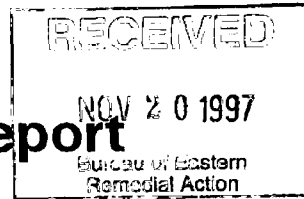


Results Letter Report



for

**Air Sparging/Soil Vapor Extraction System
System at Site 1 - Former Drum
Marshalling Area**

**Naval Weapons Industrial Reserve Plant
Bethpage, New York
Volume II - Appendices**



**Northern Division
Naval Facilities Engineering Command**

Contract Number N62472-90-D-1298

Contract Task Order 0213

October 1997

C F BRAUN ENGINEERING CORPORATION

APPENDICES

APPENDIX

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APPENDICES

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APPENDIX A
BORING LOG SHEETS



BORING LOG

PROJECT NAME: NWRIP SVE/AS BORING NUMBER: CFB MW 01
 PROJECT NUMBER: 5253 DATE: 3-20-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED W. RAMSER
 DRILLING RIG: B-61 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION			U S C S .	Remarks	PID/PID Reading (ppm)								
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole*	Driller BZ*					
	10																	
S-1 0830		29 24			LOOSE		DIS BRN GRAVEL + SAND	SP										
	12	27 30	1.0 2.0				TURNING YEL BRN 4'											
	20																	
S-2 0845		15 15			LOOSE		YEL ORN MED SAND + GRA.	SP										
	22	17 19	1.0 2.0															
	30																	
S-3 0900		21 14			LOOSE		YEL ORN MED - C SAND + GRA.	GW										
	32	18 18	1.0 2.0				BRN SAND + GRA.	GW										
	40																	
S-4 0915		10 11			LOOSE MED DENSE		VERT PNE TO YEL ORN MED SAND LAYERING	SP										
	42	15 19	1.0 2.0															

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: DOWN HOLE 14016 HAMMER ATTACHED TO CABLE TOOL
* STEADY DRILLER QUESTION PID READINGS

Drilling Area
 Background (ppm): 0.0

Converted to Well: Yes No Well I.D. #: CFB MW 01



BORING LOG

PROJECT NAME: NWRIP SVE/AS
 PROJECT NUMBER: 5253
 DRILLING COMPANY: ADT
 DRILLING RIG: B-61

BORING NUMBER: CFBMW1
 DATE: 3-20-97
 GEOLOGIST: FRED W RAMSER
 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			USCS	Remarks	PID/FID Reading (ppm)				
					Soil Density/Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller#7**	
	50													
S-5 0920							YELLOW GREY CLAY + F-G SAND	ML					2.0	
	52		1.8 2.0				YELLOW MED SAND	SP	DRY				2.0	
	54													
S-6 0945		19 18												
	56	20 34	1.8 2.0				RED SAND 55-55.5 YELLOW TO YELLOW MED TO COARSE SAND	SP SP	S-6 55-57 SATURATED @ 54				55	
	58													
	60													
S-7 1000		11 16					MED TO COARSE SAND AND GRAVEL ~ 2 sandica YELLOW/CLAY	SP	SAT.				05	
		20 22	2.0 2.0											
TD=64														
							PLACE SCREEN @							
							54' - 54'							
							SAND @ 51-64							
							BENT @ 51-49							

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Drilling Area

Background (ppm):

Remarks: _____

Converted to Well: Yes No

Well I.D. #: _____



BORING LOG

PROJECT NAME: NWRIP BETHPAGE SITE 1 SUE/AS BORING NUMBER: EW01
 PROJECT NUMBER: 5253 DATE: 3-18-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED W. RAMSER
 DRILLING RIG: B-C1 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)							
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**				
	10																
S-1 09125		17 26			MED LOESS		DR-YEL ORANGE	GW	GRAVELS WELL ROUNDED		08						
		25 25	1.0 2.0				GRAVELLY C-MED SAND		TO ANGULAR								
									GRAVELS (C) CUTTINGS 3mm to 20mm dia								
	20																
S-2 09385		9 11					AS ABOVE FEWER GRAVELS	GW			8.0						
		9 15	1.2 2.0														
	30																
S-3 0990		9 11			MED LOESS		DR-YEL ORANGE M-SAND CLAYEY SAND @ ~ 5' DEPTH	SW	MOTTLED IRON STAIN MOIST AT CLAY LAYER		15						
		15 12	1.2 2.0				SPECK ~ 3" THICK SOFT CLAYEY										
																	14

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: B-C1 RIG, 4 1/4 HSA, 14016 HAMER CUTTINGS
ARE NOT BEING CONTAINED

Drilling Area
 Background (ppm): 0.0

Converted to Well: Yes No Well I.D. #: EW01



BORING LOG

PROJECT NAME: NWRIP, BETHPAGE SW/AS BORING NUMBER: EW01
 PROJECT NUMBER: _____ DATE: 3-18-97
 DRILLING COMPANY: _____ GEOLOGIST: FRED L. RAMSER
 DRILLING RIG: _____ DRILLER: S. WILF

