW04D-02		CMS-GW-MW04DF-02		CMS-GW-MW04S-02		CMS-GW-MW04SF-02		CMS-GW-DUP1-02		CMS-GW-DUP01F-02		CMS-GW-MW05S-02	
Sample Location	MW04D		MW04D		MW04S		MW04S		MW04S		MW04S		MW05S	
Date Sampled	8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/15/2001	
QC Identifier	None		None		Field Dup. CMS-GW-MW04S-02		Field Dup. CMS-GW-MW04SF-02		Field Dup. CMS-GW-MW04S-02		Field Dup. CMS-GW-MW04SF-02		None	
Filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Benzo(a)pyrene	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(b)fluoranthene	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(g,h,i)perylene	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(k)fluoranthene	10	U		NA	10	U		NA	10	U		NA	10	U
Bis(2-Chloroethoxy)methane	10	U		NA	10	U		NA	10	U		NA	10	U
Bis(2-Chloroethyl)ether	10	U		NA	10	U		NA	10	U		NA	10	U
bis(2-Ethylhexyl)phthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Butylbenzylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Caprolactam	10	U		NA	10	U		NA	10	U		NA	10	U
Carbazole	10	U		NA	10	U		NA	10	U		NA	10	U
Chrysene	10	U		NA	10	U		NA	10	U		NA	10	U
Di-n-Butylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Di-n-octylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Dibenzo(a,h)anthracene	10	U		NA	10	U		NA	10	U		NA	10	U
Dibenzofuran	10	U		NA	10	U		NA	10	U		NA	10	U
Diethylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Dimethylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Fluoranthene	10	U		NA	10	U		NA	10	U		NA	10	U
Fluorene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorobutadiene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorocyclopentadiene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
Indeno(1,2,3-cd)pyrene	10	U		NA	10	U		NA	10	U		NA	10	U
Isophorone	10	U		NA	10	U		NA	10	U		NA	10	U
N-Nitroso-di-n-propylamine	10	U		NA	10	U		NA	10	U		NA	10	U
N-Nitroso-diphenylamine	10	U		NA	10	U		NA	10	U		NA	10	U
Naphthalene	10	U		NA	10	U		NA	10	U		NA	11	
Nitrobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
Pentachlorophenol	25	U		NA	25	U		NA	25	U		NA	25	U
Phenanthrene	10	U		NA	10	U		NA	10	U		NA	10	U
Phenol	10	U		NA	10	U		NA	10	U		NA	10	U
Pyrene	10	U		NA	10	U		NA	10	U		NA	10	U
Pesticide/PCB Analysis (UG/L)	A06Z3				A06Z1				A06Z2				A0903	
4,4'-DDD	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
4,4'-DDE	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
4,4'-DDT	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Aldrin	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
alpha-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
alpha-Chlordane	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Aroclor-1016	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U

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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW04D-02		CMS-GW-MW04DF-02		CMS-GW-MW04S-02		CMS-GW-MW04SF-02		CMS-GW-DUP1-02		CMS-GW-DUP01F-02		CMS-GW-MW05S-02	
Sample Location	MW04D		MW04D		MW04S		MW04S		MW04S		MW04S		MW05S	
Date Sampled	8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/15/2001	
QC Identifier	None		None		Field Dup. CMS-GW-MW04S-02		Field Dup. CMS-GW-MW04SF-02		Field Dup. CMS-GW-MW04S-02		Field Dup. CMS-GW-MW04SF-02		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Aroclor-1221	2.0	U		NA	2.0	U		NA	2.0	U		NA	2.0	U
Aroclor-1232	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1242	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1248	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1254	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1260	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
beta-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
delta-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Dieldrin	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endosulfan I	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Endosulfan II	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endosulfan Sulfate	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin Aldehyde	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin Ketone	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
gamma-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
gamma-Chlordane	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Heptachlor	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Heptachlor Epoxide	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Methoxychlor	0.50	U		NA	0.50	U		NA	0.50	U		NA	0.50	U
Toxaphene	5.0	U		NA	5.0	U		NA	5.0	U		NA	5.0	U
Dioxin Analysis (pg/L)	D03888				D03886				D03887				D03894	
1,2,3,4,6,7,8-HpCDD	2.0	U		NA	6.0	U		NA	5.8	U		NA	6.2	U
1,2,3,4,6,7,8-HpCDF	1.0	U		NA	1.6	EMPC		NA	3.4	EMPC		NA	3.4	U
1,2,3,4,7,8,9-HpCDF	2.0	EMPC		NA	3.5	U		NA	1.7	U		NA	4.1	U
1,2,3,4,7,8-HxCDD	1.2	U		NA	3.1	U		NA	5.8	EMPC		NA	3.7	U
1,2,3,4,7,8-HxCDF	2.5	EMPC		NA	2.2	U		NA	3.7	U		NA	2.9	U
1,2,3,6,7,8-HxCDD	1.2	U		NA	3.2	U		NA	6.6	EMPC		NA	3.8	U
1,2,3,6,7,8-HxCDF	2.4	U		NA	2.2	U		NA	2.5	EMPC		NA	1.6	EMPC
1,2,3,7,8,9-HxCDD	3.6	EMPC		NA	3.1	U		NA	5.1	J		NA	3.7	U
1,2,3,7,8,9-HxCDF	4.0	J		NA	2.7	U		NA	2.5	J		NA	3.0	EMPC
1,2,3,7,8-PeCDD	3.2	J		NA	2.3	U		NA	3.2	J		NA	202	
1,2,3,7,8-PeCDF	3.6	EMPC		NA	1.8	U		NA	3.9	J		NA	2.3	U
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA		NA		NA	270	J
2,3,4,6,7,8-HxCDF	3.0	EMPC		NA	2.2	U		NA	3.4	J		NA	3.1	J
2,3,4,7,8-PeCDF	3.5	J		NA	1.6	U		NA	2.8	EMPC		NA	2.2	U
2,3,7,8-TCDD	3.9	J		NA	2.0	U		NA	1.4	U		NA	4180	J
2,3,7,8-TCDF	0.80	U		NA	1.6	U		NA	0.90	U		NA	9.3	J
OCDD	21.0	U		NA	9.9	U		NA	9.7	U		NA	10.2	EMPC
OCDF	5.1	EMPC		NA	5.7	U		NA	7.0	EMPC		NA	9.3	U
Total HpCDD	7.7	EMPC		NA	6.0	UJ		NA	5.8	UJ		NA	6.2	UJ

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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW04D-02		CMS-GW-MW04DF-02		CMS-GW-MW04S-02		CMS-GW-MW04SF-02		CMS-GW-DUP1-02		CMS-GW-DUP01F-02		CMS-GW-MW05S-02	
Sample Location	MW04D		MW04D		MW04S		MW04S		MW04S		MW04S		MW05S	
Date Sampled	8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/14/2001		8/15/2001	
QC Identifier	None		None		Field Dup. CMS-GW-MW04S-02		Field Dup. CMS-GW-MW04SF-02		Field Dup. CMS-GW-MW04S-02		Field Dup. CMS-GW-MW04SF-02		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Total HpCDF	4.1	EMPC		NA	1.6	EMPC		NA	3.4	EMPC		NA	4.2	EMPC
Total HxCDD	8.6	EMPC		NA	3.1	UJ		NA	45.6	EMPC		NA	8.2	EMPC
Total HxCDF	11.6	EMPC		NA	2.3	UJ		NA	12.0	EMPC		NA	99.2	J
Total PeCDD	6.9	UJ		NA	2.3	UJ		NA	5.7	EMPC		NA	3940	J
Total PeCDF	3.5	J		NA	1.6	UJ		NA	6.9	J		NA	1140	J
Total TCDD	3.9	UJ		NA	2.0	UJ		NA	1.4	UJ		NA	4460	J
Total TCDF	0.80	UJ		NA	1.6	UJ		NA	0.90	UJ		NA	2710	J
Toxicity Equivalency	10.0	J		NA	0.00	U		NA	7.14	J		NA	4400	J
TAL Metal Analysis (UG/L)	MA0A09		MA0A18		MA0A07		MA0A16		MA0A08		MA0A17		MA0A26	
Aluminum	80.1	J	45.7	U	45.7	U	45.7	U	45.7	U	45.7	U	508	
Antimony	3.7	U	3.7	U	3.7	U	3.7	U	3.7	U	3.7	U	3.7	U
Arsenic	2.6	U	2.6	U	2.6	U	2.6	U	3.7	UJ	2.6	U	4.4	UJ
Barium	56.0	U	52.2	U	51.6	U	53.0	U	55.1	U	52.1	U	88.8	
Beryllium	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.12	UJ
Cadmium	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U
Calcium	35100		34600		29900		29900		31100		30400		27000	
Chromium	1.3	U	1.3	U	1.3	U	1.8	UJ	1.3	U	1.6	UJ	12.9	
Cobalt	1.8	U	1.8	U	12.6	U	13.3	U	16.0		9.9	U	35.6	
Copper	9.9		5.5		18.4		9.1		5.2		2.2	U	4.8	
Iron	182		52.9	U	3580		4070		3540		4150		329	
Lead	1.5	UJ	1.5	UJ	1.5	UJ	1.5	UJ	1.5	UJ	1.5	UJ	1.5	U
Magnesium	5060		4960		4220		4200		4370		4250		1810	
Manganese	337		322		2230		2280		2290		2350		593	
Mercury	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	8.2		7.3		3.0	U	3.0	U	3.0	U	3.0	U	12.8	
Potassium	5580	J	5330	J	4970	J	5030	J	5230	J	4910	J	4200	J
Selenium	2.2	UJ	2.2	UJ	2.2	UJ	2.2	UJ	2.2	UJ	2.2	UJ	3.8	UJ
Silver	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Sodium	92100		88500		48300		48300		51200		47900		33200	J
Thallium	5.7	U	5.7	U	5.7	U	5.7	U	5.7	U	5.7	U	5.7	U
Vanadium	3.2	U	3.2	U	3.2	U	3.2	U	3.2	U	3.2	U	3.2	U
Zinc	24.4	UJ	17.6	UJ	23.6	UJ	52.8	UJ	22.7	UJ	17.0	UJ	23.0	
Wet Chemistry Analysis (MG/L)	D03686				D03686				D03687				D03694	
Alkalinity	38.0			NA	85.0			NA	85.0			NA	83.0	
Sulfide	4.0	U		NA	4.0	U		NA	4.0	U		NA	8.0	
Total Organic Carbon	2.0			NA	7.6			NA	7.1			NA	19.0	

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW05SF-02		CM-GW-MW06-01		CM-GW-MW06-01F		CMS-GW-MW06S-02		CMS-GW-MW06SF-02		CM-GW-MW07-01		CM-GW-MW07-01F	
Sample Location	MW05S		MW06		MW06		MW06S		MW06S		MW07		MW07	
Date Sampled	8/15/2001		2/22/2001		2/22/2001		8/15/2001		8/15/2001		2/22/2001		2/22/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Volatile Organic Analysis (UG/L)			A0460				A0902				A0459			
1,1,1-Trichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1,2,2-Tetrachloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1,2-Trichloro-1,2,2-trifluoroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1,2-Trichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1-Dichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1-Dichloroethene		NA	10	U		NA	10	UJ		NA	10	U		NA
1,2,4-Trichlorobenzene		NA	10	UJ		NA	10	U		NA	10	U		NA
1,2-Dibromo-3-chloropropane		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dibromoethane		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dichlorobenzene		NA	21			NA	4	J		NA	10	U		NA
1,2-Dichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dichloropropane		NA	10	U		NA	10	UJ		NA	10	U		NA
1,3-Dichlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
1,4-Dichlorobenzene		NA	5	J		NA	3	J		NA	10	U		NA
2-Butanone		NA	10	U		NA	10	U		NA	10	U		NA
2-Hexanone		NA	10	U		NA	10	UJ		NA	10	U		NA
4-Methyl-2-Pentanone		NA	10	U		NA	10	UJ		NA	10	U		NA
Acetone		NA	10	U		NA	10	UJ		NA	10	U		NA
Benzene		NA	5	J		NA	6	J		NA	10	U		NA
Bromodichloromethane		NA	10	U		NA	10	U		NA	10	U		NA
Bromoform		NA	10	UJ		NA	10	U		NA	10	U		NA
Bromomethane		NA	10	U		NA	10	UJ		NA	10	U		NA
Carbon Disulfide		NA	10	U		NA	10	U		NA	10	U		NA
Carbon Tetrachloride		NA	10	U		NA	10	U		NA	10	U		NA
Chlorobenzene		NA	100			NA	58			NA	10	U		NA
Chloroethane		NA	10	U		NA	10	U		NA	10	UJ		NA
Chloroform		NA	10	U		NA	10	U		NA	10	U		NA
Chloromethane		NA	10	UJ		NA	10	U		NA	10	UJ		NA
cis-1,2-Dichloroethene		NA	4	J		NA	4	J		NA	10	U		NA
cis-1,3-Dichloropropene		NA	10	U		NA	10	U		NA	10	U		NA
Cyclohexane		NA	10	U		NA	4	J		NA	10	U		NA
Dibromochloromethane		NA	10	U		NA	10	U		NA	10	U		NA
Dichlorodifluoromethane		NA	10	U		NA	10	UJ		NA	10	U		NA
Ethylbenzene		NA	7	J		NA	10	U		NA	10	U		NA
Isopropylbenzene		NA	1	J		NA	10	U		NA	10	U		NA
Methyl Acetate		NA	10	U		NA	10	U		NA	10	U		NA
Methyl tert-Butyl Ether		NA	10	U		NA	10	U		NA	10	U		NA
Methylcyclohexane		NA	13			NA	5	J		NA	10	U		NA
Methylene Chloride		NA	20	U		NA	10	UJ		NA	10	U		NA
Styrene		NA	10	U		NA	10	U		NA	10	U		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW05SF-02		CM-GW-MW06-01		CM-GW-MW06-01F		CMS-GW-MW06S-02		CMS-GW-MW06SF-02		CM-GW-MW07-01		CM-GW-MW07-01F	
Sample Location	MW05S		MW06		MW06		MW06S		MW06S		MW07		MW07	
Date Sampled	8/15/2001		2/22/2001		2/22/2001		8/15/2001		8/15/2001		2/22/2001		2/22/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Tetrachloroethene		NA	10	U		NA	10	U		NA	10	U		NA
Toluene		NA	5	J		NA	10	U		NA	5	J		NA
Total Xylenes		NA	69			NA	3	J		NA	10	U		NA
trans-1,2-Dichloroethene		NA	10	U		NA	10	UJ		NA	10	U		NA
trans-1,3-Dichloropropene		NA	10	U		NA	10	U		NA	10	U		NA
Trichloroethene		NA	10	U		NA	0.9	J		NA	10	U		NA
Trichlorofluoromethane		NA	10	U		NA	10	UJ		NA	10	U		NA
Vinyl Chloride		NA	10	UJ		NA	10	U		NA	10	UJ		NA
Semivolatile Organic Analysis (UG/L)			A0460				A0902				A0459			
1,1'-Biphenyl		NA	10	U		NA	10	U		NA	10	U		NA
2,2'-oxybis(1-Chloropropane)		NA	10	U		NA	10	U		NA	10	U		NA
2,4,5-Trichlorophenol		NA	25	U		NA	25	U		NA	25	U		NA
2,4,6-Trichlorophenol		NA	10	U		NA	10	U		NA	10	U		NA
2,4-Dichlorophenol		NA	10	U		NA	10	U		NA	10	U		NA
2,4-Dimethylphenol		NA	10	U		NA	10	U		NA	10	U		NA
2,4-Dinitrophenol		NA	25	UJ		NA	25	U		NA	25	UJ		NA
2,4-Dinitrotoluene		NA	10	U		NA	10	U		NA	10	U		NA
2,6-Dinitrotoluene		NA	10	U		NA	10	U		NA	10	U		NA
2-Chloronaphthalene		NA	10	U		NA	10	U		NA	10	U		NA
2-Chlorophenol		NA	10	U		NA	10	U		NA	10	U		NA
2-Methylnaphthalene		NA	10	U		NA	10	U		NA	10	U		NA
2-Methylphenol		NA	10	U		NA	10	U		NA	10	U		NA
2-Nitroaniline		NA	25	U		NA	25	U		NA	25	U		NA
2-Nitrophenol		NA	10	U		NA	10	U		NA	10	U		NA
3,3'-Dichlorobenzidine		NA	10	U		NA	10	U		NA	10	U		NA
3-Nitroaniline		NA	25	U		NA	25	U		NA	25	U		NA
4,6-Dinitro-2-methylphenol		NA	25	U		NA	25	U		NA	25	U		NA
4-Bromophenyl-phenylether		NA	10	U		NA	10	U		NA	10	U		NA
4-Chloro-3-methylphenol		NA	10	U		NA	10	U		NA	10	U		NA
4-Chloroaniline		NA	10	U		NA	10	U		NA	10	U		NA
4-Chlorophenyl-phenylether		NA	10	U		NA	10	U		NA	10	U		NA
4-Methylphenol		NA	10	U		NA	10	U		NA	1	J		NA
4-Nitroaniline		NA	25	U		NA	25	U		NA	25	U		NA
4-Nitrophenol		NA	25	U		NA	25	U		NA	25	U		NA
Acenaphthene		NA	10	U		NA	10	U		NA	10	U		NA
Acenaphthylene		NA	10	U		NA	10	U		NA	10	U		NA
Acetophenone		NA	10	U		NA	10	U		NA	10	U		NA
Anthracene		NA	10	U		NA	10	UJ		NA	10	U		NA
Atrazine		NA	10	U		NA	10	UJ		NA	10	U		NA
Benzaldehyde		NA	10	UJ		NA	10	UJ		NA	10	UJ		NA
Benzo(a)anthracene		NA	10	U		NA	10	U		NA	10	U		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW05SF-02		CM-GW-MW06-01		CM-GW-MW06-01F		CMS-GW-MW06S-02		CMS-GW-MW06SF-02		CM-GW-MW07-01		CM-GW-MW07-01F	
Sample Location	MW05S		MW06		MW06		MW06S		MW06S		MW07		MW07	
Date Sampled	8/15/2001		2/22/2001		2/22/2001		8/15/2001		8/15/2001		2/22/2001		2/22/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Benzo(a)pyrene		NA	10	U		NA	10	U		NA	10	U		NA
Benzo(b)fluoranthene		NA	10	U		NA	10	U		NA	10	U		NA
Benzo(g,h,i)perylene		NA	10	U		NA	10	U		NA	10	U		NA
Benzo(k)fluoranthene		NA	10	U		NA	10	U		NA	10	U		NA
Bis(2-Chloroethoxy)methane		NA	10	U		NA	10	U		NA	10	U		NA
Bis(2-Chloroethyl)ether		NA	10	U		NA	10	U		NA	10	U		NA
bis(2-Ethylhexyl)phthalate		NA	10	U		NA	10	U		NA	10	U		NA
Butylbenzylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Caprolactam		NA	10	U		NA	10	U		NA	10	U		NA
Carbazole		NA	10	U		NA	10	U		NA	10	U		NA
Chrysene		NA	10	U		NA	10	U		NA	10	U		NA
Di-n-Butylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Di-n-octylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Dibenzo(a,h)anthracene		NA	10	U		NA	10	U		NA	10	U		NA
Dibenzofuran		NA	10	U		NA	10	U		NA	10	U		NA
Diethylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Dimethylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Fluoranthene		NA	10	U		NA	10	U		NA	10	U		NA
Fluorene		NA	10	U		NA	10	U		NA	10	U		NA
Hexachlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
Hexachlorobutadiene		NA	10	U		NA	10	U		NA	10	U		NA
Hexachlorocyclopentadiene		NA	10	U		NA	10	U		NA	10	U		NA
Hexachloroethane		NA	10	U		NA	10	U		NA	10	U		NA
Indeno(1,2,3-cd)pyrene		NA	10	U		NA	10	U		NA	10	U		NA
Isophorone		NA	10	U		NA	10	U		NA	10	U		NA
N-Nitroso-di-n-propylamine		NA	10	U		NA	10	U		NA	10	U		NA
N-Nitroso-diphenylamine		NA	10	U		NA	10	U		NA	10	U		NA
Naphthalene		NA	1	J		NA	10	U		NA	10	U		NA
Nitrobenzene		NA	10	U		NA	10	U		NA	10	U		NA
Pentachlorophenol		NA	25	UJ		NA	25	U		NA	25	UJ		NA
Phenanthrene		NA	10	U		NA	10	U		NA	10	U		NA
Phenol		NA	10	U		NA	10	U		NA	10	U		NA
Pyrene		NA	10	U		NA	10	U		NA	10	U		NA
Pesticide/PCB Analysis (UG/L)			A0460				A0902				A0459			
4,4'-DDD		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
4,4'-DDE		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
4,4'-DDT		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Aldrin		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
alpha-BHC		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
alpha-Chlordane		NA	0.050	U		NA	0.032	J		NA	0.050	U		NA
Aroclor-1016		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA

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Sample Location	MW05S		MW06		MW06		MW06S		MW06S		MW07		MW07	
Date Sampled	8/15/2001		2/22/2001		2/22/2001		8/15/2001		8/15/2001		2/22/2001		2/22/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Aroclor-1221		NA	2.0	U		NA	2.0	U		NA	2.0	U		NA
Aroclor-1232		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1242		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1248		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1254		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1260		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
beta-BHC		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
delta-BHC		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Dieldrin		NA	0.10	U		NA	0.11			NA	0.10	U		NA
Endosulfan I		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Endosulfan II		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endosulfan Sulfate		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin Aldehyde		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin Ketone		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
gamma-BHC		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
gamma-Chlordane		NA	0.050	U		NA	0.049	J		NA	0.050	U		NA
Heptachlor		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Heptachlor Epoxide		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Methoxychlor		NA	0.50	U		NA	0.50	U		NA	0.50	U		NA
Toxaphene		NA	5.0	U		NA	5.0	U		NA	5.0	U		NA
Dioxin Analysis (pg/L)			D02093				D03693				D02092			
1,2,3,4,6,7,8-HpCDD		NA	6.7	U		NA	4.4	U		NA	6.5	U		NA
1,2,3,4,6,7,8-HpCDF		NA	4.4	U		NA	2.2	U		NA	3.6	U		NA
1,2,3,4,7,8,9-HpCDF		NA	5.2	U		NA	2.6	U		NA	4.3	U		NA
1,2,3,4,7,8-HxCDD		NA	5.1	U		NA	2.6	U		NA	4.0	U		NA
1,2,3,4,7,8-HxCDF		NA	3.1	U		NA	1.5	U		NA	2.6	U		NA
1,2,3,6,7,8-HxCDD		NA	5.1	U		NA	2.6	U		NA	4.0	U		NA
1,2,3,6,7,8-HxCDF		NA	3.0	U		NA	1.6	U		NA	2.5	U		NA
1,2,3,7,8,9-HxCDD		NA	4.9	U		NA	2.6	U		NA	3.9	U		NA
1,2,3,7,8,9-HxCDF		NA	3.5	U		NA	2.0	U		NA	2.9	U		NA
1,2,3,7,8-PeCDD		NA	4.5	U		NA	2.2	U		NA	3.5	U		NA
1,2,3,7,8-PeCDF		NA	2.9	U		NA	2.3	J		NA	2.4	U		NA
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF		NA	3.3	U		NA	1.8	U		NA	2.7	U		NA
2,3,4,7,8-PeCDF		NA	2.9	U		NA	1.5	U		NA	2.4	U		NA
2,3,7,8-TCDD		NA	3.0	U		NA	6.6	J		NA	2.4	U		NA
2,3,7,8-TCDF		NA	2.3	U		NA	1.2	U		NA	2.1	U		NA
OCDD		NA	12.6	J		NA	7.1	U		NA	13.1	EMPC		NA
OCDF		NA	8.8	U		NA	5.9	U		NA	7.2	U		NA
Total HpCDD		NA	6.7	U		NA	4.4	UJ		NA	6.5	U		NA

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Sample Number	CMS-GW-MW05SF-02		CM-GW-MW06-01		CM-GW-MW06-01F		CMS-GW-MW06S-02		CMS-GW-MW06SF-02		CM-GW-MW07-01		CM-GW-MW07-01F	
Sample Location	MW05S		MW06		MW06		MW06S		MW06S		MW07		MW07	
Date Sampled	8/15/2001		2/22/2001		2/22/2001		8/15/2001		8/15/2001		2/22/2001		2/22/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Total HpCDF		NA	4.8	U		NA	2.4	UJ		NA	3.9	U		NA
Total HxCDD		NA	5.0	U		NA	2.6	UJ		NA	4.0	U		NA
Total HxCDF		NA	3.2	U		NA	1.6	UJ		NA	2.7	U		NA
Total PeCDD		NA	4.5	U		NA	2.2	UJ		NA	3.5	U		NA
Total PeCDF		NA	2.9	U		NA	2.3	J		NA	2.4	U		NA
Total TCDD		NA	16.4	EMPC		NA	6.6	UJ		NA	8.1	EMPC		NA
Total TCDF		NA	2.3	U		NA	1.2	UJ		NA	24.3	EMPC		NA
Toxicity Equivalency		NA		NA		NA	6.7	J		NA		NA		NA
TAL Metal Analysis (UG/L)	MA0A27		MA04Q8		MA04R3		MA0A24		MA0A25		MA04Q7		MA04R2	
Aluminum	352		143	U	39.9	U	54.5	J	45.7	U	97.7	U	77.2	U
Antimony	3.7	U	2.5	U	5.3	U	3.7	U	3.7	U	2.5	U	6.7	U
Arsenic	3.6	UJ	4.2	U	4.2	U	5.2	U	5.3	U	4.2	U	4.2	U
Barium	81.0		63.2		62.6		54.4	U	56.3	U	33.7		34.4	
Beryllium	0.10	U	0.20	U	0.17	UJ	0.10	U	0.10	U	0.27	U	0.32	U
Cadmium	0.70	U	0.60	U	0.60	U	0.70	U	0.70	U	0.60	U	0.60	U
Calcium	25800		25900		26400		34900		36800		31200		32700	
Chromium	5.5		1.5	U	1.0	U	2.2	UJ	2.9	U	0.83	UJ	1.1	U
Cobalt	3.1	J	0.70	U	0.70	U	3.9	U	4.6	U	11.2		11.8	
Copper	3.4	J	0.70	U	0.70	U	11.3		11.2		0.70	U	0.70	U
Iron	238		26500		26600		26900		26200		31600		33500	
Lead	1.5	U	1.7	U	1.7	U	2.4	UJ	1.5	UJ	1.7	U	1.7	U
Magnesium	1720		2910		2970		3750		3930		2560		2630	
Manganese	564		1640		1660		1800		1670		2680		2800	
Mercury	0.20	U	0.40	U	0.58	U	0.20	U	0.20	U	0.14	U	0.26	U
Nickel	5.4	J	2.3	J	2.0	J	3.0	U	3.0	U	4.5		4.4	
Potassium	3960	J	4090	J	4110	J	5740	J	6100	J	4540	J	4750	J
Selenium	2.3	UJ	4.8	U	4.8	U	2.2	UJ	2.2	UJ	4.8	U	4.8	U
Silver	4.0	U	0.50	U	0.50	U	4.0	U	4.0	U	0.50	U	0.50	U
Sodium	31700	J	29000		29500		37000		38800		27100		28000	
Thallium	5.7	U	6.2	U	6.2	U	5.7	U	5.7	U	6.2	U	6.2	U
Vanadium	3.2	U	2.1		1.8		3.2	U	3.2	U	1.6		1.7	
Zinc	14.8	UJ	3.0	UJ	2.7	UJ	23.7	UJ	17.0	UJ	4.2	UJ	6.2	UJ
Wet Chemistry Analysis (MG/L)			D02093				D03893				D02092			
Alkalinity		NA	120			NA	140			NA	87.0			NA
Sulfide		NA	25.0	U		NA	18.0	U		NA	4.0	U		NA
Total Organic Carbon		NA	23.0			NA	24.0			NA	15.0			NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW07D-02		CMS-GW-MW07DF-02		CMS-GW-MW07S-02		CMS-GW-MW07SF-02		CM-GW-MW08-01		CM-GW-MW08-01F		CMS-GW-MW08S-02	
Sample Location	MW07D		MW07D		MW07S		MW07S		MW08		MW08		MW08S	
Date Sampled	8/15/2001		8/15/2001		8/15/2001		8/15/2001		2/21/2001		2/21/2001		8/15/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Volatile Organic Analysis (UG/L)	A0900				A0901				A0453				A0904	
1,1,1-Trichloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
1,1,2,2-Tetrachloroethane	10	U		NA	4	J		NA	10	U		NA	10	U
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U		NA	10	U		NA	10	U		NA	10	U
1,1,2-Trichloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
1,1-Dichloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
1,1-Dichloroethene	10	U		NA	10	UJ		NA	10	U		NA	10	UJ
1,2,4-Trichlorobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
1,2-Dibromo-3-chloropropane		R		NA	7	J		NA	10	U		NA	10	U
1,2-Dibromoethane	10	U		NA	1	J		NA	10	U		NA	10	U
1,2-Dichlorobenzene	10	U		NA	10	U		NA	1	J		NA	10	U
1,2-Dichloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
1,2-Dichloropropane	10	UJ		NA	10	UJ		NA	10	U		NA	10	UJ
1,3-Dichlorobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
1,4-Dichlorobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Butanone	10	UJ		NA	10	U		NA	10	U		NA	10	U
2-Hexanone	10	U		NA	6	J		NA	10	U		NA	10	UJ
4-Methyl-2-Pentanone	10	U		NA	10	UJ		NA	10	U		NA	10	UJ
Acetone	10	UJ		NA	10	UJ		NA	11	U		NA	10	UJ
Benzene	10	U		NA	10	U		NA	6	J		NA	4	J
Bromodichloromethane	10	U		NA	10	U		NA	10	U		NA	10	U
Bromoform	10	U		NA	2	J		NA	10	U		NA	10	U
Bromomethane	10	U		NA	10	UJ		NA	10	U		NA	10	UJ
Carbon Disulfide	10	U		NA	10	U		NA	10	U		NA	10	U
Carbon Tetrachloride	10	U		NA	10	U		NA	10	U		NA	10	U
Chlorobenzene	10	U		NA	10	U		NA	10			NA	40	
Chloroethane	10	U		NA	10	U		NA	10	UJ		NA	10	U
Chloroform	10	U		NA	10	U		NA	10	U		NA	10	U
Chloromethane	10	U		NA	10	U		NA	10	UJ		NA	10	U
cis-1,2-Dichloroethene	10	U		NA	10	U		NA	10	U		NA	10	U
cis-1,3-Dichloropropene	10	U		NA	10	U		NA	10	U		NA	10	U
Cyclohexane	10	U		NA	10	U		NA	10	U		NA	10	U
Dibromochloromethane	10	U		NA	10	U		NA	10	U		NA	10	U
Dichlorodifluoromethane	10	U		NA	10	UJ		NA	10	U		NA	10	UJ
Ethylbenzene	10	U		NA	10	U		NA	1	J		NA	10	U
Isopropylbenzene	10	U		NA	10	U		NA	10	U		NA	10	U
Methyl Acetate	10	U		NA	6	J		NA	10	U		NA	10	U
Methyl tert-Butyl Ether	10	U		NA	1	J		NA	10	U		NA	10	U
Methylcyclohexane	10	U		NA	10	U		NA	10	U		NA	10	U
Methylene Chloride	10	U		NA	10	UJ		NA	10	U		NA	10	UJ
Styrene	10	U		NA	10	U		NA	10	U		NA	10	U

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW07D-02		CMS-GW-MW07DF-02		CMS-GW-MW07S-02		CMS-GW-MW07SF-02		CM-GW-MW08-01		CM-GW-MW08-01F		CMS-GW-MW08S-02	
Sample Location	MW07D		MW07D		MW07S		MW07S		MW08		MW08		MW08S	
Date Sampled	8/15/2001		8/15/2001		8/15/2001		8/15/2001		2/21/2001		2/21/2001		8/15/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Tetrachloroethene	10	U		NA	10	U		NA	10	U		NA	16	U
Toluene	10	U		NA	10	U		NA	1	J		NA	10	U
Total Xylenes	10	U		NA	10	U		NA	27			NA	8	J
trans-1,2-Dichloroethene	10	U		NA	10	UJ		NA	10	U		NA	10	UJ
trans-1,3-Dichloropropene	10	U		NA	10	U		NA	10	U		NA	10	U
Trichloroethene	10	U		NA	10	U		NA	10	U		NA	10	U
Trichlorofluoromethane	10	U		NA	10	UJ		NA	10	U		NA	10	UJ
Vinyl Chloride	10	U		NA	10	U		NA	10	UJ		NA	10	U
Semivolatile Organic Analysis (UG/L)	A0900				A0901				A0453				A0904	
1,1'-Biphenyl	10	U		NA	10	U		NA	10	U		NA	10	U
2,2'-oxybis(1-Chloropropane)	10	U		NA	10	U		NA	10	U		NA	10	U
2,4,5-Trichlorophenol	25	U		NA	25	U		NA	25	U		NA	25	U
2,4,6-Trichlorophenol	10	U		NA	10	U		NA	10	U		NA	2	J
2,4-Dichlorophenol	10	U		NA	10	U		NA	10	U		NA	10	U
2,4-Dimethylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
2,4-Dinitrophenol	25	U		NA	25	U		NA	25	UJ		NA	25	U
2,4-Dinitrotoluene	10	U		NA	10	U		NA	10	U		NA	10	U
2,6-Dinitrotoluene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Chloronaphthalene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Chlorophenol	10	U		NA	10	U		NA	10	U		NA	10	U
2-Methylnaphthalene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Methylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
2-Nitroaniline	25	U		NA	25	U		NA	25	U		NA	25	U
2-Nitrophenol	10	U		NA	10	U		NA	10	U		NA	10	U
3,3'-Dichlorobenzidine	10	U		NA	10	U		NA	10	U		NA	10	U
3-Nitroaniline	25	U		NA	25	U		NA	25	U		NA	25	U
4,6-Dinitro-2-methylphenol	25	U		NA	25	U		NA	25	U		NA	25	U
4-Bromophenyl-phenylether	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chloro-3-methylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chloroaniline	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chlorophenyl-phenylether	10	U		NA	10	U		NA	10	U		NA	10	U
4-Methylphenol	10	U		NA	10	U		NA	3	J		NA	10	U
4-Nitroaniline	25	U		NA	25	U		NA	25	U		NA	25	U
4-Nitrophenol	25	U		NA	25	U		NA	25	U		NA	25	U
Acenaphthene	10	U		NA	10	U		NA	10	U		NA	10	U
Acenaphthylene	10	U		NA	10	U		NA	10	U		NA	10	U
Acetophenone	10	U		NA	10	U		NA	10	U		NA	10	U
Anthracene	10	UJ		NA	10	UJ		NA	10	U		NA	10	U
Atrazine	10	UJ		NA	10	UJ		NA	10	U		NA	10	UJ
Benzaldehyde	10	UJ		NA	10	UJ		NA	10	UJ		NA	10	UJ
Benzo(a)anthracene	10	U		NA	10	U		NA	10	U		NA	10	U

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW07D-02		CMS-GW-MW07DF-02		CMS-GW-MW07S-02		CMS-GW-MW07SF-02		CM-GW-MW08-01		CM-GW-MW08-01F		CMS-GW-MW08S-02	
Sample Location	MW07D		MW07D		MW07S		MW07S		MW08		MW08		MW08S	
Date Sampled	8/15/2001		8/15/2001		8/15/2001		8/15/2001		2/21/2001		2/21/2001		8/15/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Benzo(a)pyrene	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(b)fluoranthene	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(g,h,i)perylene	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(k)fluoranthene	10	U		NA	10	U		NA	10	U		NA	10	U
Bis(2-Chloroethoxy)methane	10	U		NA	10	U		NA	10	U		NA	10	U
Bis(2-Chloroethyl)ether	10	U		NA	10	U		NA	10	U		NA	10	U
bis(2-Ethylhexyl)phthalate	10	U		NA	10	U		NA	1	J		NA	2	J
Butylbenzylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Caprolactam	10	U		NA	10	U		NA	10	U		NA	10	U
Carbazole	10	U		NA	10	U		NA	10	U		NA	10	U
Chrysene	10	U		NA	10	U		NA	10	U		NA	10	U
Di-n-Butylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Di-n-octylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Dibenzo(a,h)anthracene	10	U		NA	10	U		NA	10	U		NA	10	U
Dibenzofuran	10	U		NA	10	U		NA	10	U		NA	10	U
Diethylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Dimethylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Fluoranthene	10	U		NA	10	U		NA	10	U		NA	10	U
Fluorene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorobutadiene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorocyclopentadiene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
Indeno(1,2,3-cd)pyrene	10	U		NA	10	U		NA	10	U		NA	10	U
Isophorone	10	U		NA	10	U		NA	10	U		NA	10	U
N-Nitroso-di-n-propylamine	10	U		NA	10	U		NA	10	UJ		NA	10	U
N-Nitroso-diphenylamine	10	U		NA	10	U		NA	10	U		NA	10	U
Naphthalene	10	U		NA	10	U		NA	10	U		NA	10	U
Nitrobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
Pentachlorophenol	25	U		NA	25	U		NA	25	UJ		NA	25	U
Phenanthrene	10	U		NA	10	U		NA	1	J		NA	10	U
Phenol	10	U		NA	10	U		NA	10	U		NA	10	U
Pyrene	10	U		NA	10	U		NA	10	U		NA	10	U
Pesticide/PCB Analysis (UG/L)	A0900				A0901				A0453				A0904	
4,4'-DDD	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
4,4'-DDE	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
4,4'-DDT	0.10	U		NA	0.10	U		NA	0.10	UJ		NA	0.10	U
Aldrin	0.050	U		NA	0.050	U		NA	0.050	UJ		NA	0.050	U
alpha-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
alpha-Chlordane	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Aroclor-1016	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW07D-02		CMS-GW-MW07DF-02		CMS-GW-MW07S-02		CMS-GW-MW07SF-02		CM-GW-MW08-01		CM-GW-MW08-01F		CMS-GW-MW08S-02	
Sample Location	MW07D		MW07D		MW07S		MW07S		MW08		MW08		MW08S	
Date Sampled	8/15/2001		8/15/2001		8/15/2001		8/15/2001		2/21/2001		2/21/2001		8/15/2001	
QC Identifier	None		None		None		None		None		None		None	
ltered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Aroclor-1221	2.0	U		NA	2.0	U		NA	2.0	U		NA	2.0	U
Aroclor-1232	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1242	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1248	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1254	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1260	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
beta-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
delta-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Dieldrin	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endosulfan I	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Endosulfan II	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endosulfan Sulfate	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin Aldehyde	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin Ketone	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
gamma-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
gamma-Chlordane	0.050	U		NA	0.018	J		NA	0.050	U		NA	0.050	U
Heptachlor	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Heptachlor Epoxide	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Methoxychlor	0.50	U		NA	0.50	U		NA	0.50	U		NA	0.50	U
Toxaphene	5.0	U		NA	5.0	U		NA	5.0	U		NA	5.0	U
Dioxin Analysis (pg/L)	D03891				D03892				D02087				D03895	
1,2,3,4,6,7,8-HpCDD	3.7	EMPC		NA	3.9	U		NA	4.4	U		NA	4.6	U
1,2,3,4,6,7,8-HpCDF	4.0	U		NA	2.1	U		NA	2.5	U		NA	2.3	U
1,2,3,4,7,8,9-HpCDF	3.6	EMPC		NA	2.5	U		NA	3.0	U		NA	2.7	U
1,2,3,4,7,8-HxCDD	4.2	J		NA	2.4	U		NA	2.9	U		NA	2.4	U
1,2,3,4,7,8-HxCDF	4.5	U		NA	2.1	U		NA	1.9	U		NA	1.8	U
1,2,3,6,7,8-HxCDD	4.0	J		NA	2.4	U		NA	2.9	U		NA	2.4	U
1,2,3,6,7,8-HxCDF	4.4	J		NA	1.5	U		NA	1.8	U		NA	1.7	U
1,2,3,7,8,9-HxCDD	4.2	EMPC		NA	2.4	U		NA	2.8	U		NA	2.4	U
1,2,3,7,8,9-HxCDF	5.1	EMPC		NA	1.9	U		NA	2.1	U		NA	2.1	U
1,2,3,7,8-PeCDD	3.3	EMPC		NA	2.0	U		NA	2.5	U		NA	2.1	U
1,2,3,7,8-PeCDF	3.6	J		NA	2.7	J		NA	1.9	U		NA	1.5	U
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF	3.7	J		NA	1.4	EMPC		NA	2.0	U		NA	1.6	U
2,3,4,7,8-PeCDF	2.9	EMPC		NA	1.5	U		NA	1.8	U		NA	1.4	U
2,3,7,8-TCDD	3.4	J		NA	1.8	U		NA	1.9	U		NA	5.1	J
2,3,7,8-TCDF	1.1	U		NA	1.4	U		NA	1.5	U		NA	1.1	U
OCDD	13.1	U		NA	5.8	EMPC		NA	19.4	J		NA	7.4	U
OCDF	7.3	U		NA	5.9	U		NA	5.1	U		NA	7.5	U
Total HpCDD	3.7	EMPC		NA	3.9	UJ		NA	4.4	U		NA	4.6	UJ

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GROUNDWATER RESULTS
NOVEMBER 2000 - OCTOBER 2001
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW07D-02		CMS-GW-MW07DF-02		CMS-GW-MW07S-02		CMS-GW-MW07SF-02		CM-GW-MW08-01		CM-GW-MW08-01F		CMS-GW-MW08S-02	
Sample Location	MW07D		MW07D		MW07S		MW07S		MW08		MW08		MW08S	
Date Sampled	8/15/2001		8/15/2001		8/15/2001		8/15/2001		2/21/2001		2/21/2001		8/15/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Total HpCDF	7.6	EMPC		NA	2.3	UJ		NA	2.7	U		NA	2.5	UJ
Total HxCDD	19.6	EMPC		NA	2.4	UJ		NA	2.9	U		NA	2.4	UJ
Total HxCDF	17.6	EMPC		NA	3.4	EMPC		NA	2.0	U		NA	1.7	UJ
Total PeCDD	3.3	EMPC		NA	2.7	EMPC		NA	2.5	U		NA	2.1	UJ
Total PeCDF	3.8	J		NA	2.7	J		NA	1.9	U		NA	1.4	UJ
Total TCDD	3.4	UJ		NA	1.8	UJ		NA	1.9	U		NA	5.1	UJ
Total TCDF	1.1	EMPC		NA	1.4	UJ		NA	1.5	U		NA	1.1	UJ
Toxicity Equivalency	11.0	J		NA	0.26	J		NA		NA		NA	5.1	J
TAL Metal Analysis (UG/L)	MA0A20		MA0A21		MA0A22		MA0A23		MA04P7		MA04O0		MA0A28	
Aluminum	91.3	J	45.7	U	45.7	U	45.7	U	756		509		112	
Antimony	3.7	U	3.7	U	3.7	U	3.7	U	2.5	U	4.9	UJ	3.7	U
Arsenic	2.6	U	2.6	U	4.2	U	3.5	UJ	5.8	J	5.8	J	8.0	U
Barium	32.0		30.7		32.6	U	31.9	U	31.8		21.2		17.3	
Beryllium	0.10	U	0.10	U	0.10	U	0.10	U	0.59	U	0.48	U	0.10	U
Cadmium	0.70	U	0.70	U	0.70	U	0.70	U	0.60	U	0.60	U	0.70	U
Calcium	14500		14200		25900		25300		15900		15800		36100	
Chromium	3.0		1.3	U	1.8	UJ	2.1	UJ	52.7		43.5		6.0	
Cobalt	7.1		6.5		8.0	U	7.6	U	8.3		8.1		3.7	
Copper	2.2	U	2.2	U	11.2		7.6		2.1		0.71	J	2.2	J
Iron	80.6		13.1	U	23300		23200		8490		7890		35300	
Lead	1.5	U	1.5	U	1.5	UJ	1.5	UJ	17.0		2.3	J	2.7	J
Magnesium	1680		1620		2290		2240		3660		3660		6810	
Manganese	73.9		72.6		2020		1990		1100		1070		3600	
Mercury	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.34	U	0.20	U
Nickel	3.0	U	3.0	U	3.0	U	3.0	U	11.2		10.9		3.0	U
Potassium	2700	J	2530	J	4960	J	4760	J	9870	J	9650	J	13800	J
Selenium	2.2	U	2.2	U	2.2	UJ	2.2	UJ	4.8	U	4.8	U	2.2	U
Silver	4.0	U	4.0	U	4.0	U	4.0	U	0.50	U	0.50	U	4.0	U
Sodium	23300	J	22800	J	35500		35000		132000		132000		151000	J
Thallium	5.7	U	5.7	U	5.7	U	5.7	U	6.2	U	6.2	U	5.7	U
Vanadium	3.2	U	3.2	U	3.2	U	3.2	U	10.9		9.1		3.2	U
Zinc	35.1		30.8	U	15.2	UJ	14.2	UJ	7.7	UJ	5.3	UJ	19.1	
Wet Chemistry Analysis (MG/L)	D03891				D03892				D02087				D03895	
Alkalinity	20.0			NA	71.0			NA	570			NA	190	
Sulfide	4.0			NA	16.0	U		NA	1.0	U		NA	64.0	U
Total Organic Carbon	2.0			NA	8.3			NA	4.0			NA	27.0	