Sample No. and Type or ROD	Depth (Ft.) or Run No.	Blows / 6" or RGD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole	Driller BZ
S-4 1000	40	8 7			DENSE		VERY PALE ORANGE TO DK. YEL ORANGE MED SAND	SP	LAYERING	25			
	42	30 26	1.3 2.0										
S-5 1020	50	15 14		?	STIFF		MED GREY CLAY W/ITE SAND	ML	MOTTLED YEL BAN SPOON WET MAY BE PERCH H ₂ O ON THIS CLAY (JAT)	1.0			
	52	28 24	1.2 2.0						S-G 72-53				
S-6 1045	53						@ END OF SPOON M-CO SAND WHICH IS MOIST (THRU-4 CLAY)		WEATTHROUGH W/TE/CLAY LAYER				
S-7 1100	57	17 20					MED-CO SAND DRY	SP		4.0			
	57	20 17	1.2 2.0	▽	DUKY		REDDISH PURPLE M-CO SAND	SP					
S-8 1115	58	24 21					COARSE SAND w/SOME GRA + 2 sand. in w/te SATURATED GRA.	SP	MEASURED H ₂ O IN AUGURS @ 56.6-58	0.0			
	58	27 24	1.2 2.0						~ 40% ~ 46.61 SILTEAN				
									SAND 75-61				
									BENT - 43-75				
									4-5 BAG, 100#				
									BAG, SAND				
									1 BAG (100#) BENT.				
									HYDRATED w/30GALS				
									MEASURED H ₂ O @				
									56.4 @ 1320				
									56.7 @ 1375				

* When rock coring, enter rock brokenness.
 ** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: CLAY LAYER HIT @ ~ 50 WILL DRIVE ANOTHER @ 52 Drilling Area Background (ppm): 0.0
1) 75 > 75-60 2) 45-65 3) 65 > 75 IN 15' @ 75 5' SCREEN ABOVE CLAY LENS

Converted to Well: Yes No Well I.D. #: EW01



BORING LOG

PROJECT NAME: NWRIP SVEIAS BORING NUMBER: FWOZ
 PROJECT NUMBER: 5253 DATE: 3-24-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED W. RAMSEN
 DRILLING RIG: B-61 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION			U S C S .	Remarks	PID/FID Reading (ppm)					
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**		
							DK BRN GRA + SAND TO ~ 3' TURNING YEL BRN GRA + SAND								
S-1 1209	10	9 11	1.8 2.0		DENSE		DK YEL ORG. MED. CONS. SAND AND SOME CL. < 10µm	SW	GRA. ROUND TO SUBANG. INDIST	80				OP	
S-2 1225 S-3 1230	20	14 12	1.2 2.0		DENSE		NO RECOVERY, TRY 3" SPLIT FROM 3' - AS ABOVE	SW	S-3 (7" SPLIT SECTION)	600				0	
S-4 1242	30	20 17	0.2 2.0		MED. DENSE		DK YEL ORG F-mg sand	SP		26				0	
S-5 1250	40	12 11	1.8 2.0		MED DENSE		VERY PALE TO DK YEL ORG F-g sand	SP		129					

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: CONTAMINATING CUTTINGS TO 36'

Drilling Area
Background (ppm): 0.0

Converted to Well: Yes No Well I.D. #: FWOZ



BORING LOG

PROJECT NAME: NURIP SVE/AS
 PROJECT NUMBER: 5253
 DRILLING COMPANY: ADT
 DRILLING RIG: B-61

BORING NUMBER: FW02
 DATE: 3-24-97
 GEOLOGIST: FRED W. RAMSER
 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (Ft) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
5-6 1312	50 51	7 10			DENSE		DK YEL ORG COARSE SAND W/TRACE GRA.	SP	GRA E 3mm WET PERCH WATER	23			
	52	23 24	1.5 2.0										
	55												
	58												
5-7 1320		13 13			DENSE		DK YEL ORG MED SAND	SP	SATURATED	30			
	60	21 32	1.5 2.0										
							MEASURED WATER IN AUGARS @ 57						
							TD = 62						
							SCREEN: 47' - 62'						
							SAND =						
							BENT =						

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area Background (ppm): 0.0

Converted to Well: Yes No Well I.D. #: FW02



BORING LOG

PROJECT NAME: NWRIP SVE/NS BORING NUMBER: EW03
 PROJECT NUMBER: 5253 DATE: 3-19-97
 DRILLING COMPANY: ADF GEOLOGIST: FRED WIRMSER
 DRILLING RIG: B-61 DRILLER: S. WOLF

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole*	Driller BZ**	
						BRN	GRNELS / SOME SAND							
							INCREASING AMOUNT OF SAND TO 5' TURN'S YEL ORANGE SAND + SILT W/ SOME GRAVEL						0	
	10						HIT THICK GRA @ 8' - 2K BRN						0	
S-1 1110		17 17			MED DENSE		YELLOW GRAVELLY COARSE SAND	GP	MOIST		1.5			
		23 28	1.2 2.0						BLOW COUNTS W/HT DE HIGH PWT TO GRA. CNT.				30	0
	20													
S-2 1120		11 11			MED DENSE		YELLOW GRAVELLY COARSE SAND W/ SOME M.F. SAND	CU	MOIST		15	1.0	0	
		15 14	1.2 2.0										16	0
	30													
S-3 1135		18 11			MED DENSE		MUDGATE BRN SAND + GRAV	CU	MOIST		35			
		10 20	1.2 2.0				FINE SAND W/ SOME MED SAND + YEL ORG	SP SM	MOIST					
	40													
S-4 1147		13 19			MED DENSE		VERY PALE, TUGATION TO DE YEL ORANGE MED SAND	SP			275			
		28 31	1.2 2.0											
	50													

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area Background (ppm): 0.0

Converted to Well: Yes No Well I.D. #: EW03



BORING LOG

PROJECT NAME: NWRIP SVE/AS BORING NUMBER: EW03
 PROJECT NUMBER: 5253 DATE: 3-19-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED WRMMSER
 DRILLING RIG: B-61 DRILLER: S. WOLF

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PIDFID Reading (ppm)						
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**			
	<u>50</u>															
<u>S-5 1200</u>		<u>5/6</u>		-			<u>SILTY F-M SAND</u>	<u>SM</u>		<u>40</u>						
	<u>52</u>	<u>5/8</u>	<u>1.5 2.0</u>					<u>GREY CLAYEY FINE SAND</u>	<u>SC</u>							
	<u>57</u>															
<u>S-6 1210</u>		<u>11/12</u>		-	<u>DUSKY RED</u>		<u>FINE TO COARSE SAND w/ SILT. 2-3 mm max</u>	<u>SW</u>	<u>MOIST TO WET</u>	<u>10</u>						
	<u>56</u>	<u>17/22</u>	<u>1.2 2.0</u>							<u>TIP OF SIEVE SATURATED</u>	<u>10</u>					
<u>S-7 1225</u>		<u>9/17</u>		-			<u>YELLOW MED SAND</u>	<u>SP</u>								
	<u>58</u>	<u>16/23</u>	<u>1.5 2.0</u>													
							<u>HIT H2O @ 56 to 56.5</u>									
							<u>PLACE SCREEN @</u>									
							<u>46.615 46-61</u>									

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area

Background (ppm): 0.0

Converted to Well: Yes No _____

Well I.D. #: EW03



BORING LOG

PROJECT NAME: NURIP SVE/AS BORING NUMBER: EW04
 PROJECT NUMBER: 5253 DATE: 3-25-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED WRAMSER
 DRILLING RIG: B-61 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION			U S C S .	Remarks	PID/FID Reading (ppm)								
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole*	Driller BZ**					

* When rock coring, enter rock brokeness.
 ** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area
 Background (ppm): 0.0

Converted to Well: Yes No _____ Well I.D. #: EW04



BORING LOG

PROJECT NAME: NWRIP SVE/AS BORING NUMBER: EW05
 PROJECT NUMBER: 5253 DATE: 3-25-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED W RAMSER
 DRILLING RIG: B-G1 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S .	Remarks	PID/FID Reading (ppm)							
					Soil Density/Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole"	Driller BZ"				
		/	/														
	10	/	/														
S-1 1055		10 7			DENSE DENSE		YEL ORG SAND + GRA	SW	SATURATED (WET) 1.0 PERCENT H ₂ O								
		10 8	1.2 2.0														
	18	/	/														
S-2 1105		14 19			DENSE		YEL ORG COARSE SAND	SP	MOIST		12						
	20	20 23	2.0														
		/	/														
		/	/														
		/	/														
		/	/														
		/	/														
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		/	/														

* When rock coring, enter rock brokenness.
 ** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.
 Remarks: CUTTINGS STAY INSIDE OF GESS POOL Drilling Area Background (ppm): 0.0

Converted to Well: Yes No Well I.D. #: EW05



BORING LOG

PROJECT NAME: NWRIP SVE/AS BORING NUMBER: GPM 2
 PROJECT NUMBER: 5253 DATE: 3-20-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED W. RAMSER
 DRILLING RIG: B-61 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (FT.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FT.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
							DK BRN SAND+GRAVEL						
							↓ ~3'						
							YEL BRN SAND+GRAVEL						
	10												
S-1 1225		10	9			MED DENSE	YEL ORG MED SAND +GRAV	GW		0.0			6
		18	28	1.0	2.0								
S-2 1235	20	1											
		12	14			DENSE	YEL ORG MED SAND + GRAV	GW		2.0			0
		14	23	1.0	2.0								
	30												
S-3 1300		13	19			DENSE	YEL BRN TO YEL ORG SILTY MED TO FINE SAND	GM		15			0
		20	36	1.8	2.0		YEL ORG MED-COARSE SAND	SP					
	40												
S-4 1305		20	23			DENSE	VERY PALE ORG TO YEL ORG MED SAND TO FINE SAND	SP		110			0
		19	20	1.7	2.0								
	50												

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area
Background (ppm): 0.0

Converted to Well: Yes No _____ Well I.D. #: GPM 2



BORING LOG

PROJECT NAME: NWRIP SVE/AS BORING NUMBER: GPM 2
 PROJECT NUMBER: 5253 DATE: 3-20-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED W RAMSER
 DRILLING RIG: B-61 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)							
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**				
	50																
5-5 1315		20 23					YELLOW COARSE SAND AND GRA.	GW	WET	10							
	52	14 20	1.5 2.0														
	54																
	56																
5-6 1330	57																
	58	20 24					YELLOW COARSE SAND AND GRAVEL	GW	SATURATED	10							
	59	28 28	1.0 2.0														
							TD @ 62										
							SCREEN @ 60-62										
							SAND @ 58.7-62										
							BENTONITE @ 56.5-58.7										

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area Background (ppm):

Converted to Well: Yes No Well I.D. #: _____



BORING LOG

PROJECT NAME: NWRIP SVE/AS BORING NUMBER: GPM 3
 PROJECT NUMBER: 5253 DATE: 3-21-97
 DRILLING COMPANY: AOT GEOLOGIST: FRED
 DRILLING RIG: B-61 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)								
					Soil Density Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**					
	10																	
S-1 1155		9 9																
		11 12	1.0 2.0															
	20																	
S-2 1209		12 9																
		9 9	1.0 2.0															
	30																	
S-3 1215		17 20																
		31 29	1.0 2.0															
	40																	
S-4 1230		15 19																
		21 28	1.5 2.0															
	50																	

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area Background (ppm): _____