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US EPA ARCHIVE DOCUMENT

GROUNDWATER RESULTS
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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW06SF-02		CM-GW-MW09-01		CM-GW-MW09-01F		CMS-GW-MW09S-02		CMS-GW-MW09SF-02		CMS-GW-MW10B-02		CMS-GW-MW10BF-02	
Sample Location	MW06S		MW09		MW09		MW09S		MW09S		MW10B		MW10B	
Date Sampled	8/15/2001		2/21/2001		2/21/2001		8/15/2001		8/15/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Volatile Organic Analysis (UG/L)			A0456				A0805				A0863			
1,1,1-Trichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1,2,2-Tetrachloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1,2-Trichloro-1,2,2-trifluoroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1,2-Trichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1-Dichloroethene		NA	10	U		NA	10	U		NA	10	U		NA
1,1-Dichloroethene		NA	10	U		NA	10	UJ		NA	10	U		NA
1,2,4-Trichlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dibromo-3-chloropropane		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dibromoethane		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dichlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dichloropropane		NA	10	U		NA	10	UJ		NA	10	U		NA
1,3-Dichlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
1,4-Dichlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
2-Butanone		NA	10	U		NA	10	U		NA	10	UJ		NA
2-Hexanone		NA	10	U		NA	10	UJ		NA	10	U		NA
4-Methyl-2-Pentanone		NA	10	U		NA	10	UJ		NA	10	U		NA
Acetone		NA	35	U		NA	13	UJ		NA	10	UJ		NA
Benzene		NA	1	J		NA	21			NA	10	U		NA
Bromodichloromethane		NA	10	U		NA	10	U		NA	10	U		NA
Bromoform		NA	10	U		NA	10	U		NA	10	U		NA
Bromomethane		NA	10	U		NA	10	UJ		NA	10	U		NA
Carbon Disulfide		NA	10	U		NA	10	U		NA	10	U		NA
Carbon Tetrachloride		NA	10	U		NA	10	U		NA	10	U		NA
Chlorobenzene		NA	1	J		NA	10	U		NA	10	U		NA
Chloroethane		NA	10	UJ		NA	10	U		NA	10	U		NA
Chloroform		NA	10	U		NA	10	U		NA	10	U		NA
Chloromethane		NA	10	UJ		NA	10	U		NA	10	U		NA
cis-1,2-Dichloroethene		NA	2	J		NA	12			NA	10	U		NA
cis-1,3-Dichloropropene		NA	10	U		NA	10	U		NA	10	U		NA
Cyclohexane		NA	10	U		NA	10	U		NA	10	U		NA
Dibromochloromethane		NA	10	U		NA	10	U		NA	10	U		NA
Dichlorodifluoromethane		NA	10	U		NA	10	UJ		NA	10	U		NA
Ethylbenzene		NA	10	U		NA	10	U		NA	10	U		NA
Isopropylbenzene		NA	10	U		NA	10	U		NA	10	U		NA
Methyl Acetate		NA	10	U		NA	10	U		NA	10	U		NA
Methyl tert-Butyl Ether		NA	10	U		NA	10	U		NA	10	U		NA
Methylcyclohexane		NA	10	U		NA	10	U		NA	10	U		NA
Methylene Chloride		NA	10	U		NA	10	UJ		NA	10	U		NA
Styrene		NA	10	U		NA	10	U		NA	10	U		NA

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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW06SF-02		CM-GW-MW09-01		CM-GW-MW09-01F		CMS-GW-MW09S-02		CMS-GW-MW09SF-02		CMS-GW-MW10B-02		CMS-GW-MW10BF-02	
Sample Location	MW06S		MW09		MW09		MW09S		MW09S		MW10B		MW10B	
Date Sampled	8/15/2001		2/21/2001		2/21/2001		8/15/2001		8/15/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Tetrachloroethene		NA	2	J		NA	21	U		NA	10	U		NA
Toluene		NA	10	U		NA	10	U		NA	10	U		NA
Total Xylenes		NA	10	U		NA	10	U		NA	10	U		NA
trans-1,2-Dichloroethene		NA	10	U		NA	10	UJ		NA	10	UJ		NA
trans-1,3-Dichloropropene		NA	10	U		NA	10	U		NA	10	U		NA
Trichloroethene		NA	10	U		NA	1	J		NA	10	U		NA
Trichlorofluoromethane		NA	10	U		NA	10	UJ		NA	10	U		NA
Vinyl Chloride		NA	10	UJ		NA	10	J		NA	10	U		NA
Semivolatile Organic Analysis (UG/L)			A0456				A0905				A0B63			
1,1'-Biphenyl		NA	10	U		NA	10	U		NA	10	U		NA
2,2'-oxybis(1-Chloropropane)		NA	10	U		NA	10	U		NA	10	UJ		NA
2,4,5-Trichlorophenol		NA	25	U		NA	25	U		NA	25	U		NA
2,4,6-Trichlorophenol		NA	10	U		NA	10	U		NA	10	U		NA
2,4-Dichlorophenol		NA	10	U		NA	10	U		NA	10	U		NA
2,4-Dimethylphenol		NA	10	U		NA	10	U		NA	10	U		NA
2,4-Dinitrophenol		NA	25	UJ		NA	25	U		NA	25	UJ		NA
2,4-Dinitrotoluene		NA	10	U		NA	10	U		NA	10	U		NA
2,6-Dinitrotoluene		NA	10	U		NA	10	U		NA	10	U		NA
2-Chloronaphthalene		NA	10	U		NA	10	U		NA	10	U		NA
2-Chlorophenol		NA	10	U		NA	10	U		NA	10	U		NA
2-Methylnaphthalene		NA	10	U		NA	10	U		NA	10	U		NA
2-Methylphenol		NA	10	U		NA	10	U		NA	10	U		NA
2-Nitroaniline		NA	25	U		NA	25	U		NA	25	U		NA
2-Nitrophenol		NA	10	U		NA	10	U		NA	10	U		NA
3,3'-Dichlorobenzidine		NA	10	U		NA	10	U		NA	10	U		NA
3-Nitroaniline		NA	25	U		NA	25	U		NA	25	U		NA
4,6-Dinitro-2-methylphenol		NA	25	U		NA	25	U		NA	25	U		NA
4-Bromophenyl-phenylether		NA	10	U		NA	10	U		NA	10	U		NA
4-Chloro-3-methylphenol		NA	10	U		NA	10	U		NA	10	U		NA
4-Chloroaniline		NA	10	U		NA	10	U		NA	10	U		NA
4-Chlorophenyl-phenylether		NA	10	U		NA	10	U		NA	10	U		NA
4-Methylphenol		NA	10	U		NA	10	U		NA	10	U		NA
4-Nitroaniline		NA	25	U		NA	25	U		NA	25	U		NA
4-Nitrophenol		NA	25	U		NA	25	U		NA	25	U		NA
Acenaphthene		NA	10	U		NA	10	U		NA	10	U		NA
Acenaphthylene		NA	10	U		NA	10	U		NA	10	U		NA
Acetophenone		NA	10	U		NA	10	U		NA	10	U		NA
Anthracene		NA	10	U		NA	10	UJ		NA	10	U		NA
Atrazine		NA	10	U		NA	10	UJ		NA	10	UJ		NA
Benzaldehyde		NA	10	UJ		NA	10	UJ		NA	10	UJ		NA
Benzo(a)anthracene		NA	10	U		NA	10	U		NA	10	U		NA

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US EPA ARCHIVE DOCUMENT

GROUNDWATER RESULTS
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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW08SF-02		CM-GW-MW09-01		CM-GW-MW09-01F		CMS-GW-MW09S-02		CMS-GW-MW09SF-02		CMS-GW-MW10B-02		CMS-GW-MW10BF-02	
Sample Location	MW08S		MW09		MW09		MW09S		MW09S		MW10B		MW10B	
Date Sampled	8/15/2001		2/21/2001		2/21/2001		8/15/2001		8/15/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Benzo(a)pyrene		NA	10	U		NA	10	U		NA	10	U		NA
Benzo(b)fluoranthene		NA	10	U		NA	10	U		NA	10	U		NA
Benzo(g,h,i)perylene		NA	10	U		NA	10	U		NA	10	U		NA
Benzo(k)fluoranthene		NA	10	U		NA	10	U		NA	10	U		NA
Bis(2-Chloroethoxy)methane		NA	10	U		NA	10	U		NA	10	U		NA
Bis(2-Chloroethyl)ether		NA	10	U		NA	10	U		NA	10	U		NA
bis(2-Ethylhexyl)phthalate		NA	10	U		NA	10	U		NA	10	U		NA
Butylbenzylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Caprolactam		NA	10	U		NA	10	U		NA	490	*		NA
Carbazole		NA	10	U		NA	10	U		NA	10	U		NA
Chrysene		NA	10	U		NA	10	U		NA	10	U		NA
Di-n-Butylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Di-n-octylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Dibenzo(a,h)anthracene		NA	10	U		NA	10	U		NA	10	U		NA
Dibenzofuran		NA	10	U		NA	10	U		NA	10	U		NA
Diethylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Dimethylphthalate		NA	10	U		NA	10	U		NA	10	U		NA
Fluoranthene		NA	10	U		NA	10	U		NA	10	U		NA
Fluorene		NA	10	U		NA	10	U		NA	10	U		NA
Hexachlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
Hexachlorobutadiene		NA	10	U		NA	10	U		NA	10	U		NA
Hexachlorocyclopentadiene		NA	10	U		NA	10	U		NA	10	UJ		NA
Hexachloroethane		NA	10	U		NA	10	U		NA	10	U		NA
Indeno(1,2,3-cd)pyrene		NA	10	U		NA	10	U		NA	10	U		NA
Isophorone		NA	10	U		NA	10	U		NA	10	U		NA
N-Nitroso-di-n-propylamine		NA	10	U		NA	10	U		NA	10	U		NA
N-Nitroso-diphenylamine		NA	10	U		NA	10	U		NA	10	U		NA
Naphthalene		NA	10	U		NA	10	U		NA	10	U		NA
Nitrobenzene		NA	10	U		NA	10	U		NA	10	U		NA
Pentachlorophenol		NA	25	UJ		NA	25	U		NA	25	U		NA
Phenanthrene		NA	10	U		NA	10	U		NA	10	U		NA
Phenol		NA	10	U		NA	10	U		NA	10	U		NA
Pyrene		NA	10	U		NA	10	U		NA	10	U		NA
Pesticide/PCB Analysis (UG/L)			A0456				A0905				A0B63			
4,4'-DDD		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
4,4'-DDE		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
4,4'-DDT		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Aldrin		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
alpha-BHC		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
alpha-Chlordane		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Aroclor-1016		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA

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US EPA ARCHIVE DOCUMENT

GROUND WATER RESULTS
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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW08SF-02		CM-GW-MW09-01		CM-GW-MW09-01F		CMS-GW-MW09S-02		CMS-GW-MW09SF-02		CMS-GW-MW10B-02		CMS-GW-MW10BF-02	
Sample Location	MW08S		MW09		MW09		MW09S		MW09S		MW10B		MW10B	
Date Sampled	8/15/2001		2/21/2001		2/21/2001		8/15/2001		8/15/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Aroclor-1221		NA	2.0	U		NA	2.0	U		NA	2.0	U		NA
Aroclor-1232		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1242		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1248		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1254		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1260		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
beta-BHC		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
delta-BHC		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Dieldrin		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endosulfan I		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Endosulfan II		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endosulfan Sulfate		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin Aldehyde		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin Ketone		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
gamma-BHC		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
gamma-Chlordane		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Heptachlor		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Heptachlor Epoxide		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Methoxychlor		NA	0.50	U		NA	0.50	U		NA	0.50	U		NA
Toxaphene		NA	5.0	U		NA	5.0	U		NA	5.0	U		NA
Dioxin Analysis (pg/L)			D02090				D03896				D03919			
1,2,3,4,6,7,8-HpCDD		NA	6.0	U		NA	4.3	U		NA	2.2	U		NA
1,2,3,4,6,7,8-HpCDF		NA	3.7	U		NA	2.1	U		NA	2.2	U		NA
1,2,3,4,7,8,9-HpCDF		NA	4.4	U		NA	2.6	U		NA	2.5	UJ		NA
1,2,3,4,7,8-HxCDD		NA	3.8	U		NA	2.8	U		NA	2.6	U		NA
1,2,3,4,7,8-HxCDF		NA	2.5	U		NA	1.6	U		NA	1.3	EMPC		NA
1,2,3,6,7,8-HxCDD		NA	3.8	U		NA	2.9	U		NA	2.7	U		NA
1,2,3,6,7,8-HxCDF		NA	2.4	U		NA	1.6	U		NA	1.7	U		NA
1,2,3,7,8,9-HxCDD		NA	3.6	U		NA	2.8	U		NA	2.6	U		NA
1,2,3,7,8,9-HxCDF		NA	2.6	U		NA	2.0	U		NA	1.9	U		NA
1,2,3,7,8-PeCDD		NA	3.2	U		NA	2.4	U		NA	2.5	U		NA
1,2,3,7,8-PeCDF		NA	2.2	U		NA	1.7	U		NA	2.1	U		NA
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF		NA	2.6	U		NA	1.6	U		NA	1.8	U		NA
2,3,4,7,8-PeCDF		NA	2.2	U		NA	1.6	U		NA	2.0	U		NA
2,3,7,8-TCDD		NA	16.2			NA	10.2			NA	2.5	U		NA
2,3,7,8-TCDF		NA	1.8	U		NA	1.4	U		NA	1.8	U		NA
OCDD		NA	11.1	J		NA	10.1	U		NA	4.4	U		NA
OCDF		NA	6.7	U		NA	6.1	U		NA	4.7	U		NA
Total HpCDD		NA	6.0	U		NA	4.3	UJ		NA	2.2	UJ		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW06SF-02		CM-GW-MW09-01		CM-GW-MW09-01F		CMS-GW-MW09S-02		CMS-GW-MW09SF-02		CMS-GW-MW10B-02		CMS-GW-MW10BF-02	
Sample Location	MW06S		MW09		MW09		MW09S		MW09S		MW10B		MW10B	
Date Sampled	8/15/2001		2/21/2001		2/21/2001		8/15/2001		8/15/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Total HpCDF		NA	4.1	U		NA	2.3	UJ		NA	2.3	UJ		NA
Total HxCDD		NA	3.7	U		NA	2.6	UJ		NA	23.4	EMPC		NA
Total HxCDF		NA	2.6	U		NA	1.7	UJ		NA	1.3	EMPC		NA
Total PeCDD		NA	3.2	U		NA	2.4	UJ		NA	8.9	EMPC		NA
Total PeCDF		NA	2.2	U		NA	1.6	UJ		NA	2.0	UJ		NA
Total TCDD		NA	18.2			NA	10.2	UJ		NA	5.8	EMPC		NA
Total TCDF		NA	3.6	EMPC		NA	1.4	UJ		NA	1.8	UJ		NA
Toxicity Equivalency		NA		NA		NA	10.0	J		NA	0.00	UJ		NA
TAL Metal Analysis (UG/L)	MA0A29		MA04Q3		MA04Q5		MA0A30		MA0A31		MA09W3		MA09W0	
Aluminum	84.2	J	85.3	U	74.7	U	66.6	J	69.3	J	57.4	U	19.0	U
Antimony	3.7	U	2.5	U	4.4	UJ	3.7	U	3.7	U	4.9	U	4.9	U
Arsenic	6.0	U	4.2	U	4.2	U	6.6	U	6.6	U	2.0	U	2.0	U
Barium	17.3		9.7		9.1		12.7	J	11.6	J	35.3		32.6	
Beryllium	0.10	U	0.33	U	0.29	U	0.10	U	0.10	U	0.87	UJ	0.87	UJ
Cadmium	0.70	U	0.60	U	0.60	U	0.70	U	0.70	U	0.40	U	0.40	U
Calcium	37600		28600		27500		23000		23300		32600		31000	
Chromium	6.7		6.6		6.5		3.1		3.9		20.7	U	4.7	U
Cobalt	5.2		14.0		13.5		2.2	J	2.7	J	2.6		1.2	UJ
Copper	2.4	J	1.7		0.70	U	4.0	J	2.2	U	7.3	U	7.0	U
Iron	36800		68900		66200		49100		48400		391	U	212	U
Lead	3.8		1.7	U	1.7	U	3.8		1.5	U	2.0	UJ	14.8	U
Magnesium	7090		6860		6550		5350		5390		4030		3800	
Manganese	3760		4480		4280		5530		5590		407		383	
Mercury	0.20	U	0.10	U	0.12	U	0.20	U	0.20	U	0.10	U	0.10	U
Nickel	3.0	U	30.9		30.4		3.0	U	3.0	U	44.5		32.2	U
Potassium	14100	J	3670	J	3480	J	4520	J	4510	J	5040	J	4650	J
Selenium	2.2	U	4.8	U	4.8	U	3.0	UJ	4.3	UJ	4.4	UJ	4.4	UJ
Silver	4.0	U	0.50	U	0.50	U	4.0	U	4.0	U	0.92		1.1	
Sodium	158000	J	40500		39000		31600	J	32200	J	46300		44300	
Thallium	6.2	J	6.6	J	6.3	J	5.7	U	6.9	J	5.6	U	5.6	U
Vanadium	3.2	U	3.5		3.2		3.2	U	3.2	U	0.90	U	0.90	U
Zinc	19.4	U	55.1	J	76.0	J	23.8		20.2	U	61.7	U	106	U
Wet Chemistry Analysis (MG/L)			D02090				D03896				D03918			
Alkalinity		NA	86.0			NA	120			NA	34.0			NA
Sulfide		NA	4.0	U		NA	100	U		NA	2.0	U		NA
Total Organic Carbon		NA	35.0			NA	24.0			NA	3.0			NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW10D-02		CMS-GW-MW10DF-02		CMS-GW-DUP04-02		CMS-GW-DUP04F-02		CMS-GW-MW11B-02		CMS-GW-MW11BF-02		CMS-GW-MW11M-02	
Sample Location	MW10D		MW10D		MW10D		MW10D		MW11B		MW11B		MW11M	
Date Sampled	8/23/2001		8/23/2001		8/23/2001		8/23/2001		8/22/2001		8/22/2001		8/22/2001	
QC Identifier	Field Dup. CMS-GW-MW10D-02		Field Dup. CMS-GW-MW10DF-02		Field Dup. CMS-GW-MW10D-02		Field Dup. CMS-GW-MW10DF-02		None		None		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Volatile Organic Analysis (UG/L)	A0925				A0861				A0920				A0917	
1,1,1-Trichloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
1,1,2,2-Tetrachloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U		NA	10	U		NA	10	U		NA	10	U
1,1,2-Trichloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
1,1-Dichloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
1,1-Dichloroethene	10	U		NA	10	U		NA	10	U		NA	10	U
1,2,4-Trichlorobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
1,2-Dibromo-3-chloropropane	10	U		NA	10	U		NA	10	UJ		NA	10	UJ
1,2-Dibromoethane	10	U		NA	10	U		NA	10	U		NA	10	U
1,2-Dichlorobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
1,2-Dichloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
1,2-Dichloropropane	10	U		NA	10	U		NA	10	U		NA	10	U
1,3-Dichlorobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
1,4-Dichlorobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Butanone	10	UJ		NA	10	UJ		NA	10	UJ		NA	10	UJ
2-Hexanone	10	U		NA	10	U		NA	10	UJ		NA	10	UJ
4-Methyl-2-Pentanone	10	U		NA	10	U		NA	10	UJ		NA	10	UJ
Acetone	10	UJ		NA	10	UJ		NA	10	UJ		NA	10	UJ
Benzene	10	U		NA	10	U		NA	10	U		NA	10	U
Bromodichloromethane	10	U		NA	10	U		NA	10	U		NA	10	U
Bromoform	10	U		NA	10	U		NA	10	U		NA	10	U
Bromomethane	10	U		NA	10	U		NA	10	U		NA	10	U
Carbon Disulfide	10	U		NA	10	U		NA	10	UJ		NA	10	UJ
Carbon Tetrachloride	10	U		NA	10	U		NA	10	U		NA	10	U
Chlorobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
Chloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
Chloroform	10	U		NA	10	U		NA	10	U		NA	10	U
Chloromethane	10	U		NA	10	U		NA	10	U		NA	10	U
cis-1,2-Dichloroethene	10	U		NA	10	U		NA	10	U		NA	10	U
cis-1,3-Dichloropropene	10	U		NA	10	U		NA	10	U		NA	10	U
Cyclohexane	10	U		NA	10	U		NA	10	U		NA	10	U
Dibromochloromethane	10	U		NA	10	U		NA	10	U		NA	10	U
Dichlorodifluoromethane	10	U		NA	10	U		NA	10	U		NA	10	U
Ethylbenzene	10	U		NA	10	U		NA	10	U		NA	10	U
Isopropylbenzene	10	U		NA	10	U		NA	10	U		NA	10	U
Methyl Acetate	10	U		NA	10	U		NA	10	U		NA	10	U
Methyl tert-Butyl Ether	10	U		NA	10	U		NA	10	U		NA	10	U
Methylcyclohexane	10	U		NA	10	U		NA	10	U		NA	10	U
Methylene Chloride	10	U		NA	10	U		NA	10	UJ		NA	10	UJ
Styrene	10	U		NA	10	U		NA	10	U		NA	10	U