Converted to Well: Yes No Well I.D. #: GPM 3



BORING LOG

PROJECT NAME: NWRIP SVEIAS BORING NUMBER: GPM 3
 PROJECT NUMBER: 9253 DATE: 3-21-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED WRAMSER
 DRILLING RIG: B-61 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S .	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole*	Driller BZ**	
	50													
S-5 1243		17 14			DENSE		COARSE SAND w/SOME GRA	GP	WET		10	50	0	
	52	18 23	1.8 2.0				DK YEL ORG. GRA 5-7mm dia							
	54													
S-6 1300		18 A			DENSE		DK YE ORG COARSE SAND AND GRAVEL	GP	WET S/A FURTERED?		96			
	56	18 24	1.5 2.0											
	58													
	60													
S-7 1310		20 23			DENSE		PALE YEL ORG COARSE SAND w/SOME GRA ~2mm dia	GP	(GREENISH ORG)		31			
	62	24 30	.6 2.0						SAMPLE FOR GSD					
	64													
	66													
S-8 1324		10 10			DENSE		PALE YEL ORG WELL GRADED SAND	SW	GREYISH ORG SAMPLE FOR GEOTECH GSD		10			
	68	19 29	1.5 2.0											
							MEASURED WATER IN AUGURS @ 57'		SAND 60-63					
							WILL PLACE 2' SCREEN @ 61-63		63-66 NATURAL GRAVEL					

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area Background (ppm): _____

Converted to Well: _____

Yes

No

Well I.D. #: GPM 3



BORING LOG

PROJECT NAME: NWRIP SVE/AS BORING NUMBER: TW-01
 PROJECT NUMBER: 5253 DATE: 3-18-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED WRANSER
 DRILLING RIG: B-61 MOBILE DRILLER: S WOLF

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION			U S C S	Remarks	PIDFID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**	
	0						MED BRN SANDY GRAVELS		PORE HOLE READINGS ↓ @ 5' 80 @ 10' 20 @ 15' 10 @ 20' 80 @ 30' 18 @ 35' 18					
							GRADING TO A YELLOW GRAVELLY SAND TO 15' → 30' → 40'							
S-1 1425	40	14 13			DENSE		VERT PALE ORANGE TO YELLOW MED G SAND	SP		LAYERING	80	10	0	0
S-2 1435	42	23 36	1.2 2.0		DENSE		GRAYISH ORANGE TO YELLOW MED G SAND TR FINE SAND	SW		LAYERING MOIST	25	18	0	0
S-3 1445	44	42 24	1.2 2.0		DENSE		AS ABOVE SLIGHTLY DKL GR COLOR	SW	LAYERING MOIST	76				
S-4 1450	46	36 22	1.3 2.0		DENSE		↓ YELLOW ORANGE COARSE SAND TR MED SAND SOME GRAVEL 2mm+	SP	WET SILTY LAYER 3' @ ~ 47.5'	46				
S-5 1500	48	19 28	1.6 2.0				YELLOW ORANGE COARSE SAND TR F G SAND TR GRA 2mm	SP	F SAND LAYER 2" @ - 47'	50				
S-6 1505	50	43 60	1.5 2.0				YELLOW CLAYEY COARSE SAND W/SEM GRA 2mm-0.4	SC	WET	10				
	52	17 20	1.0 2.0				DK GRAY GRAVELLY CLAY	GC	TO MED GREY					
S-7 1520	54	17 14			STIFF		CLAY SL-53	ML		2.0				
	56	43 22	1.5 2.0				DUSKY RED/PURPLISH MED SAND INTERLAYERED W/ YEL ORANGE	SP	DISTRIBUTED	2.0				
							↓							
							SL-5							

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: 1/4 HSA, CABLE TOOL HAMMERING W/ 140 LB HAMMER Drilling Area Background (ppm): 0
LOG CUTTINGS TO 40' BUS H.U.C @ 52.5

Converted to Well: Yes No Well I.D. #: TW-01



BORING LOG

PROJECT NAME: NWRIP SVE/AS BORING NUMBER: SVPM 1
 PROJECT NUMBER: 5253 DATE: 3-19-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED W RAMSER
 DRILLING RIG: STEVE WOLF, B-61 DRILLER: _____

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION			U S C S	Remarks	PIDIFID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole*	Filter BZ**	
							PK BRN GRAVEL + SAND 0-3'							
							② 3' YEL BRN GRA + SAND							
	10													
S-1 1445		4/4			LOOSE	YEL BRN	GRAVEL + SAND	GP	POOR REC. LOOSE MAY ACCOUNT FOR LOW PID READINGS	1.0				
		7/8	1.7 2.0				GREENISH SAND @ 11'							
							GREENISH SAND @ CUTTING					0		
	20													
S-2 1500		14/14			LOOSE	YEL BRN	SAND W/SOME GRAVEL	SW		1.3				
		17/21	1.6 2.0											
	28													
S-3 1515		12/11			LOOSE	YEL BRN	MED SAND TRGRA. YELLOW ORANGE	SW SP		5.5				
	30	16/14	1.5 2.0											

* When rock coring, enter rock brokenness.
 ** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area Background (ppm): 6.0

Converted to Well: Yes No _____ Well I.D. #: SVPM 1



BORING LOG

PROJECT NAME: 5253 NWRIP SVE/AS BORING NUMBER: SVPM 2
 PROJECT NUMBER: 5253 DATE: 3-21-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED W RAMSER
 DRILLING RIG: B-61 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**	
							DK BRN GRAVEL + SAND TO ~3'							
							TURNING YEL BRN GRAVEL + SAND							
							SEE BORING LOG FOR GPM 2 FOR MORE LITHO. DETAIL							
							TD = 30							
							SCREEN 25-30							
							SAND - 23.5 - 30							
							SEAL - 21.5 - 23.5							

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area Background (ppm): 0.0

Converted to Well: Yes No Well I.D. #: SVPM

18
23
15



BORING LOG

PROJECT NAME: NWRIP SVE/AS BORING NUMBER: SVPM3
 PROJECT NUMBER: 5253 DATE: 3-21-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED W RAMSER
 DRILLING RIG: B-61 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**	
							DK BRN SAND + GRAVEL TO ~3'							
							CHANGING TO A YEL BRN SAND + GRAVEL							
	10													
S-1 1010		12 23					DK YEL ORG SAND + GRA.	GP	SPL FOR GSD GEOPHYSICAL LAB.	22	0	0		
		19 24	1.2 2.0				YEL ORG SAND + GRNV.							
	20													
S-2 1025		16 29					AS ABOVE	GP		06	0	0		
		28 29	1.0 2.0											
	28													
S-3 1035		14 14					MED SAND	SP	SPL FOR GSD GEOPHYSICAL LAB	30		0		
	30	18 20	1.8 2.0				MED SAND + GRAVEL	GP						
							TP @ 30'							
							SCREEN 25-30							
							SAND 20.5-30							
							BENT - 21.5-23.5							

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area Background (ppm): 00

Converted to Well: Yes No

Well I.D. #: SVPM3



BORING LOG

PROJECT NAME: NWRIP SVE/AS BORING NUMBER: SVPM 4
 PROJECT NUMBER: 5253 DATE: 3-24-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED W RAMSEY
 DRILLING RIG: B-61 DRILLER: STEVE WOLF

Sample No. and Type or RCD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)					
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**		
							OK BRN GRAVEL AND SAND CHANGING TO YEL BRN GRAVEL AND SAND ~ 3'								
							GRADING TO A YEL ORG SAND ~ 20' TO 30'								
							SEE BORING LOG FOR GPM'S FOR MORE DETAIL.								
							TD = 30 SCREEN - 25-30' SAND - 23.5-30 BENT - 21.5-23.5								

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area Background (ppm):

Converted to Well: Yes No Well I.D. #: SVPM 4



BORING LOG

PROJECT NAME: NWRIP SVE/AS BORING NUMBER: SUPM 5
 PROJECT NUMBER: 5253 DATE: 3-25-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED W. RAMSIEA
 DRILLING RIG: B 61 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole™	Driller BZ™	
							DK BRN SAND + GRAVEL							
							CHANGING TO A YEL BRN SAND + GRA.							
							LESSER GRAVELS							
							DOWNWARD TO 10'						0	0
S-1 1020	10	14 15					DK YEL ORG. GRA + COARSE SAND	GW			27			
		19 18	1.2 2.0										15	0
S-2 1020	18	10 13					DK YEL ORG. COARSE SAND W/SOME GRAVEL AND MED. SAND	SP			60			
	20	15 18	1.5 2.0											
							TDC @ 20'							
							SCREEN - 15'-20'							
							SAND - 14'-20'							
							BENTONITE 12'-14'							

* When rock coring, enter rock brokenness.
 ** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____ Drilling Area Background (ppm): _____

Converted to Well: Yes No _____ Well I.D. #: SUPM 5



BORING LOG

PROJECT NAME: NWRIP SVE/AS BORING NUMBER: AS SB01
 PROJECT NUMBER: 5253 DATE: 3-25-97
 DRILLING COMPANY: ADT GEOLOGIST: FRED W. AMSELER
 DRILLING RIG: B-61 DRILLER: STEVE WOLF

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PIOPID Reading (ppm)							
					Soil Density / Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole "	Driller BZ"				
	20	/	/														
S-1 1405		15 16			?		NO RECOVERY		SOME MTL IN TOP OF SPOON BLK LOOKS LIKE FILL?	10							
		18 23	1.8 2.0												20	0	
	30	/	/														
S-2 1410		26 26			DENSE		DE YEL ORG FINE TO MED SAND W/SOME COARSE SAND TRILT @ ~ 31'	SW		50							
		29 30	1.8 2.0														
	40	/	/														
S-3 1425		16 16			MED DENSE		FALE TO UNYELORG MED G. SAND	SP		58	20	0					
		24 24	1.8 2.0														
	50	/	/														
S-4 1435		14 14			MED DENSE		AS ABOVE	SP		100							
		22 24	2.0														

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area Background (ppm): _____