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW10D-02		CMS-GW-MW10DF-02		CMS-GW-DUP04-02		CMS-GW-DUP04F-02		CMS-GW-MW11B-02		CMS-GW-MW11BF-02		CMS-GW-MW11M-02	
Sample Location	MW10D		MW10D		MW10D		MW10D		MW11B		MW11B		MW11M	
Date Sampled	8/23/2001		8/23/2001		8/23/2001		8/23/2001		8/22/2001		8/22/2001		8/22/2001	
QC Identifier	Field Dup. CMS-GW-MW10D-02		Field Dup. CMS-GW-MW10DF-02		Field Dup. CMS-GW-MW10D-02		Field Dup. CMS-GW-MW10DF-02		None		None		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Tetrachloroethene	10	U		NA	10	U		NA	10	U		NA	10	U
Toluene	10	U		NA	10	U		NA	10	U		NA	10	U
Total Xylenes	10	U		NA	10	U		NA	10	U		NA	10	U
trans-1,2-Dichloroethene	10	UJ		NA	10	UJ		NA	10	UJ		NA	10	UJ
trans-1,3-Dichloropropene	10	U		NA	10	U		NA	10	U		NA	10	U
Trichloroethene	10	U		NA	10	U		NA	10	U		NA	10	U
Trichlorofluoromethane	10	U		NA	10	U		NA	10	U		NA	10	U
Vinyl Chloride	10	U		NA	10	U		NA	10	U		NA	10	U
Semivolatile Organic Analysis (UG/L)	A0925				A0B61				A0920				A0917	
1,1'-Biphenyl	10	U		NA	10	U		NA	10	U		NA	10	U
2,2'-oxybis(1-Chloropropane)	10	UJ		NA	10	UJ		NA	10	U		NA	10	U
2,4,5-Trichlorophenol	25	U		NA	25	U		NA	25	U		NA	25	U
2,4,6-Trichlorophenol	10	U		NA	10	U		NA	10	U		NA	10	U
2,4-Dichlorophenol	10	U		NA	10	U		NA	10	U		NA	10	U
2,4-Dimethylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
2,4-Dinitrophenol	25	UJ		NA	25	UJ		NA	25	UJ		NA	25	UJ
2,4-Dinitrotoluene	10	U		NA	10	U		NA	10	U		NA	10	U
2,6-Dinitrotoluene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Chloronaphthalene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Chlorophenol	10	U		NA	10	U		NA	10	U		NA	10	U
2-Methylnaphthalene	10	U		NA	10	U		NA	10	U		NA	10	U
2-Methylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
2-Nitroaniline	25	U		NA	25	U		NA	25	U		NA	25	U
2-Nitrophenol	10	U		NA	10	U		NA	10	U		NA	10	U
3,3'-Dichlorobenzidine	10	U		NA	10	U		NA	10	U		NA	10	U
3-Nitroaniline	25	U		NA	25	U		NA	25	U		NA	25	U
4,6-Dinitro-2-methylphenol	25	U		NA	25	U		NA	25	U		NA	25	U
4-Bromophenyl-phenylether	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chloro-3-methylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chloroaniline	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chlorophenyl-phenylether	10	U		NA	10	U		NA	10	U		NA	10	U
4-Methylphenol	10	U		NA	10	U		NA	10	U		NA	10	U
4-Nitroaniline	25	U		NA	25	U		NA	25	U		NA	25	U
4-Nitrophenol	25	U		NA	25	U		NA	25	U		NA	25	U
Acenaphthene	10	U		NA	10	U		NA	10	U		NA	10	U
Acenaphthylene	10	U		NA	10	U		NA	10	U		NA	10	U
Acetophenone	10	U		NA	10	U		NA	10	U		NA	10	U
Anthracene	10	U		NA	10	U		NA	10	U		NA	10	U
Atrazine	10	UJ		NA	10	UJ		NA	10	UJ		NA	10	UJ
Benzaldehyde	10	UJ		NA	10	UJ		NA	10	UJ		NA	10	UJ
Benzo(a)anthracene	10	U		NA	10	U		NA	10	U		NA	10	U

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW10D-02		CMS-GW-MW10DF-02		CMS-GW-DUP04-02		CMS-GW-DUP04F-02		CMS-GW-MW11B-02		CMS-GW-MW11BF-02		CMS-GW-MW11M-02	
Sample Location	MW10D		MW10D		MW10D		MW10D		MW11B		MW11B		MW11M	
Date Sampled	8/23/2001		8/23/2001		8/23/2001		8/23/2001		8/22/2001		8/22/2001		8/22/2001	
QC Identifier	Field Dup. CMS-GW-MW10D-02		Field Dup. CMS-GW-MW10DF-02		Field Dup. CMS-GW-MW10D-02		Field Dup. CMS-GW-MW10DF-02		None		None		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Benzo(a)pyrene	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(b)fluoranthene	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(g,h,i)perylene	10	U		NA	10	U		NA	10	UJ		NA	10	UJ
Benzo(k)fluoranthene	10	U		NA	10	U		NA	10	U		NA	10	U
Bis(2-Chloroethoxy)methane	10	U		NA	10	U		NA	10	U		NA	10	U
Bis(2-Chloroethyl)ether	10	U		NA	10	U		NA	10	U		NA	10	U
bis(2-Ethylhexyl)phthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Butylbenzylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Caprolactam	10	UJ		NA	10	UJ		NA	10	U		NA	10	U
Carbazole	10	U		NA	10	U		NA	10	U		NA	10	U
Chrysene	10	U		NA	10	U		NA	10	U		NA	10	U
Di-n-Butylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Di-n-octylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Dibenzo(a,h)anthracene	10	U		NA	10	U		NA	10	U		NA	10	U
Dibenzofuran	10	U		NA	10	U		NA	10	U		NA	10	U
Diethylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Dimethylphthalate	10	U		NA	10	U		NA	10	U		NA	10	U
Fluoranthene	10	U		NA	10	U		NA	10	U		NA	10	U
Fluorene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorobutadiene	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorocyclopentadiene	10	UJ		NA	10	UJ		NA	10	UJ		NA	10	UJ
Hexachloroethane	10	U		NA	10	U		NA	10	U		NA	10	U
Indeno(1,2,3-cd)pyrene	10	U		NA	10	U		NA	10	U		NA	10	U
Isophorone	10	U		NA	10	U		NA	10	U		NA	10	U
N-Nitroso-di-n-propylamine	10	U		NA	10	U		NA	10	U		NA	10	U
N-Nitroso-diphenylamine	10	U		NA	10	U		NA	10	U		NA	10	U
Naphthalene	10	U		NA	10	U		NA	10	U		NA	10	U
Nitrobenzene	10	U		NA	10	U		NA	10	U		NA	10	U
Pentachlorophenol	25	U		NA	25	U		NA	25	U		NA	25	U
Phenanthrene	10	U		NA	10	U		NA	10	U		NA	10	U
Phenol	10	U		NA	10	U		NA	10	U		NA	10	U
Pyrene	10	U		NA	10	U		NA	10	U		NA	10	U
Pesticide/PCB Analysis (UG/L)	A0925				A0B61				A0920				A0917	
4,4'-DDD	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
4,4'-DDE	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
4,4'-DDT	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Aldrin	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
alpha-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
alpha-Chlordane	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Aroclor-1016	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U

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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW10D-02		CMS-GW-MW10DF-02		CMS-GW-DUP04-02		CMS-GW-DUP04F-02		CMS-GW-MW11B-02		CMS-GW-MW11BF-02		CMS-GW-MW11M-02	
Sample Location	MW10D		MW10D		MW10D		MW10D		MW11B		MW11B		MW11M	
Date Sampled	8/23/2001		8/23/2001		8/23/2001		8/23/2001		8/22/2001		8/22/2001		8/22/2001	
QC Identifier	Field Dup. CMS-GW-MW10D-02		Field Dup. CMS-GW-MW10DF-02		Field Dup. CMS-GW-MW10D-02		Field Dup. CMS-GW-MW10DF-02		None		None		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Aroclor-1221	2.0	U		NA	2.0	U		NA	2.0	U		NA	2.0	U
Aroclor-1232	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1242	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1248	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1254	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1260	1.0	U		NA	1.0	U		NA	1.0	U		NA	1.0	U
beta-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
delta-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Dieldrin	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endosulfan I	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Endosulfan II	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endosulfan Sulfate	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin Aldehyde	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin Ketone	0.10	U		NA	0.10	U		NA	0.10	U		NA	0.10	U
gamma-BHC	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
gamma-Chlordane	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Heptachlor	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Heptachlor Epoxide	0.050	U		NA	0.050	U		NA	0.050	U		NA	0.050	U
Methoxychlor	0.50	U		NA	0.50	U		NA	0.50	U		NA	0.50	U
Toxaphene	5.0	U		NA	5.0	U		NA	5.0	U		NA	5.0	U
Dioxin Analysis (pg/L)	D03916				D03917				D03912				D03909	
1,2,3,4,6,7,8-HpCDD	2.9	EMPC		NA	6.5	U		NA	3.6	U		NA	3.8	U
1,2,3,4,6,7,8-HpCDF	3.0	EMPC		NA	3.9	U		NA	1.8	U		NA	1.7	U
1,2,3,4,7,8,9-HpCDF	4.2	UJ		NA	4.8	UJ		NA	2.2	UJ		NA	2.4	UJ
1,2,3,4,7,8-HxCDD	1.7	EMPC		NA	4.3	U		NA	2.3	U		NA	2.3	U
1,2,3,4,7,8-HxCDF	2.8	EMPC		NA	3.0	U		NA	2.9	EMPC		NA	1.5	U
1,2,3,6,7,8-HxCDD	3.3	U		NA	4.5	U		NA	2.4	U		NA	2.4	U
1,2,3,6,7,8-HxCDF	2.5	EMPC		NA	3.1	U		NA	2.8	U		NA	1.5	U
1,2,3,7,8,9-HxCDD	4.1	EMPC		NA	4.4	U		NA	2.4	U		NA	2.3	U
1,2,3,7,8,9-HxCDF	7.5	U		NA	4.0	EMPC		NA	1.8	U		NA	1.9	U
1,2,3,7,8-PeCDD	2.8	U		NA	3.5	U		NA	2.5	U		NA	2.3	U
1,2,3,7,8-PeCDF	5.1	U		NA	2.8	U		NA	1.9	U		NA	1.7	U
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF	2.2	U		NA	3.0	U		NA	1.4	U		NA	1.5	U
2,3,4,7,8-PeCDF	2.2	U		NA	2.7	U		NA	1.8	U		NA	1.8	U
2,3,7,8-TCDD	2.8	U		NA	3.5	U		NA	2.3	U		NA	1.9	U
2,3,7,8-TCDF	2.0	U		NA	2.8	U		NA	1.7	U		NA	1.8	U
OCDD	11.9	U		NA	10.2	EMPC		NA	11.1	EMPC		NA	4.8	U
OCDF	8.7	U		NA	8.7	U		NA	11.6	U		NA	5.1	EMPC
Total HpCDD	2.9	EMPC		NA	6.5	UJ		NA	3.6	UJ		NA	3.8	UJ

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW10D-02		CMS-GW-MW10DF-02		CMS-GW-DUP04-02		CMS-GW-DUP04F-02		CMS-GW-MW11B-02		CMS-GW-MW11BF-02		CMS-GW-MW11M-02	
Sample Location	MW10D		MW10D		MW10D		MW10D		MW11B		MW11B		MW11M	
Date Sampled	8/23/2001		8/23/2001		8/23/2001		8/23/2001		8/22/2001		8/22/2001		8/22/2001	
QC Identifier	Field Dup. CMS-GW-MW10D-02		Field Dup. CMS-GW-MW10DF-02		Field Dup. CMS-GW-MW10D-02		Field Dup. CMS-GW-MW10DF-02		None		None		None	
filtered	Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered	
Total HpCDF	7.3	EMPC		NA	4.3	UJ		NA	2.0	UJ		NA	1.7	UJ
Total HxCDD	38.9	EMPC		NA	4.4	UJ		NA	6.9	EMPC		NA	6.2	EMPC
Total HxCDF	15.2	EMPC		NA	4.0	EMPC		NA	5.7	EMPC		NA	1.6	UJ
Total PeCDD	11.2	EMPC		NA	3.5	UJ		NA	2.5	UJ		NA	2.3	UJ
Total PeCDF	5.1	UJ		NA	2.8	UJ		NA	1.8	UJ		NA	1.6	UJ
Total TCDD	8.5	EMPC		NA	3.5	UJ		NA	14.1	EMPC		NA	44.6	EMPC
Total TCDF	9.9	EMPC		NA	7.5	EMPC		NA	3.9	EMPC		NA	10.8	EMPC
Toxicity Equivalency	0.00	UJ		NA	0.00	UJ		NA	0.00	UJ		NA	0.00	UJ
TAL Metal Analysis (UG/L)	MA09W8		MA09W7		MA09W8		MA09W9		MA0A55		MA0A56		MA0A49	
Aluminum	65.0	U	48.4	U	46.1	U	33.5	U	67.4	U	43.6	U	85.4	U
Antimony	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U
Arsenic	3.4	UJ	2.0	U	2.0	U	3.4	UJ	2.0	U	2.0	U	2.0	U
Barium	55.6		50.9		53.5		53.3		40.6		41.1		126	
Beryllium	0.90	UJ	0.89	UJ	0.90	UJ	0.92	UJ	0.36	UJ	0.40	UJ	0.84	UJ
Cadmium	0.48		0.40	U	0.54		0.65		0.40	U	0.56	J	0.40	U
Calcium	25000		23100		24300		24400		13600		14500		18500	
Chromium	2.9	U	2.0	U	2.8	U	2.3	U	3.0	U	1.1	U	3.1	U
Cobalt	1.2		0.70	U	1.2		0.70	U	0.70	U	0.70	U	0.70	U
Copper	7.3	U	6.9	U	10.3	U	8.0	U	8.1	U	6.4	U	7.1	U
Iron	88.4	U	46.6	U	92.9	U	52.1	U	80.6	U	25.5	UJ	32.3	UJ
Lead	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ
Magnesium	3640		3380		3520		3500		1730		1760		2090	
Manganese	927		850		899		909		110		119		602	
Mercury	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Nickel	156		145		153		152		6.1	U	6.9	U	4.9	U
Potassium	5120	J	4630	J	4900	J	4890	J	2630	J	2760	J	3200	J
Selenium	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ
Silver	0.70	U	0.73		0.73		1.1		0.70	U	0.70	U	0.70	U
Sodium	63300		58900		61300		61400		16600		17300		30500	
Thallium	5.6	U	5.6	U	5.6	U	5.6	U	5.6	UJ	5.6	UJ	5.6	UJ
Vanadium	0.90	U	0.90	U	0.90	U	0.90	U	0.90	U	0.90	U	0.90	U
Zinc	27.2	U	20.7	U	23.8	U	26.0	U	54.9	U	65.2	U	25.9	U
Wet Chemistry Analysis (MG/L)	D03916				D03917				D03912				D03909	
Alkalinity	20.0			NA	20.0			NA	20.0			NA	20.0	
Sulfide	2.0	U		NA	3.0			NA	2.0			NA	2.0	
Total Organic Carbon	2.0			NA	2.0			NA	18.0			NA	3.0	