Converted to Well: Yes _____ No X Well I.D. #: _____

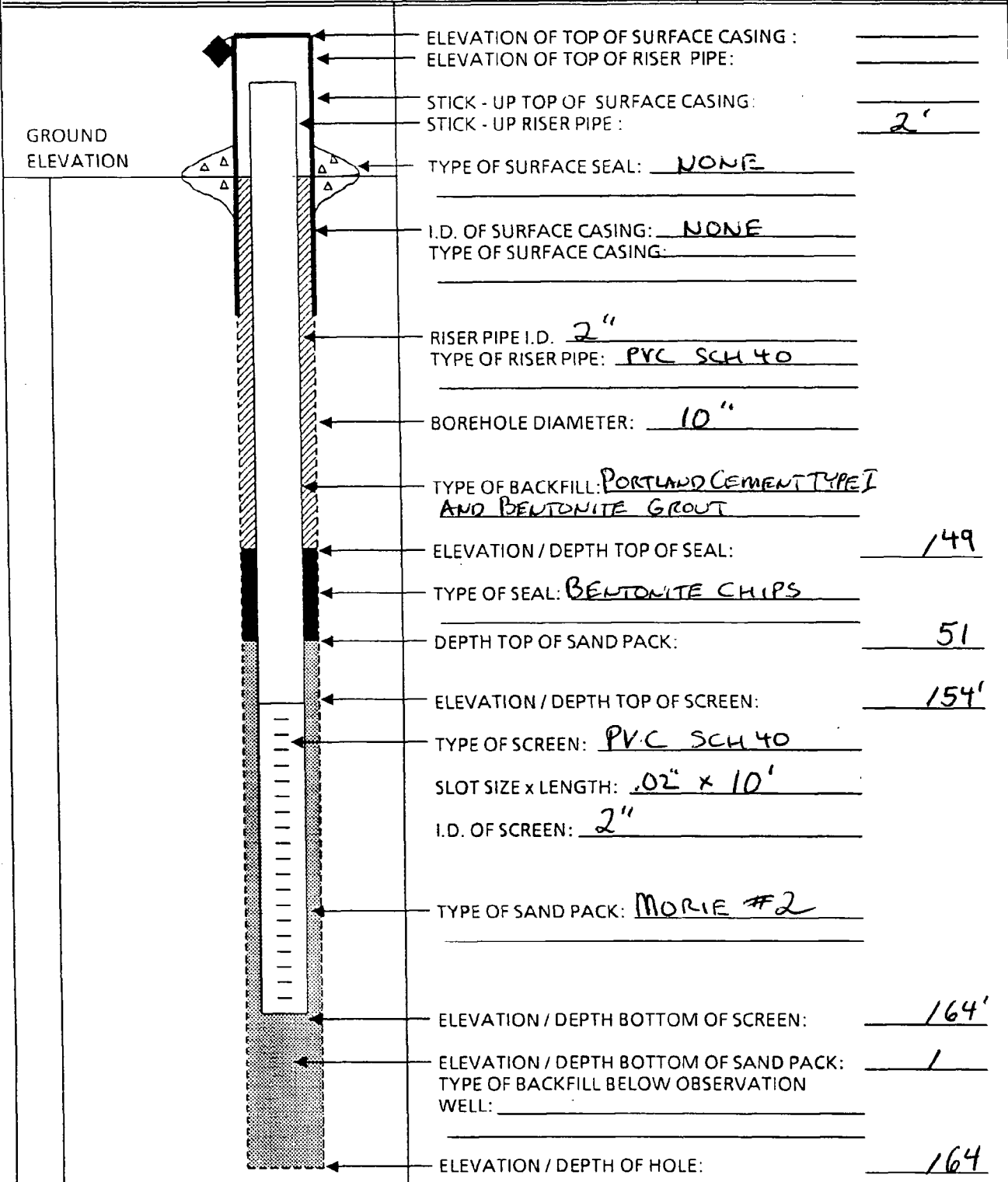
B

APPENDIX B
WELL CONSTRUCTION SHEETS



OVERBURDEN MONITORING WELL SHEET

PROJECT <u>NW IRP SVE/AS</u>	LOCATION <u>BETHPAGE NY</u>	DRILLER <u>S. WOLF/ADT</u>
PROJECT NO. <u>5253</u>	BORING <u>CFBMW01</u>	DRILLING METHOD <u>4 1/4 HSA</u>
ELEVATION _____	DATE <u>3-20-97</u>	DEVELOPMENT METHOD <u>SUB. PUMP</u>
FIELD GEOLOGIST <u>FRED W. RAMSER</u>		



ELEVATION OF TOP OF SURFACE CASING : _____

ELEVATION OF TOP OF RISER PIPE : _____

STICK - UP TOP OF SURFACE CASING : _____

STICK - UP RISER PIPE : 2'

TYPE OF SURFACE SEAL : NONE

I.D. OF SURFACE CASING : NONE

TYPE OF SURFACE CASING : _____

RISER PIPE I.D. 2"

TYPE OF RISER PIPE : PVC SCH 40

BOREHOLE DIAMETER : 10"

TYPE OF BACKFILL : PORTLAND CEMENT TYPE I AND BENTONITE GROUT

ELEVATION / DEPTH TOP OF SEAL : 149

TYPE OF SEAL : BENTONITE CHIPS

DEPTH TOP OF SAND PACK : 51

ELEVATION / DEPTH TOP OF SCREEN : 154'

TYPE OF SCREEN : PVC SCH 40

SLOT SIZE x LENGTH : .02" x 10'

I.D. OF SCREEN : 2"

TYPE OF SAND PACK : MORIE #2

ELEVATION / DEPTH BOTTOM OF SCREEN : 164'

ELEVATION / DEPTH BOTTOM OF SAND PACK : 1

TYPE OF BACKFILL BELOW OBSERVATION WELL : _____

ELEVATION / DEPTH OF HOLE : 164

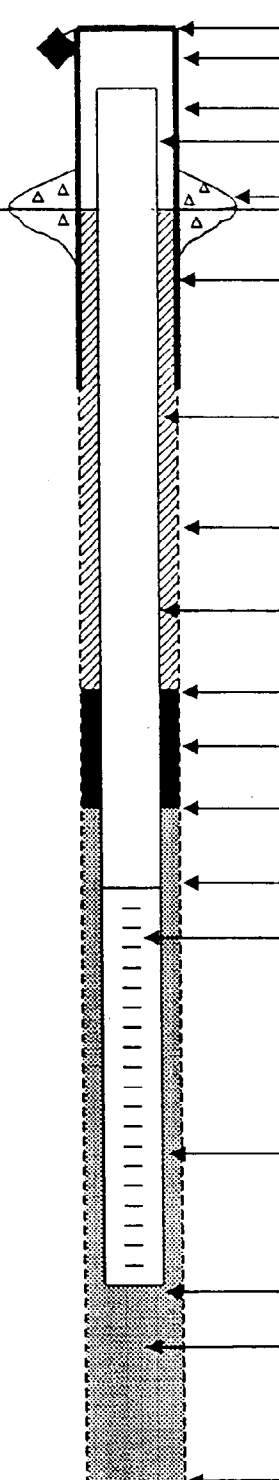


BORING NO.: EW01

OVERBURDEN MONITORING WELL SHEET

PROJECT NWIRP, SITE 1 SVE/AS LOCATION BETH PAGE
 PROJECT NO. 5253 BORING EW01
 ELEVATION _____ DATE 3-18-97
 FIELD GEOLOGIST FRED W. RAMSER

DRILLER S. WOLF/ADT
 DRILLING METHOD 4 1/4 HSA
 DEVELOPMENT METHOD SUB. PUMP

GROUND ELEVATION		ELEVATION OF TOP OF SURFACE CASING: _____
		ELEVATION OF TOP OF RISER PIPE: _____
		STICK - UP TOP OF SURFACE CASING: _____
		STICK - UP RISER PIPE: <u>2'</u>
		TYPE OF SURFACE SEAL: <u>NONE</u>
		I.D. OF SURFACE CASING: <u>NONE</u>
		TYPE OF SURFACE CASING: _____
		RISER PIPE I.D. <u>2"</u>
		TYPE OF RISER PIPE: <u>PVC SCH 40</u>
		BOREHOLE DIAMETER: <u>10"</u>
		TYPE OF BACKFILL: <u>PORTLAND CEMENT TYPE I AND BENTONITE GROUT</u>
		ELEVATION / DEPTH TOP OF SEAL: <u>143</u>
		TYPE OF SEAL: <u>BENTONITE CHIPS</u>
		DEPTH TOP OF SAND PACK: <u>45</u>
		ELEVATION / DEPTH TOP OF SCREEN: <u>146</u>
	TYPE OF SCREEN: <u>PVC SCH 40</u>	
	SLOT SIZE x LENGTH: <u>.02" x 15'</u>	
	I.D. OF SCREEN: <u>2"</u>	
	TYPE OF SAND PACK: <u>MORIE #2</u>	
	ELEVATION / DEPTH BOTTOM OF SCREEN: <u>161</u>	
	ELEVATION / DEPTH BOTTOM OF SAND PACK: <u>161.5</u>	
	TYPE OF BACKFILL BELOW OBSERVATION WELL: _____	
	ELEVATION / DEPTH OF HOLE: <u>161.5</u>	

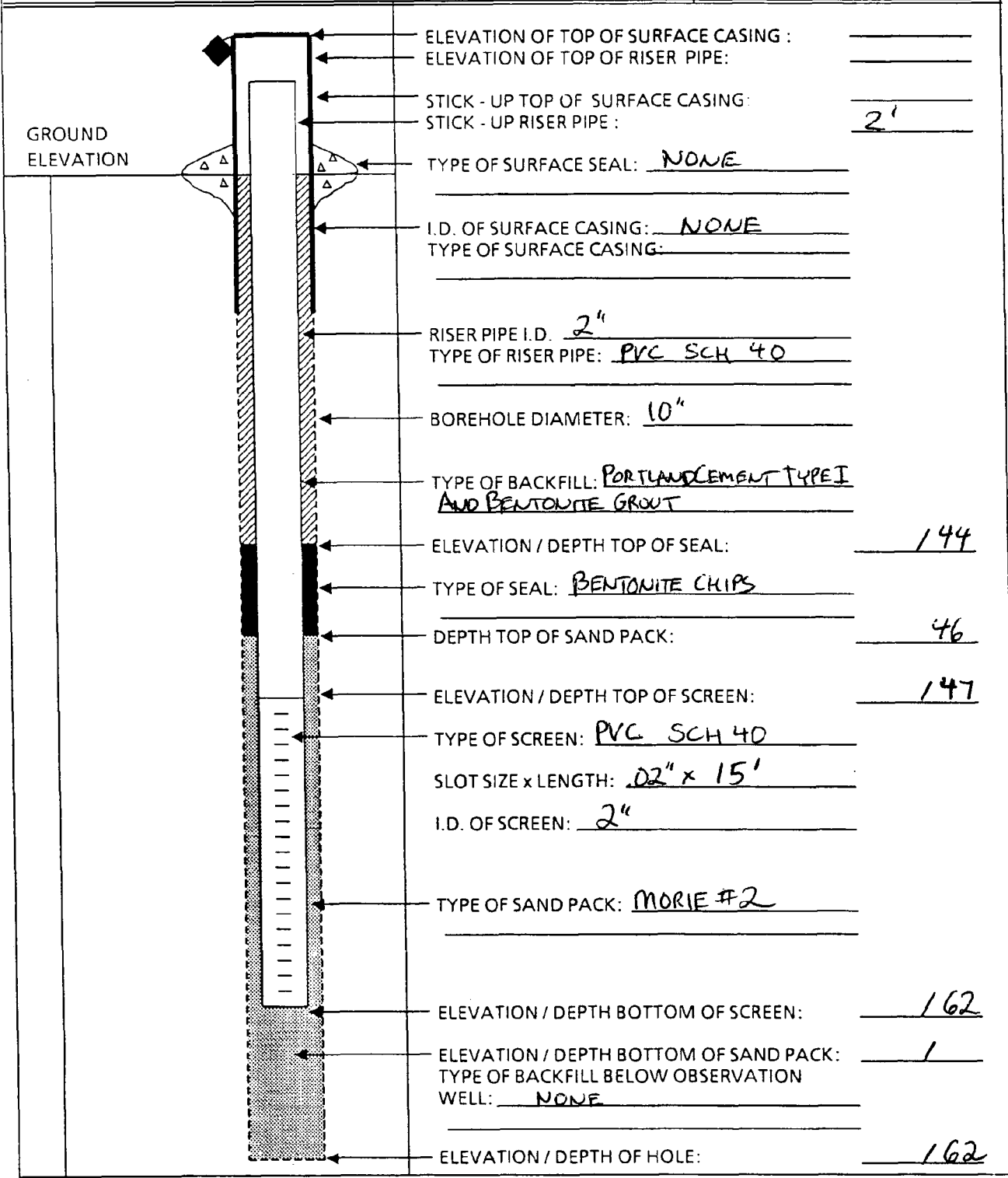


BORING NO.: EW02

OVERBURDEN MONITORING WELL SHEET

PROJECT NURIP SITE 1 SUE/AS LOCATION BETHPAGE NY
 PROJECT NO. 5253 BORING EW02
 ELEVATION _____ DATE 3-24-97
 FIELD GEOLOGIST FRED W. RAMSER