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Sample Number	CMS-GW-MW11MF-02		CMS-GW-MW11S-02		CMS-GW-MW11SF-02		CMS-GW-MW12B-02		CMS-GW-MW12BF-02		CMS-GW-DUP03-02		CMS-GW-DUP03F-02	
Sample Location	MW11M		MW11S		MW11S		MW12B		MW12B		MW12B		MW12B	
Date Sampled	8/22/2001		8/22/2001		8/22/2001		8/22/2001		8/22/2001		8/22/2001		8/22/2001	
QC Identifier	None		None		None		Field Dup. CMS-GW-MW12B-02		Field Dup. CMS-GW-MW12BF-02		Field Dup. CMS-GW-MW12B-02		Field Dup. CMS-GW-MW12BF-02	
Filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Volatile Organic Analysis (UG/L)			A0923				A0918				A0919			
1,1,1-Trichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1,2,2-Tetrachloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1,2-Trichloro-1,2,2-trifluoroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1,2-Trichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1-Dichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,1-Dichloroethene		NA	10	U		NA	10	U		NA	10	U		NA
1,2,4-Trichlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dibromo-3-chloropropane		NA	10	U		NA	10	UJ		NA	10	UJ		NA
1,2-Dibromoethane		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dichlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dichloroethane		NA	10	U		NA	10	U		NA	10	U		NA
1,2-Dichloropropane		NA	10	U		NA	10	U		NA	10	U		NA
1,3-Dichlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
1,4-Dichlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
2-Butanone		NA	10	UJ		NA	10	UJ		NA	10	UJ		NA
2-Hexanone		NA	10	U		NA	10	UJ		NA	10	UJ		NA
4-Methyl-2-Pentanone		NA	10	U		NA	10	UJ		NA	10	UJ		NA
Acetone		NA	16	UJ		NA	10	UJ		NA	10	UJ		NA
Benzene		NA	10	U		NA	10	U		NA	10	U		NA
Bromodichloromethane		NA	10	U		NA	10	U		NA	10	U		NA
Bromoform		NA	10	U		NA	10	U		NA	10	U		NA
Bromomethane		NA	10	U		NA	10	U		NA	10	U		NA
Carbon Disulfide		NA	10	U		NA	10	UJ		NA	10	UJ		NA
Carbon Tetrachloride		NA	10	U		NA	10	U		NA	10	U		NA
Chlorobenzene		NA	10	U		NA	10	U		NA	10	U		NA
Chloroethane		NA	10	U		NA	10	U		NA	10	U		NA
Chloroform		NA	10	U		NA	10	U		NA	10	U		NA
Chloromethane		NA	10	U		NA	10	U		NA	10	U		NA
cis-1,2-Dichloroethene		NA	10	U		NA	10	U		NA	10	U		NA
cis-1,3-Dichloropropene		NA	10	U		NA	10	U		NA	10	U		NA
Cyclohexane		NA	10	U		NA	10	U		NA	10	U		NA
Dibromochloromethane		NA	10	U		NA	10	U		NA	10	U		NA
Dichlorodifluoromethane		NA	10	U		NA	10	U		NA	10	U		NA
Ethylbenzene		NA	10	U		NA	10	U		NA	10	U		NA
Isopropylbenzene		NA	10	U		NA	10	U		NA	10	U		NA
Methyl Acetate		NA	10	U		NA	10	U		NA	10	U		NA
Methyl tert-Butyl Ether		NA	10	U		NA	10	U		NA	10	U		NA
Methylcyclohexane		NA	10	U		NA	10	U		NA	10	U		NA
Methylene Chloride		NA	10	U		NA	10	UJ		NA	10	UJ		NA
Styrene		NA	10	U		NA	10	U		NA	10	U		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW11MF-02		CMS-GW-MW11S-02		CMS-GW-MW11SF-02		CMS-GW-MW12B-02		CMS-GW-MW12BF-02		CMS-GW-DUP03-02		CMS-GW-DUP03F-02	
Sample Location	MW11M		MW11S		MW11S		MW12B		MW12B		MW12B		MW12B	
Date Sampled	8/22/2001		8/22/2001		8/22/2001		8/22/2001		8/22/2001		8/22/2001		8/22/2001	
QC Identifier	None		None		None		Field Dup. CMS-GW-MW12B-02		Field Dup. CMS-GW-MW12BF-02		Field Dup. CMS-GW-MW12B-02		Field Dup. CMS-GW-MW12BF-02	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Tetrachloroethene		NA	10	U		NA	10	U		NA	10	U		NA
Toluene		NA	10	U		NA	10	U		NA	10	U		NA
Total Xylenes		NA	10	U		NA	10	U		NA	10	U		NA
trans-1,2-Dichloroethene		NA	10	UJ		NA	10	UJ		NA	10	UJ		NA
trans-1,3-Dichloropropene		NA	10	U		NA	10	U		NA	10	U		NA
Trichloroethene		NA	10	U		NA	10	U		NA	10	U		NA
Trichlorofluoromethane		NA	10	U		NA	10	U		NA	10	U		NA
Vinyl Chloride		NA	10	U		NA	10	U		NA	10	U		NA
Semivolatile Organic Analysis (UG/L)			A0923				A0918				A0919			
1,1'-Biphenyl		NA	10	U		NA	10	U		NA	10	U		NA
2,2'-oxybis(1-Chloropropane)		NA	10	U		NA	10	UJ		NA	10	U		NA
2,4,5-Trichlorophenol		NA	25	U		NA	25	U		NA	25	U		NA
2,4,6-Trichlorophenol		NA	10	U		NA	10	U		NA	10	U		NA
2,4-Dichlorophenol		NA	10	U		NA	10	U		NA	10	U		NA
2,4-Dimethylphenol		NA	10	U		NA	10	U		NA	10	U		NA
2,4-Dinitrophenol		NA	25	UJ		NA	25	U		NA	25	UJ		NA
2,4-Dinitrotoluene		NA	10	U		NA	10	U		NA	10	U		NA
2,6-Dinitrotoluene		NA	10	U		NA	10	U		NA	10	U		NA
2-Chloronaphthalene		NA	10	U		NA	10	U		NA	10	U		NA
2-Chlorophenol		NA	10	U		NA	10	U		NA	10	U		NA
2-Methylnaphthalene		NA	10	U		NA	10	U		NA	10	U		NA
2-Methylphenol		NA	10	U		NA	10	U		NA	10	U		NA
2-Nitroaniline		NA	25	U		NA	25	U		NA	25	U		NA
2-Nitrophenol		NA	10	U		NA	10	U		NA	10	U		NA
3,3'-Dichlorobenzidine		NA	10	U		NA	10	U		NA	10	U		NA
3-Nitroaniline		NA	25	U		NA	25	U		NA	25	U		NA
4,6-Dinitro-2-methylphenol		NA	25	U		NA	25	U		NA	25	U		NA
4-Bromophenyl-phenylether		NA	10	U		NA	10	U		NA	10	U		NA
4-Chloro-3-methylphenol		NA	10	U		NA	10	U		NA	10	U		NA
4-Chloroaniline		NA	10	U		NA	10	U		NA	10	U		NA
4-Chlorophenyl-phenylether		NA	10	U		NA	10	U		NA	10	U		NA
4-Methylphenol		NA	10	U		NA	10	U		NA	10	U		NA
4-Nitroaniline		NA	25	U		NA	25	U		NA	25	U		NA
4-Nitrophenol		NA	25	U		NA	25	U		NA	25	U		NA
Acenaphthene		NA	10	U		NA	10	U		NA	10	U		NA
Acenaphthylene		NA	10	U		NA	10	U		NA	10	U		NA
Acetophenone		NA	10	UJ		NA	10	U		NA	10	U		NA
Anthracene		NA	10	U		NA	10	U		NA	10	U		NA
Atrazine		NA	10	UJ		NA	10	UJ		NA	10	UJ		NA
Benzaldehyde		NA	10	UJ		NA	10	UJ		NA	10	UJ		NA
Benzo(a)anthracene		NA	10	U		NA	10	U		NA	10	U		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW11MF-02		CMS-GW-MW11S-02		CMS-GW-MW11SF-02	CMS-GW-MW12B-02		CMS-GW-MW12BF-02	CMS-GW-DUP03-02		CMS-GW-DUP03F-02	
Sample Location	MW11M		MW11S		MW11S	MW12B		MW12B	MW12B		MW12B	
Date Sampled	8/22/2001		8/22/2001		8/22/2001	8/22/2001		8/22/2001	8/22/2001		8/22/2001	
QC Identifier	None		None		None	Field Dup. CMS-GW-MW12B-02		Field Dup. CMS-GW-MW12BF-02	Field Dup. CMS-GW-MW12B-02		Field Dup. CMS-GW-MW12BF-02	
filtered	Filtered		Unfiltered		Filtered	Unfiltered		Filtered	Unfiltered		Filtered	
Benzo(a)pyrene		NA	10	U		NA	10 U		NA	10 U		NA
Benzo(b)fluoranthene		NA	10	U		NA	10 U		NA	10 U		NA
Benzo(g,h,i)perylene		NA	10	U		NA	10 U		NA	10 UJ		NA
Benzo(k)fluoranthene		NA	10	U		NA	10 U		NA	10 U		NA
Bis(2-Chloroethoxy)methane		NA	10	U		NA	10 U		NA	10 U		NA
Bis(2-Chloroethyl)ether		NA	10	U		NA	10 U		NA	10 U		NA
bis(2-Ethylhexyl)phthalate		NA	10	U		NA	10 U		NA	10 U		NA
Butylbenzylphthalate		NA	10	U		NA	10 U		NA	10 U		NA
Caprolactam		NA	10	UJ		NA	10 U		NA	10 U		NA
Carbazole		NA	10	U		NA	10 U		NA	10 U		NA
Chrysene		NA	10	U		NA	10 U		NA	10 U		NA
Di-n-Butylphthalate		NA	10	U		NA	10 U		NA	10 U		NA
Di-n-octylphthalate		NA	10	U		NA	10 U		NA	10 U		NA
Dibenzo(a,h)anthracene		NA	10	U		NA	10 U		NA	10 U		NA
Dibenzofuran		NA	10	U		NA	10 U		NA	10 U		NA
Diethylphthalate		NA	10	U		NA	10 U		NA	10 U		NA
Dimethylphthalate		NA	10	U		NA	10 U		NA	10 U		NA
Fluoranthene		NA	10	U		NA	10 U		NA	10 U		NA
Fluorene		NA	10	U		NA	10 U		NA	10 U		NA
Hexachlorobenzene		NA	10	U		NA	10 U		NA	10 U		NA
Hexachlorobutadiene		NA	10	U		NA	10 U		NA	10 U		NA
Hexachlorocyclopentadiene		NA	10	UJ		NA	10 U		NA	10 UJ		NA
Hexachloroethane		NA	10	U		NA	10 U		NA	10 U		NA
Indeno(1,2,3-cd)pyrene		NA	10	U		NA	10 U		NA	10 U		NA
Isophorone		NA	10	U		NA	10 U		NA	10 U		NA
N-Nitroso-di-n-propylamine		NA	10	U		NA	10 U		NA	10 U		NA
N-Nitroso-diphenylamine		NA	10	U		NA	10 U		NA	10 U		NA
Naphthalene		NA	10	U		NA	10 U		NA	10 U		NA
Nitrobenzene		NA	10	U		NA	10 U		NA	10 U		NA
Pentachlorophenol		NA	25	U		NA	25 U		NA	25 U		NA
Phenanthrene		NA	10	U		NA	10 U		NA	10 U		NA
Phenol		NA	10	U		NA	10 U		NA	10 U		NA
Pyrene		NA	10	U		NA	10 U		NA	10 U		NA
Pesticide/PCB Analysis (UG/L)			A0923				A0918			A0919		
4,4'-DDD		NA	0.10	U		NA	0.10 U		NA	0.10 U		NA
4,4'-DDE		NA	0.10	U		NA	0.10 U		NA	0.10 U		NA
4,4'-DDT		NA	0.10	U		NA	0.10 U		NA	0.10 U		NA
Aldrin		NA	0.050	U		NA	0.050 U		NA	0.050 U		NA
alpha-BHC		NA	0.050	U		NA	0.050 U		NA	0.050 U		NA
alpha-Chlordane		NA	0.050	U		NA	0.050 U		NA	0.050 U		NA
Aroclor-1016		NA	1.0	U		NA	1.0 U		NA	1.0 U		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW11MF-02		CMS-GW-MW11S-02		CMS-GW-MW11SF-02		CMS-GW-MW12B-02		CMS-GW-MW12BF-02		CMS-GW-DUP03-02		CMS-GW-DUP03F-02	
Sample Location	MW11M		MW11S		MW11S		MW12B		MW12B		MW12B		MW12B	
Date Sampled	8/22/2001		8/22/2001		8/22/2001		8/22/2001		8/22/2001		8/22/2001		8/22/2001	
QC identifier	None		None		None		Field Dup. CMS-GW-MW12B-02		Field Dup. CMS-GW-MW12BF-02		Field Dup. CMS-GW-MW12B-02		Field Dup. CMS-GW-MW12BF-02	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Aroclor-1221		NA	2.0	U		NA	2.0	U		NA	2.0	U		NA
Aroclor-1232		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1242		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1248		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1254		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1260		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA
beta-BHC		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
delta-BHC		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Dieldrin		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endosulfan I		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Endosulfan II		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endosulfan Sulfate		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin Aldehyde		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin Ketone		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA
gamma-BHC		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
gamma-Chlordane		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Heptachlor		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Heptachlor Epoxide		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA
Methoxychlor		NA	0.50	U		NA	0.50	U		NA	0.50	U		NA
Toxaphene		NA	5.0	U		NA	5.0	U		NA	5.0	U		NA
Dioxin Analysis (pg/L)			D03914				D03910				D03911			
1,2,3,4,6,7,8-HpCDD		NA	3.7	U		NA	2.8	EMPC		NA	4.2	U		NA
1,2,3,4,6,7,8-HpCDF		NA	2.1	U		NA	1.8	U		NA	5.8	U		NA
1,2,3,4,7,8,9-HpCDF		NA	2.4	UJ		NA	1.9	UJ		NA	2.5	UJ		NA
1,2,3,4,7,8-HxCDD		NA	2.5	U		NA	2.1	U		NA	2.6	U		NA
1,2,3,4,7,8-HxCDF		NA	1.5	U		NA	2.8	EMPC		NA	3.1	U		NA
1,2,3,6,7,8-HxCDD		NA	2.6	U		NA	1.4	EMPC		NA	2.7	U		NA
1,2,3,6,7,8-HxCDF		NA	1.5	U		NA	3.0	U		NA	1.6	U		NA
1,2,3,7,8,9-HxCDD		NA	2.4	U		NA	2.1	U		NA	2.6	U		NA
1,2,3,7,8,9-HxCDF		NA	1.8	U		NA	1.5	U		NA	2.0	U		NA
1,2,3,7,8-PeCDD		NA	1.5	EMPC		NA	1.9	U		NA	2.8	U		NA
1,2,3,7,8-PeCDF		NA	1.9	U		NA	3.7	U		NA	3.9	U		NA
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF		NA	1.5	U		NA	1.2	U		NA	1.6	U		NA
2,3,4,7,8-PeCDF		NA	1.8	U		NA	1.7	EMPC		NA	1.9	U		NA
2,3,7,8-TCDD		NA	2.2	U		NA	2.2	EMPC		NA	4.7	U		NA
2,3,7,8-TCDF		NA	1.5	U		NA	1.1	U		NA	1.7	U		NA
OCDD		NA	7.4	U		NA	13.2	U		NA	19.5	U		NA
OCDF		NA	5.2	U		NA	11.0	EMPC		NA	17.2	U		NA
Total HpCDD		NA	3.7	UJ		NA	2.8	EMPC		NA	9.1	EMPC		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW11MF-02		CMS-GW-MW11S-02		CMS-GW-MW11SF-02		CMS-GW-MW12B-02		CMS-GW-MW12BF-02		CMS-GW-DUP03-02		CMS-GW-DUP03F-02	
Sample Location	MW11M		MW11S		MW11S		MW12B		MW12B		MW12B		MW12B	
Date Sampled	8/22/2001		8/22/2001		8/22/2001		8/22/2001		8/22/2001		8/22/2001		8/22/2001	
QC Identifier	None		None		None		Field Dup. CMS-GW-MW12B-02		Field Dup. CMS-GW-MW12BF-02		Field Dup. CMS-GW-MW12B-02		Field Dup. CMS-GW-MW12BF-02	
filtered	Filtered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Total HpCDF		NA	2.3	UJ		NA	1.6	UJ		NA	5.6	UJ		NA
Total HxCDD		NA	29.5	EMPC		NA	8.5	EMPC		NA	6.0	EMPC		NA
Total HxCDF		NA	1.6	UJ		NA	5.9	EMPC		NA	3.1	UJ		NA
Total PeCDD		NA	6.1	EMPC		NA	1.9	UJ		NA	2.8	UJ		NA
Total PeCDF		NA	1.8	UJ		NA	5.3	EMPC		NA	3.9	UJ		NA
Total TCDD		NA	11.1	EMPC		NA	2.2	EMPC		NA	11.2	EMPC		NA
Total TCDF		NA	10.1	EMPC		NA	3.6	EMPC		NA	1.7	UJ		NA
Toxicity Equivalency		NA	0.00	UJ		NA	0.00	UJ		NA	0.00	UJ		NA
TAL Metal Analysis (UG/L)	MA0A50		MA0A59		MA0A60		MA0A51		MA0A52		MA0A53		MA0A54	
Aluminum	106	U	383		70.2	U	4360		465		4980		178	
Antimony	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U
Arsenic	2.0	U	3.5	UJ	2.7	UJ	2.0	U	2.0	U	2.2	UJ	2.0	U
Barium	124		86.7		56.5		88.3		57.3		88.5		51.7	
Beryllium	0.65	UJ	0.92	UJ	0.68	UJ	1.5	UJ	0.72	UJ	1.5	UJ	0.66	UJ
Cadmium	0.40	U	0.40	U	0.40		0.40	U	0.40	U	0.40	U	0.40	U
Calcium	18200		15100		14400		44400		39800		44600		38300	
Chromium	0.60	UJ	20.4	U	2.8	U	13.3	U	5.5	U	15.4	U	4.4	U
Cobalt	0.70	U	5.3		2.2	U	5.3	U	1.2	UJ	6.2	U	0.70	U
Copper	7.8	U	8.8	U	7.1	U	14.0	U	8.8	U	13.7	U	6.2	U
Iron	35.0	UJ	618	U	174	U	4040		800	J	3970		500	J
Lead	1.3	UJ	18.0	U	1.3	UJ	5.3	J	1.3	UJ	4.6	J	1.3	UJ
Magnesium	2060		2060		1930		4350		3100		4500		2670	
Manganese	595		239		209		211		151		210		134	
Mercury	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Nickel	4.6	U	38.7		52.2		12.4	U	6.6	U	14.1	U	7.1	U
Potassium	3100	J	3230	J	3060	J	3730	J	3970	J	3990	J	3680	J
Selenium	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ
Silver	0.70	U	0.70	U	0.82		0.70	U	0.70	U	0.78	UJ	0.70	U
Sodium	30000		32000		31200		43700		49700		42700		45800	
Thallium	5.6	UJ	5.6	U	5.6	U	5.6	UJ	5.6	UJ	5.6	UJ	5.6	UJ
Vanadium	0.90	U	0.90	U	0.90	U	5.7		2.3		6.3		1.9	
Zinc	51.3	U	56.7	U	49.4	U	46.3	U	19.2	U	56.3	U	33.9	U
Wet Chemistry Analysis (MG/L)			D03914				D03910				D03911			
Alkalinity		NA	10.0			NA	130			NA	130			NA
Sulfide		NA	2.0	U		NA	8.0	U		NA	13.0	U		NA
Total Organic Carbon		NA	2.0			NA	5.0			NA	4.0			NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW12D-02		CMS-GW-MW12DF-02		CMS-GW-MW13SF-02		CMS-GW-MW13B-02		CMS-GW-MW13BF-02		CMS-GW-MW13D-02		CMS-GW-MW13DF-02	
Sample Location	MW12D		MW12D		MW13		MW13B		MW13B		MW13D		MW13D	
Date Sampled	8/22/2001		8/22/2001		8/23/2001		8/23/2001		8/23/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Filtered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Volatile Organic Analysis (UG/L)	A0924						A0862				A0885			
1,1,1-Trichloroethane	10	U		NA		NA	10	U		NA	10	U		NA
1,1,2,2-Tetrachloroethane	10	U		NA		NA	10	U		NA	10	U		NA
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U		NA		NA	10	U		NA	10	U		NA
1,1,2-Trichloroethane	10	U		NA		NA	10	U		NA	10	U		NA
1,1-Dichloroethane	10	U		NA		NA	10	U		NA	10	U		NA
1,1-Dichloroethene	10	U		NA		NA	10	U		NA	10	U		NA
1,2,4-Trichlorobenzene	10	U		NA		NA	10	U		NA	10	U		NA
1,2-Dibromo-3-chloropropane	10	U		NA		NA	10	U		NA		R		NA
1,2-Dibromoethane	10	U		NA		NA	10	U		NA	10	U		NA
1,2-Dichlorobenzene	10	U		NA		NA	10	U		NA	10	U		NA
1,2-Dichloroethane	10	U		NA		NA	10	U		NA	10	U		NA
1,2-Dichloropropane	10	U		NA		NA	10	U		NA	10	U		NA
1,3-Dichlorobenzene	10	U		NA		NA	10	U		NA	10	U		NA
1,4-Dichlorobenzene	10	U		NA		NA	10	U		NA	10	U		NA
2-Butanone	10	UJ		NA		NA	10	UJ		NA	10	U		NA
2-Hexanone	10	U		NA		NA	10	U		NA	10	U		NA
4-Methyl-2-Pentanone	10	U		NA		NA	10	U		NA	10	U		NA
Acetone	10	UJ		NA		NA	10	UJ		NA	10	UJ		NA
Benzene	10	U		NA		NA	10	U		NA	10	U		NA
Bromodichloromethane	10	U		NA		NA	10	U		NA	10	U		NA
Bromoform	10	U		NA		NA	10	U		NA	10	U		NA
Bromomethane	10	U		NA		NA	10	U		NA	10	U		NA
Carbon Disulfide	10	U		NA		NA	10	U		NA	10	U		NA
Carbon Tetrachloride	10	U		NA		NA	10	U		NA	10	U		NA
Chlorobenzene	10	U		NA		NA	10	U		NA	10	U		NA
Chloroethane	10	U		NA		NA	10	U		NA	10	U		NA
Chloroform	10	U		NA		NA	10	U		NA	10	U		NA
Chloromethane	10	U		NA		NA	10	U		NA	10	U		NA
cis-1,2-Dichloroethene	10	U		NA		NA	10	U		NA	10	U		NA
cis-1,3-Dichloropropene	10	U		NA		NA	10	U		NA	10	U		NA
Cyclohexane	10	U		NA		NA	10	U		NA	10	U		NA
Dibromochloromethane	10	U		NA		NA	10	U		NA	10	U		NA
Dichlorodifluoromethane	10	U		NA		NA	10	U		NA	10	U		NA
Ethylbenzene	10	U		NA		NA	10	U		NA	10	U		NA
Isopropylbenzene	10	U		NA		NA	10	U		NA	10	U		NA
Methyl Acetate	10	U		NA		NA	10	U		NA	10	U		NA
Methyl tert-Butyl Ether	10	U		NA		NA	10	U		NA	10	U		NA
Methylcyclohexane	10	U		NA		NA	10	U		NA	10	U		NA
Methylene Chloride	10	U		NA		NA	10	U		NA	10	U		NA
Styrene	10	U		NA		NA	10	U		NA	10	U		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW12D-02		CMS-GW-MW12DF-02		CMS-GW-MW13SF-02		CMS-GW-MW13B-02		CMS-GW-MW13BF-02		CMS-GW-MW13D-02		CMS-GW-MW13DF-02	
Sample Location	MW12D		MW12D		MW13		MW13B		MW13B		MW13D		MW13D	
Date Sampled	8/22/2001		8/22/2001		8/23/2001		8/23/2001		8/23/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Filtered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Tetrachloroethene	18			NA		NA	220	*		NA	340	*		NA
Toluene	10	U		NA		NA	10	U		NA	10	U		NA
Total Xylenes	10	U		NA		NA	10	U		NA	10	U		NA
trans-1,2-Dichloroethene	10	UJ		NA		NA	10	UJ		NA	10	U		NA
trans-1,3-Dichloropropene	10	U		NA		NA	10	U		NA	10	U		NA
Trichloroethene	10	U		NA		NA	7	J		NA	6	J		NA
Trichlorofluoromethane	10	U		NA		NA	10	U		NA	10	U		NA
Vinyl Chloride	10	U		NA		NA	10	U		NA	10	U		NA
Semivolatile Organic Analysis (UG/L)	A0924						A0B62				A0B65			
1,1'-Biphenyl	10	U		NA		NA	10	U		NA	10	U		NA
2,2'-oxybis(1-Chloropropane)	10	U		NA		NA	10	UJ		NA	10	U		NA
2,4,5-Trichlorophenol	25	U		NA		NA	25	U		NA	25	U		NA
2,4,6-Trichlorophenol	10	U		NA		NA	10	U		NA	10	U		NA
2,4-Dichlorophenol	10	U		NA		NA	10	U		NA	10	U		NA
2,4-Dimethylphenol	10	U		NA		NA	10	U		NA	10	U		NA
2,4-Dinitrophenol	25	UJ		NA		NA	25	UJ		NA	25	UJ		NA
2,4-Dinitrotoluene	10	U		NA		NA	10	U		NA	10	U		NA
2,6-Dinitrotoluene	10	U		NA		NA	10	U		NA	10	U		NA
2-Chloronaphthalene	10	U		NA		NA	10	U		NA	10	U		NA
2-Chlorophenol	10	U		NA		NA	10	U		NA	10	U		NA
2-Methylnaphthalene	10	U		NA		NA	10	U		NA	10	U		NA
2-Methylphenol	10	U		NA		NA	10	U		NA	10	U		NA
2-Nitroaniline	25	U		NA		NA	25	U		NA	25	U		NA
2-Nitrophenol	10	U		NA		NA	10	U		NA	10	U		NA
3,3'-Dichlorobenzidine	10	U		NA		NA	10	U		NA	10	U		NA
3-Nitroaniline	25	U		NA		NA	25	U		NA	25	U		NA
4,6-Dinitro-2-methylphenol	25	U		NA		NA	25	U		NA	25	U		NA
4-Bromophenyl-phenylether	10	U		NA		NA	10	U		NA	10	U		NA
4-Chloro-3-methylphenol	10	U		NA		NA	10	U		NA	10	U		NA
4-Chloroaniline	10	U		NA		NA	10	U		NA	10	U		NA
4-Chlorophenyl-phenylether	10	U		NA		NA	10	U		NA	10	U		NA
4-Methylphenol	10	U		NA		NA	10	U		NA	10	U		NA
4-Nitroaniline	25	U		NA		NA	25	U		NA	25	U		NA
4-Nitrophenol	25	U		NA		NA	25	U		NA	25	U		NA
Acenaphthene	10	U		NA		NA	10	U		NA	10	U		NA
Acenaphthylene	10	U		NA		NA	10	U		NA	10	U		NA
Acetophenone	10	UJ		NA		NA	10	U		NA	10	UJ		NA
Anthracene	10	U		NA		NA	10	U		NA	10	U		NA
Atrazine	10	UJ		NA		NA	10	UJ		NA	10	UJ		NA
Benzaldehyde	10	UJ		NA		NA	10	UJ		NA	10	UJ		NA
Benzo(a)anthracene	10	U		NA		NA	10	U		NA	10	U		NA

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GROUNDWATER RESULTS
NOVEMBER 2000 - OCTOBER 2001
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW12D-02		CMS-GW-MW12DF-02		CMS-GW-MW13SF-02		CMS-GW-MW13B-02		CMS-GW-MW13BF-02		CMS-GW-MW13D-02		CMS-GW-MW13DF-02	
Sample Location	MW12D		MW12D		MW13		MW13B		MW13B		MW13D		MW13D	
Date Sampled	8/22/2001		8/22/2001		8/23/2001		8/23/2001		8/23/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Filtered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Benzo(a)pyrene	10	U		NA		NA	10	U		NA	10	U		NA
Benzo(b)fluoranthene	10	U		NA		NA	10	U		NA	10	U		NA
Benzo(g,h,i)perylene	10	U		NA		NA	10	U		NA	10	U		NA
Benzo(k)fluoranthene	10	U		NA		NA	10	U		NA	10	U		NA
Bis(2-Chloroethoxy)methane	10	U		NA		NA	10	U		NA	10	U		NA
Bis(2-Chloroethyl)ether	10	U		NA		NA	10	U		NA	10	U		NA
bis(2-Ethylhexyl)phthalate	10	U		NA		NA	10	U		NA	31			NA
Butylbenzylphthalate	10	U		NA		NA	10	U		NA	10	U		NA
Caprolactam	10	UJ		NA		NA	10	UJ		NA	10	UJ		NA
Carbazole	10	U		NA		NA	10	U		NA	10	U		NA
Chrysene	10	U		NA		NA	10	U		NA	10	U		NA
Di-n-Butylphthalate	10	U		NA		NA	10	U		NA	10	U		NA
Di-n-octylphthalate	10	U		NA		NA	10	U		NA	10	U		NA
Dibenzo(a,h)anthracene	10	U		NA		NA	10	U		NA	10	U		NA
Dibenzofuran	10	U		NA		NA	10	U		NA	10	U		NA
Diethylphthalate	10	U		NA		NA	10	U		NA	10	U		NA
Dimethylphthalate	10	U		NA		NA	10	U		NA	10	U		NA
Fluoranthene	10	U		NA		NA	10	U		NA	10	U		NA
Fluorene	10	U		NA		NA	10	U		NA	10	U		NA
Hexachlorobenzene	10	U		NA		NA	10	U		NA	10	U		NA
Hexachlorobutadiene	10	U		NA		NA	10	U		NA	10	U		NA
Hexachlorocyclopentadiene	10	UJ		NA		NA	10	UJ		NA	10	UJ		NA
Hexachloroethane	10	U		NA		NA	10	U		NA	10	U		NA
Indeno(1,2,3-cd)pyrene	10	U		NA		NA	10	U		NA	10	U		NA
Isophorone	10	U		NA		NA	10	U		NA	10	U		NA
N-Nitroso-di-n-propylamine	10	U		NA		NA	10	U		NA	10	U		NA
N-Nitroso-diphenylamine	10	U		NA		NA	10	U		NA	10	U		NA
Naphthalene	10	U		NA		NA	10	U		NA	10	U		NA
Nitrobenzene	10	U		NA		NA	10	U		NA	10	U		NA
Pentachlorophenol	25	U		NA		NA	25	U		NA	25	U		NA
Phenanthrene	10	U		NA		NA	10	U		NA	10	U		NA
Phenol	10	U		NA		NA	10	U		NA	10	U		NA
Pyrene	10	U		NA		NA	10	U		NA	10	U		NA
Pesticide/PCB Analysis (UG/L)	A0824						A0862				A0865			
4,4'-DDD	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
4,4'-DDE	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
4,4'-DDT	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
Aldrin	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
alpha-BHC	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
alpha-Chlordane	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
Aroclor-1016	1.0	U		NA		NA	1.0	U		NA	1.0	U		NA

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NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW12D-02		CMS-GW-MW12DF-02		CMS-GW-MW13SF-02		CMS-GW-MW13B-02		CMS-GW-MW13BF-02		CMS-GW-MW13D-02		CMS-GW-MW13DF-02	
Sample Location	MW12D		MW12D		MW13		MW13B		MW13B		MW13D		MW13D	
Date Sampled	8/22/2001		8/22/2001		8/23/2001		8/23/2001		8/23/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Filtered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Aroclor-1221	2.0	U		NA		NA	2.0	U		NA	2.0	U		NA
Aroclor-1232	1.0	U		NA		NA	1.0	U		NA	1.0	U		NA
Aroclor-1242	1.0	U		NA		NA	1.0	U		NA	1.0	U		NA
Aroclor-1248	1.0	U		NA		NA	1.0	U		NA	1.0	U		NA
Aroclor-1254	1.0	U		NA		NA	1.0	U		NA	1.0	U		NA
Aroclor-1260	1.0	U		NA		NA	1.0	U		NA	1.0	U		NA
beta-BHC	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
delta-BHC	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
Dieldrin	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
Endosulfan I	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
Endosulfan II	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
Endosulfan Sulfate	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
Endrin	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
Endrin Aldehyde	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
Endrin Ketone	0.10	U		NA		NA	0.10	U		NA	0.10	U		NA
gamma-BHC	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
gamma-Chlordane	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
Heptachlor	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
Heptachlor Epoxide	0.050	U		NA		NA	0.050	U		NA	0.050	U		NA
Methoxychlor	0.50	U		NA		NA	0.50	U		NA	0.50	U		NA
Toxaphene	5.0	U		NA		NA	5.0	U		NA	5.0	U		NA
Dioxin Analysis (pg/L)	D03915						D03918				D04062			
1,2,3,4,6,7,8-HpCDD	3.9	U		NA		NA	3.6	U		NA	3.8	U		NA
1,2,3,4,6,7,8-HpCDF	2.4	U		NA		NA	2.4	U		NA	8.2	U		NA
1,2,3,4,7,8,9-HpCDF	2.7	UJ		NA		NA	2.9	UJ		NA	2.3	UJ		NA
1,2,3,4,7,8-HxCDD	2.7	U		NA		NA	2.4	U		NA	2.5	U		NA
1,2,3,4,7,8-HxCDF	1.3	U		NA		NA	1.8	U		NA	3.4	EMPC		NA
1,2,3,6,7,8-HxCDD	2.6	U		NA		NA	2.5	U		NA	2.6	U		NA
1,2,3,6,7,8-HxCDF	1.8	U		NA		NA	1.8	U		NA	1.8	U		NA
1,2,3,7,8,9-HxCDD	2.7	U		NA		NA	2.4	U		NA	2.4	U		NA
1,2,3,7,8,9-HxCDF	2.1	U		NA		NA	2.1	U		NA	1.8	U		NA
1,2,3,7,8-PeCDD	2.7	U		NA		NA	1.9	U		NA	2.4	U		NA
1,2,3,7,8-PeCDF	2.3	U		NA		NA	1.8	U		NA	2.0	U		NA
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF	1.7	U		NA		NA	1.7	U		NA	1.5	U		NA
2,3,4,7,8-PeCDF	2.1	U		NA		NA	1.5	U		NA	1.8	U		NA
2,3,7,8-TCDD	2.7	U		NA		NA	1.9	U		NA	2.3	U		NA
2,3,7,8-TCDF	1.8	U		NA		NA	1.8	U		NA	1.6	U		NA
OCDD	6.2	U		NA		NA	5.2	U		NA	6.7	EMPC		NA
OCDF	5.4	U		NA		NA	4.2	U		NA	32.3	EMPC		NA
Total HpCDD	3.9	UJ		NA		NA	3.6	UJ		NA	3.8	UJ		NA

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GROUNDWATER RESULTS
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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW12D-02		CMS-GW-MW12DF-02		CMS-GW-MW13SF-02		CMS-GW-MW13B-02		CMS-GW-MW13BF-02		CMS-GW-MW13D-02		CMS-GW-MW13DF-02	
Sample Location	MW12D		MW12D		MW13		MW13B		MW13B		MW13D		MW13D	
Date Sampled	8/22/2001		8/22/2001		8/23/2001		8/23/2001		8/23/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Filtered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Total HpCDF	2.5	UJ		NA		NA	2.6	UJ		NA	8.2	UJ		NA
Total HxCDD	31.1	EMPC		NA		NA	11.2	EMPC		NA	29.7	EMPC		NA
Total HxCDF	1.3	UJ		NA		NA	1.8	UJ		NA	3.4	EMPC		NA
Total PeCDD	13.9	EMPC		NA		NA	1.9	UJ		NA	12.5	EMPC		NA
Total PeCDF	2.2	UJ		NA		NA	1.6	UJ		NA	4.6	UJ		NA
Total TCDD	15.6	EMPC		NA		NA	1.9	UJ		NA	7.8	EMPC		NA
Total TCDF	7.8	EMPC		NA		NA	4.5	EMPC		NA	1.5	EMPC		NA
Toxicity Equivalency	0.00	UJ		NA		NA	0.00	UJ		NA	0.00	UJ		NA
TAL Metal Analysis (UG/L)	MA09W4		MA09W5		MA08T0		MA09W1		MA09W2		MA05D6		MA05D7	
Aluminum	37.5	U	19.0	U	12.6	U	130		105		112		10.0	U
Antimony	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U
Arsenic	2.6	UJ	2.0	U	2.0	U	2.6	UJ	3.3	UJ	2.0	U	2.0	U
Barium	32.6		32.3		103		56.6		57.3		64.6		56.0	
Beryllium	0.79	UJ	0.76	UJ	1.1	UJ	1.1	UJ	1.0	UJ	0.66	UJ	0.66	UJ
Cadmium	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Calcium	13500		13600		41200		56700		56500		43600		38000	
Chromium	0.90	UJ	6.9	U	6.6	U	0.70	UJ	114		35.9	U	22.4	U
Cobalt	0.70	U	1.2	UJ	0.70	U	1.7		1.9	U	0.70	U	0.95	UJ
Copper	6.1	U	7.2	U	7.2	U	9.6	U	7.6	U	6.5	U	9.4	U
Iron	89.4	U	105	U	47.2	U	126	U	554	U	370	U	109	U
Lead	3.6	UJ	3.5	UJ	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ
Magnesium	1930		1920		3720		3780		3800		3810		3440	
Manganese	134		134		47.0		215		220		53.6		35.5	
Mercury	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Nickel	2.9	U	6.9	U	6.6	U	2.9	U	82.6		26.5	U	19.4	U
Potassium	2490	J	2450	J	5010	J	4930	J	4940	J	4320	J	3690	J
Selenium	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ
Silver	0.70	U	1.4		0.72		0.76		0.70	U	0.88		1.1	
Sodium	26200		26000		64000		53000		53600		63400		57500	
Thallium	5.6	U	5.6	U	5.6	U	5.6	U	5.6	U	5.6	U	5.6	U
Vanadium	0.90	U	0.90	U	0.90	U	1.4		0.90	U	0.90	U	0.90	U
Zinc	30.3	U	18.3	U	18.6	U	23.5	U	34.1	U	15.2	U	15.5	U
Wet Chemistry Analysis (MG/L)	D03915						D03918				D04062			
Alkalinity	20.0			NA		NA	96.0			NA	60.0			NA
Sulfide	4.0			NA		NA	2.0	U		NA	2.0	U		NA
Total Organic Carbon	1.0			NA		NA	1.0			NA	2.0			NA

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GROUNDWATER RESULTS
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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW13S-02		CMS-GW-MW14M-02		CMS-GW-MW14MF-02		CMS-GW-MW15D-02		CMS-GW-MW15DF-02		CMS-GW-TMW3-02		CMS-GW-TMW3F-02	
Sample Location	MW13S		MW14M		MW14M		MW15D		MW15D		TMW3		TMW3	
Date Sampled	8/23/2001		8/21/2001		8/21/2001		8/21/2001		8/21/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Volatile Organic Analysis (UG/L)	A0868		A0913				A0912				A0864			
1,1,1-Trichloroethane	10	U	10	U		NA	10	U		NA	10	U		NA
1,1,2,2-Tetrachloroethane	10	U	10	U		NA	10	U		NA	10	U		NA
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	10	U		NA	10	U		NA	10	U		NA
1,1,2-Trichloroethane	10	U	10	U		NA	10	U		NA	10	U		NA
1,1-Dichloroethane	10	U	10	U		NA	10	U		NA	10	U		NA
1,1-Dichloroethene	10	U	10	U		NA	10	U		NA	10	U		NA
1,2,4-Trichlorobenzene	10	U	10	U		NA	10	U		NA	10	U		NA
1,2-Dibromo-3-chloropropane		R	10	UJ		NA	10	UJ		NA	10	U		NA
1,2-Dibromoethane	10	U	10	U		NA	10	U		NA	10	U		NA
1,2-Dichlorobenzene	10	U	10	U		NA	10	U		NA	10	U		NA
1,2-Dichloroethane	10	U	10	U		NA	10	U		NA	10	U		NA
1,2-Dichloropropane	10	U	10	U		NA	10	U		NA	10	U		NA
1,3-Dichlorobenzene	10	U	10	U		NA	10	U		NA	10	U		NA
1,4-Dichlorobenzene	10	U	10	U		NA	10	U		NA	10	U		NA
2-Butanone	10	U	10	UJ		NA	10	UJ		NA	10	UJ		NA
2-Hexanone	10	U	10	UJ		NA	10	UJ		NA	10	U		NA
4-Methyl-2-Pentanone	10	U	10	UJ		NA	10	UJ		NA	10	U		NA
Acetone	10	UJ	10	UJ		NA	10	UJ		NA	10	UJ		NA
Benzene	10	U	10	U		NA	10	U		NA	10	U		NA
Bromodichloromethane	10	U	10	U		NA	10	U		NA	10	U		NA
Bromoform	10	U	10	U		NA	10	U		NA	10	U		NA
Bromomethane	10	U	10	U		NA	10	U		NA	10	U		NA
Carbon Disulfide	10	U	10	UJ		NA	10	UJ		NA	10	U		NA
Carbon Tetrachloride	10	U	10	U		NA	10	U		NA	10	U		NA
Chlorobenzene	10	U	10	U		NA	10	U		NA	10	U		NA
Chloroethane	10	U	10	U		NA	10	U		NA	10	U		NA
Chloroform	10	U	10	U		NA	10	U		NA	10	U		NA
Chloromethane	10	U	10	U		NA	10	U		NA	10	U		NA
cis-1,2-Dichloroethene	10	U	10	U		NA	10	U		NA	10	U		NA
cis-1,3-Dichloropropene	10	U	10	U		NA	10	U		NA	10	U		NA
Cyclohexane	10	U	10	U		NA	10	U		NA	10	U		NA
Dibromochloromethane	10	U	10	U		NA	10	U		NA	10	U		NA
Dichlorodifluoromethane	10	U	10	U		NA	10	U		NA	10	U		NA
Ethylbenzene	10	U	10	U		NA	10	U		NA	10	U		NA
Isopropylbenzene	10	U	10	U		NA	10	U		NA	10	U		NA
Methyl Acetate	10	U	10	U		NA	10	U		NA	10	U		NA
Methyl tert-Butyl Ether	10	U	10	U		NA	10	U		NA	10	U		NA
Methylcyclohexane	10	U	10	U		NA	10	U		NA	10	U		NA
Methylene Chloride	10	U	10	UJ		NA	10	UJ		NA	10	U		NA
Styrene	10	U	10	U		NA	10	U		NA	10	U		NA

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CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW13S-02		CMS-GW-MW14M-02		CMS-GW-MW14MF-02		CMS-GW-MW15D-02		CMS-GW-MW15DF-02		CMS-GW-TMW3-02		CMS-GW-TMW3F-02	
Sample Location	MW13S		MW14M		MW14M		MW15D		MW15D		TMW3		TMW3	
Date Sampled	8/23/2001		8/21/2001		8/21/2001		8/21/2001		8/21/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
ltered	Unfiltered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Tetrachloroethene	10	U	10	U		NA	10	U		NA	10	U		NA
Toluene	10	U	10	U		NA	10	U		NA	10	U		NA
Total Xylenes	10	U	10	U		NA	10	U		NA	10	U		NA
trans-1,2-Dichloroethene	10	U	10	UJ		NA	10	UJ		NA	10	UJ		NA
trans-1,3-Dichloropropene	10	U	10	U		NA	10	U		NA	10	U		NA
Trichloroethene	10	U	10	U		NA	10	U		NA	10	U		NA
Trichlorofluoromethane	10	U	10	U		NA	10	U		NA	10	U		NA
Vinyl Chloride	10	U	10	U		NA	10	U		NA	10	U		NA
Semivolatile Organic Analysis (UG/L)	A0866		A0913				A0912				A0864			
1,1'-Biphenyl	10	U	10	U		NA	14	U		NA	10	U		NA
2,2'-oxybis(1-Chloropropene)	10	U	10	UJ		NA	14	UJ		NA	10	UJ		NA
2,4,5-Trichlorophenol	25	U	25	U		NA	36	U		NA	25	U		NA
2,4,6-Trichlorophenol	10	U	10	U		NA	14	U		NA	10	U		NA
2,4-Dichlorophenol	10	U	10	U		NA	14	U		NA	10	U		NA
2,4-Dimethylphenol	10	U	10	U		NA	14	U		NA	10	U		NA
2,4-Dinitrophenol	25	UJ	25	U		NA	36	U		NA	25	UJ		NA
2,4-Dinitrotoluene	10	U	10	U		NA	14	U		NA	10	U		NA
2,6-Dinitrotoluene	10	U	10	U		NA	14	U		NA	10	U		NA
2-Chloronaphthalene	10	U	10	U		NA	14	U		NA	10	U		NA
2-Chlorophenol	10	U	10	U		NA	14	U		NA	10	U		NA
2-Methylnaphthalene	10	U	10	U		NA	14	U		NA	10	U		NA
2-Methylphenol	10	U	10	U		NA	14	U		NA	10	U		NA
2-Nitroaniline	25	U	25	U		NA	36	U		NA	25	U		NA
2-Nitrophenol	10	U	10	U		NA	14	U		NA	10	U		NA
3,3'-Dichlorobenzidine	10	U	10	U		NA	14	U		NA	10	U		NA
3-Nitroaniline	25	U	25	U		NA	36	U		NA	25	U		NA
4,6-Dinitro-2-methylphenol	25	U	25	U		NA	36	U		NA	25	U		NA
4-Bromophenyl-phenylether	10	U	10	U		NA	14	U		NA	10	U		NA
4-Chloro-3-methylphenol	10	U	10	U		NA	14	U		NA	10	U		NA
4-Chloroaniline	10	U	10	U		NA	14	U		NA	10	U		NA
4-Chlorophenyl-phenylether	10	U	10	U		NA	14	U		NA	10	U		NA
4-Methylphenol	10	U	10	U		NA	14	U		NA	10	U		NA
4-Nitroaniline	25	U	25	U		NA	36	U		NA	25	U		NA
4-Nitrophenol	25	U	25	U		NA	36	U		NA	25	U		NA
Acenaphthene	10	U	10	U		NA	14	U		NA	10	U		NA
Acenaphthylene	10	U	10	U		NA	14	U		NA	10	U		NA
Acetophenone	10	UJ	10	U		NA	14	U		NA	10	U		NA
Anthracene	10	U	10	U		NA	14	U		NA	10	U		NA
Atrazine	10	UJ	10	UJ		NA	14	UJ		NA	10	UJ		NA
Benzaldehyde	10	UJ	10	UJ		NA	14	UJ		NA	10	UJ		NA
Benzo(a)anthracene	10	U	10	U		NA	14	U		NA	10	U		NA

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US EPA ARCHIVE DOCUMENT

GROUNDWATER RESULTS
NOVEMBER 2000 - OCTOBER 2001
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW13S-02		CMS-GW-MW14M-02		CMS-GW-MW14MF-02		CMS-GW-MW15D-02		CMS-GW-MW15DF-02		CMS-GW-TMW3-02		CMS-GW-TMW3F-02	
Sample Location	MW13S		MW14M		MW14M		MW15D		MW15D		TMW3		TMW3	
Date Sampled	8/23/2001		8/21/2001		8/21/2001		8/21/2001		8/21/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Benzo(a)pyrene	10	U	10	U		NA	14	U		NA	10	U		NA
Benzo(b)fluoranthene	10	U	10	U		NA	14	U		NA	10	U		NA
Benzo(g,h,i)perylene	10	U	10	U		NA	14	U		NA	10	U		NA
Benzo(k)fluoranthene	10	U	10	U		NA	14	U		NA	10	U		NA
Bis(2-Chloroethoxy)methane	10	U	10	U		NA	14	U		NA	10	U		NA
Bis(2-Chloroethyl)ether	10	U	10	U		NA	14	U		NA	10	U		NA
bis(2-Ethylhexyl)phthalate	10	UJ	10	U		NA	14	UJ		NA	10	U		NA
Butylbenzylphthalate	10	U	10	U		NA	14	UJ		NA	10	U		NA
Caprolactam	10	UJ	10	U		NA	14	UJ		NA	10	UJ		NA
Carbazole	10	U	10	U		NA	14	U		NA	10	U		NA
Chrysene	10	U	10	U		NA	14	U		NA	10	U		NA
Di-n-Butylphthalate	10	UJ	10	U		NA	14	U		NA	10	U		NA
Di-n-octylphthalate	10	UJ	10	U		NA	14	UJ		NA	10	U		NA
Dibenzo(a,h)anthracene	10	U	10	U		NA	14	U		NA	10	U		NA
Dibenzofuran	10	U	10	U		NA	14	U		NA	10	U		NA
Diethylphthalate	10	U	10	U		NA	14	U		NA	10	U		NA
Dimethylphthalate	10	U	10	U		NA	14	U		NA	10	U		NA
Fluoranthene	10	U	10	U		NA	14	U		NA	10	U		NA
Fluorene	10	U	10	U		NA	14	U		NA	10	U		NA
Hexachlorobenzene	10	U	10	U		NA	14	U		NA	10	U		NA
Hexachlorobutadiene	10	U	10	U		NA	14	U		NA	10	U		NA
Hexachlorocyclopentadiene	10	UJ	10	U		NA	14	U		NA	10	UJ		NA
Hexachloroethane	10	U	10	U		NA	14	U		NA	10	U		NA
Indeno(1,2,3-cd)pyrene	10	U	10	U		NA	14	U		NA	10	U		NA
Isophorone	10	U	10	U		NA	14	U		NA	10	U		NA
N-Nitroso-di-n-propylamine	10	U	10	U		NA	14	U		NA	10	U		NA
N-Nitroso-diphenylamine	10	U	10	U		NA	14	U		NA	10	U		NA
Naphthalene	10	U	10	U		NA	14	U		NA	10	U		NA
Nitrobenzene	10	U	10	U		NA	14	U		NA	10	U		NA
Pentachlorophenol	25	U	25	U		NA	36	U		NA	25	U		NA
Phenanthrene	10	U	10	U		NA	14	U		NA	10	U		NA
Phenol	10	U	10	U		NA	14	U		NA	10	U		NA
Pyrene	10	U	10	U		NA	14	U		NA	10	U		NA
Pesticide/PCB Analysis (UG/L)	A0866		A0913				A0912				A0864			
4,4'-DDD	0.10	U	0.10	U		NA	0.10	U		NA	0.10	U		NA
4,4'-DDE	0.10	U	0.10	U		NA	0.10	U		NA	0.10	U		NA
4,4'-DDT	0.10	U	0.10	U		NA	0.10	U		NA	0.10	U		NA
Aldrin	0.050	U	0.050	U		NA	0.050	U		NA	0.050	U		NA
alpha-BHC	0.050	U	0.050	U		NA	0.050	U		NA	0.050	U		NA
alpha-Chlordane	0.050	U	0.050	U		NA	0.050	U		NA	0.050	U		NA
Aroclor-1016	1.0	U	1.0	U		NA	1.0	U		NA	1.0	U		NA

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US EPA ARCHIVE DOCUMENT

GROUNDWATER RESULTS
NOVEMBER 2000 - OCTOBER 2001
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW13S-02		CMS-GW-MW14M-02		CMS-GW-MW14MF-02		CMS-GW-MW15D-02		CMS-GW-MW15DF-02		CMS-GW-TMW3-02		CMS-GW-TMW3F-02	
Sample Location	MW13S		MW14M		MW14M		MW15D		MW15D		TMW3		TMW3	
Date Sampled	8/23/2001		8/21/2001		8/21/2001		8/21/2001		8/21/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Aroclor-1221	2.0	U	2.0	U		NA	2.0	U		NA	2.0	U		NA
Aroclor-1232	1.0	U	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1242	1.0	U	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1248	1.0	U	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1254	1.0	U	1.0	U		NA	1.0	U		NA	1.0	U		NA
Aroclor-1260	1.0	U	1.0	U		NA	1.0	U		NA	1.0	U		NA
beta-BHC	0.050	U	0.050	U		NA	0.050	U		NA	0.050	U		NA
delta-BHC	0.050	U	0.050	U		NA	0.050	U		NA	0.050	U		NA
Dieldrin	0.10	U	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endosulfan I	0.050	U	0.050	U		NA	0.050	U		NA	0.050	U		NA
Endosulfan II	0.10	U	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endosulfan Sulfate	0.10	U	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin	0.10	U	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin Aldehyde	0.10	U	0.10	U		NA	0.10	U		NA	0.10	U		NA
Endrin Ketone	0.10	U	0.10	U		NA	0.10	U		NA	0.10	U		NA
gamma-BHC	0.050	U	0.050	U		NA	0.050	U		NA	0.050	U		NA
gamma-Chlordane	0.050	U	0.050	U		NA	0.050	U		NA	0.050	U		NA
Heptachlor	0.050	U	0.050	U		NA	0.050	U		NA	0.050	U		NA
Heptachlor Epoxide	0.050	U	0.050	U		NA	0.050	U		NA	0.050	U		NA
Methoxychlor	0.50	U	0.50	U		NA	0.50	U		NA	0.50	U		NA
Toxaphene	5.0	U	5.0	U		NA	5.0	U		NA	5.0	U		NA
Dioxin Analysis (pg/L)	D04083		D03906				D03905				D04081			
1,2,3,4,6,7,8-HpCDD	5.5	U	2.6	U		NA	10.0	U		NA	4.8	U		NA
1,2,3,4,6,7,8-HpCDF	3.0	U	1.3	U		NA	4.8	U		NA	3.0	U		NA
1,2,3,4,7,8,9-HpCDF	3.4	UJ	1.6	UJ		NA	5.7	UJ		NA	3.7	UJ		NA
1,2,3,4,7,8-HxCDD	3.6	U	1.6	U		NA	6.0	U		NA	3.0	U		NA
1,2,3,4,7,8-HxCDF	3.3	U	1.0	U		NA	3.6	U		NA	2.2	U		NA
1,2,3,6,7,8-HxCDD	3.8	U	1.6	U		NA	6.1	U		NA	3.1	U		NA
1,2,3,6,7,8-HxCDF	2.3	U	1.0	U		NA	3.7	U		NA	2.2	U		NA
1,2,3,7,8,9-HxCDD	3.6	U	1.6	U		NA	6.0	U		NA	3.0	U		NA
1,2,3,7,8,9-HxCDF	2.7	U	1.2	U		NA	4.6	U		NA	2.6	U		NA
1,2,3,7,8-PeCDD	3.0	U	2.0	U		NA	6.1	U		NA	2.6	U		NA
1,2,3,7,8-PeCDF	2.8	U	1.3	U		NA	4.8	U		NA	1.9	U		NA
1,2,4,5,7,8-hexachloro(9H)xanthene		NA		NA		NA		NA		NA		NA		NA
2,3,4,6,7,8-HxCDF	2.2	U	1.0	U		NA	3.6	U		NA	2.1	U		NA
2,3,4,7,8-PeCDF	2.6	U	1.2	U		NA	4.5	U		NA	1.9	U		NA
2,3,7,8-TCDD	3.1	U	1.5	U		NA	5.7	U		NA	2.1	U		NA
2,3,7,8-TCDF	2.2	U	1.0	U		NA	3.8	U		NA	1.9	U		NA
OCDD	16.1	U	5.9	U		NA	17.0	EMPC		NA	9.5	EMPC		NA
OCDF	8.5	U	3.9	EMPC		NA	15.4	EMPC		NA	9.2	EMPC		NA
Total HpCDD	5.5	UJ	2.6	UJ		NA	10.0	UJ		NA	4.8	UJ		NA

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US EPA ARCHIVE DOCUMENT

GROUNDWATER RESULTS
NOVEMBER 2000 - OCTOBER 2001
CENTREDALE MANOR
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CMS-GW-MW13S-02		CMS-GW-MW14M-02		CMS-GW-MW14MF-02		CMS-GW-MW15D-02		CMS-GW-MW15DF-02		CMS-GW-TMW3-02		CMS-GW-TMW3F-02	
Sample Location	MW13S		MW14M		MW14M		MW15D		MW15D		TMW3		TMW3	
Date Sampled	8/23/2001		8/21/2001		8/21/2001		8/21/2001		8/21/2001		8/23/2001		8/23/2001	
QC Identifier	None		None		None		None		None		None		None	
filtered	Unfiltered		Unfiltered		Filtered		Unfiltered		Filtered		Unfiltered		Filtered	
Total HpCDF	3.2	UJ	1.5	UJ		NA	5.2	UJ		NA	3.3	UJ		NA
Total HxCDD	30.0	EMPC	6.5	EMPC		NA	6.0	UJ		NA	6.4	EMPC		NA
Total HxCDF	3.3	UJ	1.0	UJ		NA	3.6	UJ		NA	2.3	UJ		NA
Total PeCDD	13.5	EMPC	5.2	EMPC		NA	6.1	UJ		NA	2.6	UJ		NA
Total PeCDF	2.7	UJ	1.3	UJ		NA	4.6	UJ		NA	1.9	UJ		NA
Total TCDD	6.7	EMPC	26.5	EMPC		NA	34.3	EMPC		NA	2.1	UJ		NA
Total TCDF	6.3	EMPC	5.2	EMPC		NA	3.8	UJ		NA	3.9	EMPC		NA
Toxicity Equivalency	0.00	UJ	0.00	UJ		NA	0.00	UJ		NA	0.00	UJ		NA
TAL Metal Analysis (UG/L)	MA05D6		MA0A46		MA0A47		MA0A44		MA0A45		MA0B66		MA0B67	
Aluminum	87.1	U	738		95.6	U	151		26.4	U	316		16.9	U
Antimony	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	3.4	UJ	4.8	U
Barium	96.4		34.6		32.6		33.9		32.5		53.0		46.9	
Beryllium	0.96	UJ	0.36	UJ	0.40	UJ	0.26	UJ	0.24	UJ	0.86	UJ	0.86	UJ
Cadmium	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Calcium	35400		9380		8700		30400		30700		21000		20000	
Chromium	19.9	U	0.96	UJ	0.97	UJ	2.4	U	0.50	U	8.1	U	4.5	U
Cobalt	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U	2.2		2.6	U
Copper	12.2	U	7.9	U	8.4	U	8.7	U	4.8	U	10.2	U	7.5	U
Iron	226	U	70.2	U	39.3	UJ	416	U	75.0	UJ	3560		2870	
Lead	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ	7.4	UJ	2.2	UJ
Magnesium	3450		1340		1240		2690		2680		2610		2440	
Manganese	52.2		88.7		82.5		486		483		963		929	
Mercury	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Nickel	13.5	U	2.6	U	1.1	UJ	1.6	U	1.2	UJ	11.5	U	8.4	U
Potassium	4510	J	1520	J	1440	J	4160	J	4110	J	4940	J	4550	J
Selenium	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ	4.4	UJ
Silver	0.70	U	0.80	UJ	0.70	U	0.70	U	0.70	U	0.70	U	0.77	
Sodium	59800		13700		12800		30800		31100		131000		124000	
Thallium	5.6	U	5.6	UJ	5.6	UJ	5.6	UJ	5.6	UJ	5.6	U	5.6	U
Vanadium	0.90	U	0.90	U	0.90	U	0.90	U	0.90	U	0.90	U	0.90	U
Zinc	16.9	U	49.6	U	43.4	U	25.2	U	20.3	U	29.3	U	26.8	U
Wet Chemistry Analysis (MG/L)	D04063		D03906				D03905				D04061			
Alkalinity	52.0		9.0			NA	54.0			NA	120			NA
Sulfide	2.0	U	2.0	U		NA	2.0	U		NA	1.0	U		NA
Total Organic Carbon	1.0		2.0			NA	3.0			NA	6.0			NA

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US EPA ARCHIVE DOCUMENT

GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CM-GW-RB01-01		CM-GW-TB02-01		CMS-GW-RB01F-02		CMS-GW-RB01-02		CMS-GW-TB01-02		CMS-GW-RB02F-02		CMS-GW-RB02-02	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	2/21/2001		2/22/2001		2/22/2001		2/22/2001		8/13/2001		8/13/2001		8/14/2001		8/16/2001		8/16/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank	
Filtered			Filtered						Filtered						Filtered			
Volatile Organic Analysis (UG/L)	A0458				A0463		A0462				A08Y7		A08Z5				A0906	
1,1,1-Trichloroethane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
1,1,2,2-Tetrachloroethane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	UJ
1,1,2-Trichloroethane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
1,1-Dichloroethane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
1,1-Dichloroethene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	UJ
1,2,4-Trichlorobenzene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
1,2-Dibromo-3-chloropropane	10	U		NA	10	U	10	U		NA		R		R		NA	10	U
1,2-Dibromoethane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
1,2-Dichlorobenzene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
1,2-Dichloroethane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
1,2-Dichloropropane	10	U		NA	10	U	10	U		NA	10	UJ	10	UJ		NA	10	U
1,3-Dichlorobenzene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
1,4-Dichlorobenzene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
2-Butanone	13			NA	12		17			NA	8	J	9	J		NA	9	J
2-Hexanone	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
4-Methyl-2-Pentanone	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Acetone	13			NA	10	U	24			NA	26	J	27	J		NA	20	UJ
Benzene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Bromodichloromethane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Bromoform	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Bromomethane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	UJ
Carbon Disulfide	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	UJ
Carbon Tetrachloride	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Chlorobenzene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Chloroethane	10	UJ		NA	10	UJ	10	UJ		NA	10	U	10	U		NA	10	U

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GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CM-GW-RB01-01		CM-GW-TB02-01		CMS-GW-RB01F-02		CMS-GW-RB01-02		CMS-GW-TB01-02		CMS-GW-RB02F-02		CMS-GW-RB02-02	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	2/21/2001		2/22/2001		2/22/2001		2/22/2001		8/13/2001		8/13/2001		8/14/2001		8/16/2001		8/16/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank	
filtered			Filtered						Filtered						Filtered			
Chloroform	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Chloromethane	10	UJ		NA	10	UJ	10	UJ		NA	10	U	10	U		NA	10	U
cis-1,2-Dichloroethene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	UJ
cis-1,3-Dichloropropene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Cyclohexane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Dibromochloromethane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Dichlorodifluoromethane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	UJ
Ethylbenzene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Isopropylbenzene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Methyl Acetate	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	UJ
Methyl tert-Butyl Ether	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	UJ
Methylcyclohexane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Methylene Chloride	10	U		NA	10	U	10	U		NA	10	U	2	J		NA	10	UJ
Styrene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Tetrachloroethene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	1	J
Toluene	10	U		NA	10	U	10	U		NA	1	J	1	J		NA	10	U
Total Xylenes	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
trans-1,2-Dichloroethene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	UJ
trans-1,3-Dichloropropene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Trichloroethene	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Trichlorofluoromethane	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U
Vinyl Chloride	10	UJ		NA	10	UJ	10	UJ		NA	10	U	10	U		NA	10	U

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US EPA ARCHIVE DOCUMENT

GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CM-GW-RB01-01		CM-GW-TB02-01		CMS-GW-RB01F-02		CMS-GW-RB01-02		CMS-GW-TB01-02		CMS-GW-RB02F-02		CMS-GW-RB02-02	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	2/21/2001		2/22/2001		2/22/2001		2/22/2001		8/13/2001		8/13/2001		8/14/2001		8/16/2001		8/16/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank	
filtered			Filtered						Filtered						Filtered			
Semivolatile Organic Analysis (UG/L)					A0463						A08Y7						A0908	
1,1'-Biphenyl		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
2,2'-oxybis(1-Chloropropane)		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
2,4,5-Trichlorophenol		NA		NA	25	U		NA		NA	25	U		NA		NA	25	U
2,4,6-Trichlorophenol		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
2,4-Dichlorophenol		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
2,4-Dimethylphenol		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
2,4-Dinitrophenol		NA		NA	25	UJ		NA		NA	25	U		NA		NA	25	U
2,4-Dinitrotoluene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
2,6-Dinitrotoluene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
2-Chloronaphthalene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
2-Chlorophenol		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
2-Methylnaphthalene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
2-Methylphenol		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
2-Nitroaniline		NA		NA	25	U		NA		NA	25	U		NA		NA	25	U
2-Nitrophenol		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
3,3'-Dichlorobenzidine		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
3-Nitroaniline		NA		NA	25	U		NA		NA	25	U		NA		NA	25	U
4,6-Dinitro-2-methylphenol		NA		NA	25	U		NA		NA	25	U		NA		NA	25	U
4-Bromophenyl-phenylether		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
4-Chloro-3-methylphenol		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
4-Chloroaniline		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
4-Chlorophenyl-phenylether		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
4-Methylphenol		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
4-Nitroaniline		NA		NA	25	U		NA		NA	25	U		NA		NA	25	U
4-Nitrophenol		NA		NA	25	U		NA		NA	25	U		NA		NA	25	U
Acenaphthene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Acenaphthylene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Acetophenone		NA		NA	10	U		NA		NA	3	J		NA		NA	10	U
Anthracene		NA		NA	10	U		NA		NA	10	UJ		NA		NA	10	U
Atrazine		NA		NA	10	U		NA		NA	10	UJ		NA		NA	10	UJ
Benzaldehyde		NA		NA	2	J		NA		NA	1	J		NA		NA	4	J
Benzo(a)anthracene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Benzo(a)pyrene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U

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GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CM-GW-RB01-01		CM-GW-TB02-01		CMS-GW-RB01F-02		CMS-GW-RB01-02		CMS-GW-TB01-02		CMS-GW-RB02F-02		CMS-GW-RB02-02	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	2/21/2001		2/22/2001		2/22/2001		2/22/2001		8/13/2001		8/13/2001		8/14/2001		8/16/2001		8/16/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank	
filtered			Filtered						Filtered						Filtered			
Benzo(b)fluoranthene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Benzo(g,h,i)perylene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Benzo(k)fluoranthene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Bis(2-Chloroethoxy)methane		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Bis(2-Chloroethyl)ether		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
bis(2-Ethylhexyl)phthalate		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Butylbenzylphthalate		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Caprolactam		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Carbazole		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Chrysene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Di-n-Butylphthalate		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Di-n-octylphthalate		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Dibenzo(a,h)anthracene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Dibenzofuran		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Diethylphthalate		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Dimethylphthalate		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Fluoranthene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Fluorene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Hexachlorobenzene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Hexachlorobutadiene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Hexachlorocyclopentadiene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Hexachloroethane		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Indeno(1,2,3-cd)pyrene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Isophorone		NA		NA	1	J		NA		NA	10	U		NA		NA	10	U
N-Nitroso-di-n-propylamine		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
N-Nitroso-diphenylamine		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Naphthalene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Nitrobenzene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Pentachlorophenol		NA		NA	25	UJ		NA		NA	25	U		NA		NA	25	U
Phenanthrene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U
Phenol		NA		NA	10	U		NA		NA	3	J		NA		NA	10	U
Pyrene		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U

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US EPA ARCHIVE DOCUMENT

GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CM-GW-RB01-01		CM-GW-TB02-01		CMS-GW-RB01F-02		CMS-GW-RB01-02		CMS-GW-TB01-02		CMS-GW-RB02F-02		CMS-GW-RB02-02	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	2/21/2001		2/22/2001		2/22/2001		2/22/2001		8/13/2001		8/13/2001		8/14/2001		8/16/2001		8/16/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank	
Filtered			Filtered						Filtered						Filtered			
Pesticide/PCB Analysis (UG/L)					A0463						A08Y7						A0906	
4,4'-DDD		NA		NA	0.10	U		NA		NA	0.10	U		NA		NA	0.10	U
4,4'-DDE		NA		NA	0.10	U		NA		NA	0.10	U		NA		NA	0.10	U
4,4'-DDT		NA		NA	0.10	U		NA		NA	0.10	U		NA		NA	0.10	U
Aldrin		NA		NA	0.050	U		NA		NA	0.050	U		NA		NA	0.050	U
alpha-BHC		NA		NA	0.050	U		NA		NA	0.050	U		NA		NA	0.050	U
alpha-Chlordane		NA		NA	0.050	U		NA		NA	0.050	U		NA		NA	0.050	U
Aroclor-1016		NA		NA	1.0	U		NA		NA	1.0	U		NA		NA	1.0	U
Aroclor-1221		NA		NA	2.0	U		NA		NA	2.0	U		NA		NA	2.0	U
Aroclor-1232		NA		NA	1.0	U		NA		NA	1.0	U		NA		NA	1.0	U
Aroclor-1242		NA		NA	1.0	U		NA		NA	1.0	U		NA		NA	1.0	U
Aroclor-1248		NA		NA	1.0	U		NA		NA	1.0	U		NA		NA	1.0	U
Aroclor-1254		NA		NA	1.0	U		NA		NA	1.0	U		NA		NA	1.0	U
Aroclor-1260		NA		NA	1.0	U		NA		NA	1.0	U		NA		NA	1.0	U
beta-BHC		NA		NA	0.050	U		NA		NA	0.050	U		NA		NA	0.050	U
delta-BHC		NA		NA	0.050	U		NA		NA	0.050	U		NA		NA	0.050	U
Dieldrin		NA		NA	0.10	U		NA		NA	0.10	U		NA		NA	0.10	U
Endosulfan I		NA		NA	0.050	U		NA		NA	0.050	U		NA		NA	0.050	U
Endosulfan II		NA		NA	0.10	U		NA		NA	0.10	U		NA		NA	0.10	U
Endosulfan Sulfate		NA		NA	0.10	U		NA		NA	0.10	U		NA		NA	0.10	U
Endrin		NA		NA	0.10	U		NA		NA	0.10	U		NA		NA	0.10	U
Endrin Aldehyde		NA		NA	0.10	U		NA		NA	0.10	U		NA		NA	0.10	U
Endrin Ketone		NA		NA	0.10	U		NA		NA	0.10	U		NA		NA	0.10	U
gamma-BHC		NA		NA	0.050	U		NA		NA	0.050	U		NA		NA	0.050	U
gamma-Chlordane		NA		NA	0.050	U		NA		NA	0.050	U		NA		NA	0.050	U
Heptachlor		NA		NA	0.050	U		NA		NA	0.050	U		NA		NA	0.050	U
Heptachlor Epoxide		NA		NA	0.050	U		NA		NA	0.050	U		NA		NA	0.050	U
Methoxychlor		NA		NA	0.50	U		NA		NA	0.50	U		NA		NA	0.50	U
Toxaphene		NA		NA	5.0	U		NA		NA	5.0	U		NA		NA	5.0	U

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GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CM-GW-RB01-01		CM-GW-TB02-01		CMS-GW-RB01F-02		CMS-GW-RB01-02		CMS-GW-TB01-02		CMS-GW-RB02F-02		CMS-GW-RB02-02	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	2/21/2001		2/22/2001		2/22/2001		2/22/2001		8/13/2001		8/13/2001		8/14/2001		8/16/2001		8/16/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank	
Filtered			Filtered						Filtered						Filtered			
Dioxin Analysis (pg/L)					D02097						D03882						D03899	
1,2,3,4,6,7,8-HpCDD		NA		NA	1.4	J		NA		NA	1.0	U		NA		NA	5.3	U
1,2,3,4,6,7,8-HpCDF		NA		NA	0.90	U		NA		NA	1.1	EMPC		NA		NA	2.5	U
1,2,3,4,7,8,9-HpCDF		NA		NA	1.2	U		NA		NA	0.90	U		NA		NA	3.0	U
1,2,3,4,7,8-HxCDD		NA		NA	1.0	U		NA		NA	0.90	U		NA		NA	2.9	U
1,2,3,4,7,8-HxCDF		NA		NA	0.60	U		NA		NA	0.90	U		NA		NA	2.0	U
1,2,3,6,7,8-HxCDD		NA		NA	1.0	U		NA		NA	0.90	U		NA		NA	3.0	U
1,2,3,6,7,8-HxCDF		NA		NA	0.60	U		NA		NA	0.60	J		NA		NA	2.1	U
1,2,3,7,8,9-HxCDD		NA		NA	0.90	U		NA		NA	0.90	U		NA		NA	3.0	U
1,2,3,7,8,9-HxCDF		NA		NA	0.70	U		NA		NA	0.70	U		NA		NA	2.6	U
1,2,3,7,8-PeCDD		NA		NA	0.90	U		NA		NA	0.70	U		NA		NA	2.8	U
1,2,3,7,8-PeCDF		NA		NA	0.60	U		NA		NA	0.60	U		NA		NA	2.2	U
2,3,4,6,7,8-HxCDF		NA		NA	0.60	U		NA		NA	0.28	EMPC		NA		NA	2.0	U
2,3,4,7,8-PeCDF		NA		NA	0.60	U		NA		NA	0.60	U		NA		NA	2.1	U
2,3,7,8-TCDD		NA		NA	0.60	U		NA		NA	0.80	U		NA		NA	2.3	U
2,3,7,8-TCDF		NA		NA	0.50	U		NA		NA	0.50	U		NA		NA	1.7	U
OCDD		NA		NA	17.0	EMPC		NA		NA	2.9	U		NA		NA	7.9	U
OCDF		NA		NA	1.5	J		NA		NA	3.1	U		NA		NA	6.6	U
Total HpCDD		NA		NA	2.3	EMPC		NA		NA	1.0	UJ		NA		NA	5.3	UJ
Total HpCDF		NA		NA	1.0	U		NA		NA	1.1	EMPC		NA		NA	2.7	UJ
Total HxCDD		NA		NA	16.1	EMPC		NA		NA	17.4	EMPC		NA		NA	3.0	UJ
Total HxCDF		NA		NA	0.60	U		NA		NA	1.5	J		NA		NA	2.2	UJ
Total PeCDD		NA		NA	5.6	EMPC		NA		NA	4.6	EMPC		NA		NA	2.8	UJ
Total PeCDF		NA		NA	0.87	EMPC		NA		NA	0.60	UJ		NA		NA	2.1	UJ
Total TCDD		NA		NA	43.7	EMPC		NA		NA	2.6	EMPC		NA		NA	2.3	UJ
Total TCDF		NA		NA	13.7	EMPC		NA		NA	1.4	EMPC		NA		NA	1.7	UJ
Toxicity Equivalency		NA		NA		NA		NA		NA	0.088	J		NA		NA	0.00	U

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US EPA ARCHIVE DOCUMENT

GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CM-GW-RB01-01		CM-GW-TB02-01		CMS-GW-RB01F-02		CMS-GW-RB01-02		CMS-GW-TB01-02		CMS-GW-RB02F-02		CMS-GW-RB02-02	
Sample Location	None		None		None		None		None		None		None		None		None	
Date Sampled	2/21/2001		2/22/2001		2/22/2001		2/22/2001		8/13/2001		8/13/2001		8/14/2001		8/16/2001		8/16/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank	
filtered			Filtered						Filtered						Filtered			
TAL Metal Analysis (UG/L)			MA04R1		MA04R0				MA0A12		MA0A03				MA0A37		MA0A36	
Aluminum		NA	23.5	UJ	33.7	U		NA	45.7	U	45.7	U		NA	45.7	U	45.7	U
Antimony		NA	15.2		2.5	U		NA	3.7	U	3.7	U		NA	3.7	U	3.7	U
Arsenic		NA	4.2	U	4.2	U		NA	2.6	U	2.6	U		NA	2.6	U	2.6	U
Barium		NA	0.42		0.63			NA	8.3	U	8.3	U		NA	8.3	U	8.3	U
Beryllium		NA	0.10	UJ	0.10	UJ		NA	0.10	U	0.10	U		NA	0.10	U	0.10	U
Cadmium		NA	0.60	U	0.60	U		NA	0.70	U	0.70	U		NA	0.70	U	0.70	U
Calcium		NA	17.6	U	17.6	U		NA	81.6	U	81.6	U		NA	22.2	U	10.7	U
Chromium		NA	0.50	U	1.1			NA	1.3	U	3.6	U		NA	1.3	U	1.3	U
Cobalt		NA	0.70	U	0.70	U		NA	1.8	U	1.8	U		NA	1.8	U	1.8	U
Copper		NA	0.70	U	0.70	U		NA	2.2	U	2.2	U		NA	2.2	U	2.2	U
Iron		NA	14.2	U	21.1	J		NA	13.1	U	13.1	U		NA	13.1	U	13.1	U
Lead		NA	1.7	U	1.7	U		NA	1.5	UJ	1.5	UJ		NA	1.5	U	1.5	U
Magnesium		NA	8.9	U	8.9	U		NA	75.7	U	75.7	U		NA	75.7	U	75.7	U
Manganese		NA	0.64	U	0.65	U		NA	1.2	U	1.2	U		NA	1.2	U	1.2	U
Mercury		NA	0.46	U	0.24	U		NA	0.20	U	0.20	U		NA	0.20	U	0.20	U
Nickel		NA	1.3	U	1.3	U		NA	3.0	U	3.0	U		NA	3.0	U	3.0	U
Potassium		NA	41.6	U	41.6	U		NA	21.9	UJ	21.9	J		NA	21.9	UJ	21.9	UJ
Selenium		NA	4.8	U	4.8	U		NA	2.2	UJ	2.2	UJ		NA	2.2	U	2.9	UJ
Silver		NA	0.50	U	0.50	U		NA	4.0	U	4.0	U		NA	4.0	U	4.0	U
Sodium		NA	306		184	J		NA	490	U	490	U		NA	490	U	490	U
Thallium		NA	6.2	U	6.2	U		NA	5.7	U	5.7	U		NA	5.7	U	5.7	U
Vanadium		NA	0.70	U	0.70	U		NA	3.2	U	3.2	U		NA	3.2	U	3.2	U
Zinc		NA	1.6	UJ	1.1	UJ		NA	11.6	J	9.1	J		NA	17.0		6.5	U

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US EPA ARCHIVE DOCUMENT

GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CMS-GW-RB03F-02		CMS-GW-RB03-02		CMS-GW-TB02-02		CMS-GW-RB04F-02		CMS-GW-RB04-02		CMS-GW-TB03-02	
Sample Location	None		None		None		None		None		None		None		None	
Date Sampled	2/21/2001		2/22/2001		8/22/2001		8/22/2001		8/22/2001		8/23/2001		8/23/2001		8/23/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank		Trip Blank	
filtered			Filtered		Filtered						Filtered					
Volatile Organic Analysis (UG/L)	A0458						A0821		A0822				A0867		A0868	
1,1,1-Trichloroethane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
1,1,2-Trichloroethane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
1,1-Dichloroethane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
1,1-Dichloroethene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
1,2,4-Trichlorobenzene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
1,2-Dibromo-3-chloropropane	10	U		NA		NA	10	UJ	10	UJ		NA		R		R
1,2-Dibromoethane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
1,2-Dichlorobenzene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
1,2-Dichloroethane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
1,2-Dichloropropane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
1,3-Dichlorobenzene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
1,4-Dichlorobenzene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
2-Butanone	13			NA		NA	10	UJ	10	UJ		NA	10	U	10	U
2-Hexanone	10	U		NA		NA	10	UJ	10	UJ		NA	10	U	10	U
4-Methyl-2-Pentanone	10	U		NA		NA	10	UJ	10	UJ		NA	10	U	10	U
Acetone	13			NA		NA	50	J	10	UJ		NA	18	J	10	UJ
Benzene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Bromodichloromethane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Bromoform	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Bromomethane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Carbon Disulfide	10	U		NA		NA	10	UJ	10	UJ		NA	10	U	10	U
Carbon Tetrachloride	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Chlorobenzene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Chloroethane	10	UJ		NA		NA	10	U	10	U		NA	10	U	10	U

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GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CMS-GW-RB03F-02		CMS-GW-RB03-02		CMS-GW-TB02-02		CMS-GW-RB04F-02		CMS-GW-RB04-02		CMS-GW-TB03-02	
Sample Location	None		None		None		None		None		None		None		None	
Date Sampled	2/21/2001		2/22/2001		8/22/2001		8/22/2001		8/22/2001		8/23/2001		8/23/2001		8/23/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank		Trip Blank	
filtered			Filtered		Filtered						Filtered					
Chloroform	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Chloromethane	10	UJ		NA		NA	10	U	10	U		NA	10	U	10	U
cis-1,2-Dichloroethene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
cis-1,3-Dichloropropene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Cyclohexane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Dibromochloromethane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Dichlorodifluoromethane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Ethylbenzene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Isopropylbenzene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Methyl Acetate	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Methyl tert-Butyl Ether	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Methylcyclohexane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Methylene Chloride	10	U		NA		NA	10	UJ	10	UJ		NA	10	U	10	U
Styrene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Tetrachloroethene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Toluene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Total Xylenes	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
trans-1,2-Dichloroethene	10	U		NA		NA	10	UJ	10	UJ		NA	10	U	10	U
trans-1,3-Dichloropropene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Trichloroethene	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Trichlorofluoromethane	10	U		NA		NA	10	U	10	U		NA	10	U	10	U
Vinyl Chloride	10	UJ		NA		NA	10	U	10	U		NA	10	U	10	U

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GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CMS-GW-RB03F-02		CMS-GW-RB03-02			CMS-GW-TB02-02		CMS-GW-RB04F-02		CMS-GW-RB04-02			CMS-GW-TB03-02	
Sample Location	None		None		None		None			None		None		None			None	
Date Sampled	2/21/2001		2/22/2001		8/22/2001		8/22/2001			8/22/2001		8/23/2001		8/23/2001			8/23/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0			0.0-0.0		0.0-0.0		0.0-0.0			0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Rinsate Blank			Trip Blank		Rinsate Blank		Rinsate Blank			Trip Blank	
Filtered			Filtered		Filtered							Filtered						
Semivolatile Organic Analysis (UG/L)							A0921							A0867				
1,1'-Biphenyl		NA		NA		NA	10	U			NA		NA	10	U			NA
2,2'-oxybis(1-Chloropropane)		NA		NA		NA	10	U			NA		NA	10	U			NA
2,4,5-Trichlorophenol		NA		NA		NA	25	U			NA		NA	25	U			NA
2,4,6-Trichlorophenol		NA		NA		NA	10	U			NA		NA	10	U			NA
2,4-Dichlorophenol		NA		NA		NA	10	U			NA		NA	10	U			NA
2,4-Dimethylphenol		NA		NA		NA	10	U			NA		NA	10	U			NA
2,4-Dinitrophenol		NA		NA		NA	25	UJ			NA		NA	25	UJ			NA
2,4-Dinitrotoluene		NA		NA		NA	10	U			NA		NA	10	U			NA
2,6-Dinitrotoluene		NA		NA		NA	10	U			NA		NA	10	U			NA
2-Chloronaphthalene		NA		NA		NA	10	U			NA		NA	10	U			NA
2-Chlorophenol		NA		NA		NA	10	U			NA		NA	10	U			NA
2-Methylnaphthalene		NA		NA		NA	10	U			NA		NA	10	U			NA
2-Methylphenol		NA		NA		NA	10	U			NA		NA	10	U			NA
2-Nitroaniline		NA		NA		NA	25	U			NA		NA	25	U			NA
2-Nitrophenol		NA		NA		NA	10	U			NA		NA	10	U			NA
3,3'-Dichlorobenzidine		NA		NA		NA	10	U			NA		NA	10	U			NA
3-Nitroaniline		NA		NA		NA	25	U			NA		NA	25	U			NA
4,6-Dinitro-2-methylphenol		NA		NA		NA	25	U			NA		NA	25	U			NA
4-Bromophenyl-phenylether		NA		NA		NA	10	U			NA		NA	10	U			NA
4-Chloro-3-methylphenol		NA		NA		NA	10	U			NA		NA	10	U			NA
4-Chloroaniline		NA		NA		NA	10	U			NA		NA	10	U			NA
4-Chlorophenyl-phenylether		NA		NA		NA	10	U			NA		NA	10	U			NA
4-Methylphenol		NA		NA		NA	10	U			NA		NA	10	U			NA
4-Nitroaniline		NA		NA		NA	25	U			NA		NA	25	U			NA
4-Nitrophenol		NA		NA		NA	25	U			NA		NA	25	U			NA
Acenaphthene		NA		NA		NA	10	U			NA		NA	10	U			NA
Acenaphthylene		NA		NA		NA	10	U			NA		NA	10	U			NA
Acetophenone		NA		NA		NA	10	U			NA		NA	2	J			NA
Anthracene		NA		NA		NA	10	U			NA		NA	10	U			NA
Atrazine		NA		NA		NA	10	UJ			NA		NA	10	UJ			NA
Benzaldehyde		NA		NA		NA	15	J			NA		NA	10	UJ			NA
Benzo(a)anthracene		NA		NA		NA	10	U			NA		NA	10	U			NA
Benzo(a)pyrene		NA		NA		NA	10	U			NA		NA	10	U			NA

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GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CMS-GW-RB03F-02		CMS-GW-RB03-02		CMS-GW-TB02-02		CMS-GW-RB04F-02		CMS-GW-RB04-02		CMS-GW-TB03-02	
Sample Location	None		None		None		None		None		None		None		None	
Date Sampled	2/21/2001		2/22/2001		8/22/2001		8/22/2001		8/22/2001		8/23/2001		8/23/2001		8/23/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank		Trip Blank	
filtered			Filtered		Filtered						Filtered					
Benzo(b)fluoranthene		NA		NA		NA	10	U		NA		NA	10	U		NA
Benzo(g,h,i)perylene		NA		NA		NA	10	UJ		NA		NA	10	U		NA
Benzo(k)fluoranthene		NA		NA		NA	10	U		NA		NA	10	U		NA
Bis(2-Chloroethoxy)methane		NA		NA		NA	10	U		NA		NA	10	U		NA
Bis(2-Chloroethyl)ether		NA		NA		NA	10	U		NA		NA	10	U		NA
bis(2-Ethylhexyl)phthalate		NA		NA		NA	10	U		NA		NA	1	J		NA
Butylbenzylphthalate		NA		NA		NA	10	U		NA		NA	10	U		NA
Caprolactam		NA		NA		NA	10	U		NA		NA	10	UJ		NA
Carbazole		NA		NA		NA	10	U		NA		NA	10	U		NA
Chrysene		NA		NA		NA	10	U		NA		NA	10	U		NA
Di-n-Butylphthalate		NA		NA		NA	10	U		NA		NA	10	UJ		NA
Di-n-octylphthalate		NA		NA		NA	10	U		NA		NA	10	UJ		NA
Dibenzo(a,h)anthracene		NA		NA		NA	10	U		NA		NA	10	U		NA
Dibenzofuran		NA		NA		NA	10	U		NA		NA	10	U		NA
Diethylphthalate		NA		NA		NA	10	U		NA		NA	10	U		NA
Dimethylphthalate		NA		NA		NA	10	U		NA		NA	10	U		NA
Fluoranthene		NA		NA		NA	10	U		NA		NA	10	U		NA
Fluorene		NA		NA		NA	10	U		NA		NA	10	U		NA
Hexachlorobenzene		NA		NA		NA	10	U		NA		NA	10	U		NA
Hexachlorobutadiene		NA		NA		NA	10	U		NA		NA	10	U		NA
Hexachlorocyclopentadiene		NA		NA		NA	10	UJ		NA		NA	10	UJ		NA
Hexachloroethane		NA		NA		NA	10	U		NA		NA	10	U		NA
Indeno(1,2,3-cd)pyrene		NA		NA		NA	10	U		NA		NA	10	U		NA
Isophorone		NA		NA		NA	10	U		NA		NA	10	U		NA
N-Nitroso-di-n-propylamine		NA		NA		NA	10	U		NA		NA	10	U		NA
N-Nitroso-diphenylamine		NA		NA		NA	10	U		NA		NA	10	U		NA
Naphthalene		NA		NA		NA	10	U		NA		NA	10	U		NA
Nitrobenzene		NA		NA		NA	10	U		NA		NA	10	U		NA
Pentachlorophenol		NA		NA		NA	25	U		NA		NA	25	U		NA
Phenanthrene		NA		NA		NA	10	U		NA		NA	10	U		NA
Phenol		NA		NA		NA	10	U		NA		NA	10	U		NA
Pyrene		NA		NA		NA	10	U		NA		NA	10	U		NA

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GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CMS-GW-RB03F-02		CMS-GW-RB03-02		CMS-GW-TB02-02		CMS-GW-RB04F-02		CMS-GW-RB04-02		CMS-GW-TB03-02	
Sample Location	None		None		None		None		None		None		None		None	
Date Sampled	2/21/2001		2/22/2001		8/22/2001		8/22/2001		8/22/2001		8/23/2001		8/23/2001		8/23/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank		Trip Blank	
filtered			Filtered		Filtered						Filtered					
Pesticide/PCB Analysis (UG/L)							A0921						A0807			
4,4'-DDD		NA		NA		NA	0.10	U		NA		NA	0.10	U		NA
4,4'-DDE		NA		NA		NA	0.10	U		NA		NA	0.10	U		NA
4,4'-DDT		NA		NA		NA	0.10	U		NA		NA	0.10	U		NA
Aldrin		NA		NA		NA	0.050	U		NA		NA	0.050	U		NA
alpha-BHC		NA		NA		NA	0.050	U		NA		NA	0.050	U		NA
alpha-Chlordane		NA		NA		NA	0.050	U		NA		NA	0.050	U		NA
Aroclor-1016		NA		NA		NA	1.0	U		NA		NA	1.0	U		NA
Aroclor-1221		NA		NA		NA	2.0	U		NA		NA	2.0	U		NA
Aroclor-1232		NA		NA		NA	1.0	U		NA		NA	1.0	U		NA
Aroclor-1242		NA		NA		NA	1.0	U		NA		NA	1.0	U		NA
Aroclor-1248		NA		NA		NA	1.0	U		NA		NA	1.0	U		NA
Aroclor-1254		NA		NA		NA	1.0	U		NA		NA	1.0	U		NA
Aroclor-1260		NA		NA		NA	1.0	U		NA		NA	1.0	U		NA
beta-BHC		NA		NA		NA	0.050	U		NA		NA	0.050	U		NA
delta-BHC		NA		NA		NA	0.050	U		NA		NA	0.050	U		NA
Dieldrin		NA		NA		NA	0.10	U		NA		NA	0.10	U		NA
Endosulfan I		NA		NA		NA	0.050	U		NA		NA	0.050	U		NA
Endosulfan II		NA		NA		NA	0.10	U		NA		NA	0.10	U		NA
Endosulfan Sulfate		NA		NA		NA	0.10	U		NA		NA	0.10	U		NA
Endrin		NA		NA		NA	0.10	U		NA		NA	0.10	U		NA
Endrin Aldehyde		NA		NA		NA	0.10	U		NA		NA	0.10	U		NA
Endrin Ketone		NA		NA		NA	0.10	U		NA		NA	0.10	U		NA
gamma-BHC		NA		NA		NA	0.050	U		NA		NA	0.050	U		NA
gamma-Chlordane		NA		NA		NA	0.050	U		NA		NA	0.050	U		NA
Heptachlor		NA		NA		NA	0.050	U		NA		NA	0.050	U		NA
Heptachlor Epoxide		NA		NA		NA	0.050	U		NA		NA	0.050	U		NA
Methoxychlor		NA		NA		NA	0.50	U		NA		NA	0.50	U		NA
Toxaphene		NA		NA		NA	5.0	U		NA		NA	5.0	U		NA

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US EPA ARCHIVE DOCUMENT

GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CMS-GW-RB03F-02		CMS-GW-RB03-02		CMS-GW-TB02-02		CMS-GW-RB04F-02		CMS-GW-RB04-02		CMS-GW-TB03-02	
Sample Location	None		None		None		None		None		None		None		None	
Date Sampled	2/21/2001		2/22/2001		8/22/2001		8/22/2001		8/22/2001		8/23/2001		8/23/2001		8/23/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank		Trip Blank	
filtered			Filtered		Filtered						Filtered					
Dioxin Analysis (pg/L)							D03913						D04064			
1,2,3,4,6,7,8-HpCDD		NA		NA		NA	5.8	J		NA		NA	11.3	U		NA
1,2,3,4,6,7,8-HpCDF		NA		NA		NA	7.2	U		NA		NA	6.4	U		NA
1,2,3,4,7,8,9-HpCDF		NA		NA		NA	5.4	EMPC		NA		NA	7.2	UJ		NA
1,2,3,4,7,8-HxCDD		NA		NA		NA	3.5	EMPC		NA		NA	7.3	U		NA
1,2,3,4,7,8-HxCDF		NA		NA		NA	6.9	U		NA		NA	3.6	EMPC		NA
1,2,3,6,7,8-HxCDD		NA		NA		NA	5.0	U		NA		NA	7.6	U		NA
1,2,3,6,7,8-HxCDF		NA		NA		NA	6.3	U		NA		NA	3.0	U		NA
1,2,3,7,8,9-HxCDD		NA		NA		NA	9.2	J		NA		NA	7.2	U		NA
1,2,3,7,8,9-HxCDF		NA		NA		NA	9.8	J		NA		NA	5.3	J		NA
1,2,3,7,8-PeCDD		NA		NA		NA	6.1	J		NA		NA	6.7	U		NA
1,2,3,7,8-PeCDF		NA		NA		NA	8.3	J		NA		NA	5.8	U		NA
2,3,4,6,7,8-HxCDF		NA		NA		NA	5.3	J		NA		NA	2.3	EMPC		NA
2,3,4,7,8-PeCDF		NA		NA		NA	5.0	EMPC		NA		NA	5.4	U		NA
2,3,7,8-TCDD		NA		NA		NA	6.3	J		NA		NA	6.3	U		NA
2,3,7,8-TCDF		NA		NA		NA	4.2	J		NA		NA	4.4	U		NA
OCDD		NA		NA		NA	19.5	EMPC		NA		NA	27.4	U		NA
OCDF		NA		NA		NA	25.9	U		NA		NA	13.1	U		NA
Total HpCDD		NA		NA		NA	5.8	J		NA		NA	11.3	UJ		NA
Total HpCDF		NA		NA		NA	7.2	J		NA		NA	6.5	UJ		NA
Total HxCDD		NA		NA		NA	14.3	J		NA		NA	27.3	EMPC		NA
Total HxCDF		NA		NA		NA	28.4	J		NA		NA	8.3	J		NA
Total PeCDD		NA		NA		NA	6.1	J		NA		NA	9.7	EMPC		NA
Total PeCDF		NA		NA		NA	13.4	EMPC		NA		NA	5.6	UJ		NA
Total TCDD		NA		NA		NA	6.3	J		NA		NA	6.3	UJ		NA
Total TCDF		NA		NA		NA	6.7	EMPC		NA		NA	6.2	UJ		NA
Toxicity Equivalency		NA		NA		NA	16.0	J		NA		NA	0.76	J		NA

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US EPA ARCHIVE DOCUMENT

GROUNDWATER BLANK AND QC ANALYTICAL RESULTS
CENTREDALE MANOR RESTORATION PROJECT SOURCE AREA INVESTIGATION
NORTH PROVIDENCE, RHODE ISLAND

Sample Number	CM-GW-TB01-01		CM-GW-FB01-01F		CMS-GW-RB03F-02		CMS-GW-RB03-02		CMS-GW-TB02-02		CMS-GW-RB04F-02		CMS-GW-RB04-02		CMS-GW-TB03-02	
Sample Location	None		None		None		None		None		None		None		None	
Date Sampled	2/21/2001		2/22/2001		2/22/2001		2/22/2001		2/22/2001		2/23/2001		2/23/2001		2/23/2001	
Interval	0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0		0.0-0.0	
QC Identifier	Trip Blank		Filter Blank		Rinsate Blank		Rinsate Blank		Trip Blank		Rinsate Blank		Rinsate Blank		Trip Blank	
Filtered			Filtered		Filtered						Filtered					
TAL Metal Analysis (UG/L)			MA04R1		MA0A56		MA0A57				MA0BT2		MA0BT1			
Aluminum		NA	23.5	UJ	12.5	J	25.6			NA	15.5	U	21.8	U		NA
Antimony		NA	15.2		4.9	U	4.9	U		NA	4.9	U	4.9	U		NA
Arsenic		NA	4.2	U	2.0	U	2.0	U		NA	2.0	U	2.0	U		NA
Barium		NA	0.42		4.3	U	4.3	U		NA	4.3	U	4.3	U		NA
Beryllium		NA	0.19	UJ	0.47	UJ	0.42	UJ		NA	0.96	UJ	1.0	UJ		NA
Cadmium		NA	0.80	U	0.40	U	0.40	U		NA	0.40	U	0.40	U		NA
Calcium		NA	17.6	U	318		375			NA	91.5		143			NA
Chromium		NA	0.50	U	0.99	J	4.4			NA	3.2		8.6			NA
Cobalt		NA	0.70	U	78.7		130			NA	0.71		0.70	U		NA
Copper		NA	0.70	U	4.6		5.1			NA	10.1		11.2			NA
Iron		NA	14.2	U	36.7	J	98.3			NA	44.0		331			NA
Lead		NA	1.7	U	1.3	UJ	1.3	UJ		NA	7.8	J	10.5	J		NA
Magnesium		NA	8.9	U	28.0	U	26.6	U		NA	36.4		46.7			NA
Manganese		NA	0.84	U	3.0		4.7			NA	1.1		2.9			NA
Mercury		NA	0.45	U	0.10	U	0.10	U		NA	0.10	U	0.10	U		NA
Nickel		NA	1.3	U	3.3		4.4			NA	2.5		6.5			NA
Potassium		NA	41.6	U	151		164	J		NA	66.1	J	66.3	J		NA
Selenium		NA	4.8	U	4.4	UJ	4.4	UJ		NA	4.4	UJ	4.4	UJ		NA
Silver		NA	0.50	U	0.70	U	3.3			NA	0.70	U	0.70	U		NA
Sodium		NA	306		344		367			NA	146	U	161	U		NA
Thallium		NA	8.2	U	5.6	UJ	5.6	UJ		NA	5.6	U	5.6	U		NA
Vanadium		NA	0.70	U	0.90	U	0.90	U		NA	0.90	U	0.90	U		NA
Zinc		NA	1.6	UJ	29.6		32.6			NA	50.8		76.5			NA

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