DRILLER S. WOLF / ADT
 DRILLING METHOD 4 1/4 HSA
 DEVELOPMENT METHOD SUB. PUMP





BORING NO.: EW03

OVERBURDEN MONITORING WELL SHEET

PROJECT NWMP BETHPAGE SVE/AS LOCATION SITE L
 PROJECT NO. 5253 BORING EW03
 ELEVATION _____ DATE 3-19-97
 FIELD GEOLOGIST FRED W RAMSER

DRILLER STEVE WOLF/BDT
 DRILLING METHOD 4 1/4 HSA
 DEVELOPMENT METHOD SUB. PUMP

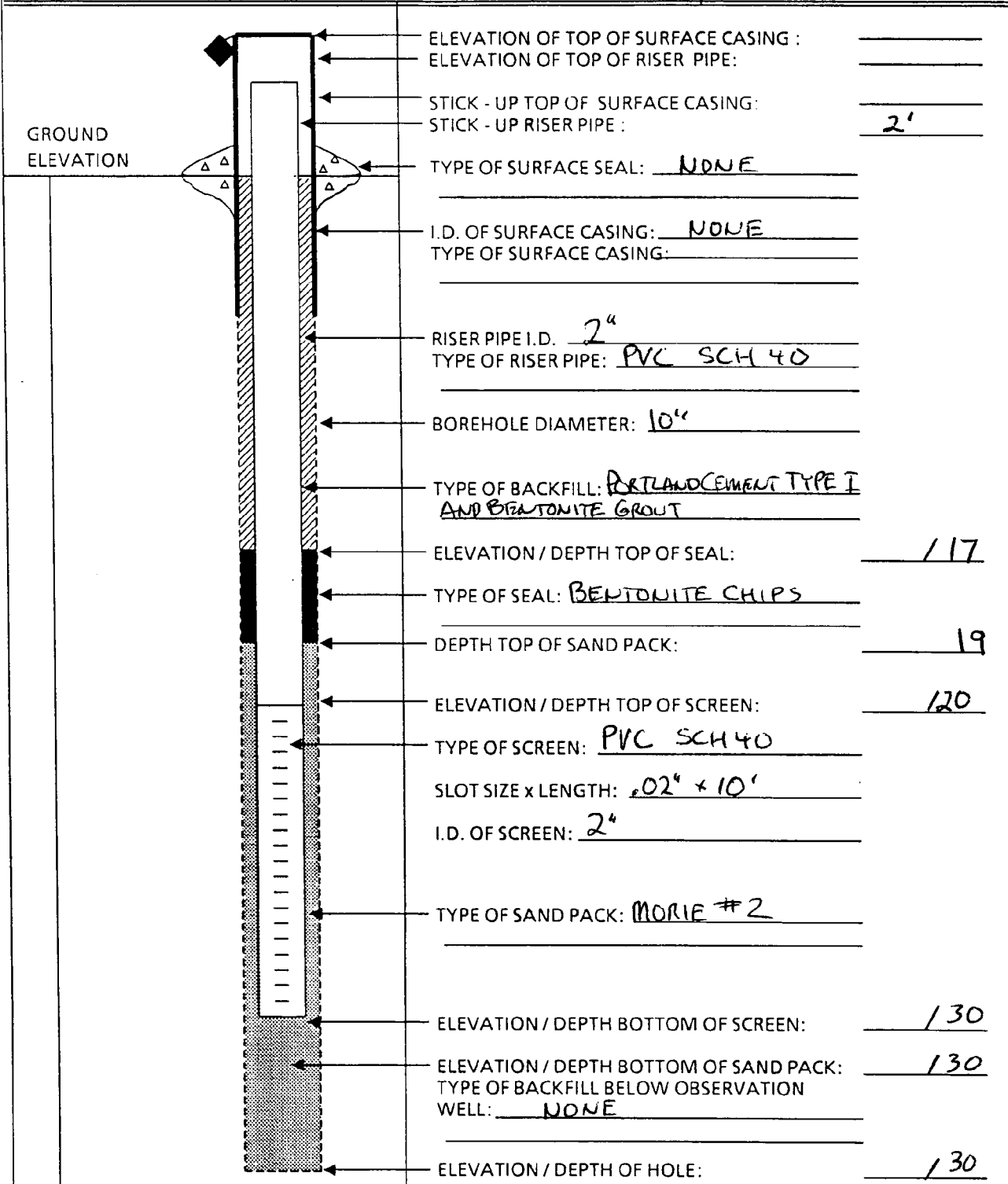
	GROUND ELEVATION	_____
	ELEVATION OF TOP OF SURFACE CASING :	_____
	ELEVATION OF TOP OF RISER PIPE:	_____
	STICK - UP TOP OF SURFACE CASING:	_____
	STICK - UP RISER PIPE :	<u>2'</u>
	TYPE OF SURFACE SEAL: <u>NONE</u>	_____
	I.D. OF SURFACE CASING: <u>NONE</u>	_____
	TYPE OF SURFACE CASING:	_____
	RISER PIPE I.D. <u>2"</u>	_____
	TYPE OF RISER PIPE: <u>PVC SCH 40</u>	_____
	BOREHOLE DIAMETER: <u>10"</u>	_____
	TYPE OF BACKFILL: <u>PORTLAND CEMENT TYPE I AND BENTONITE GROUT</u>	_____
	ELEVATION / DEPTH TOP OF SEAL:	<u>142</u>
	TYPE OF SEAL: <u>BENTONITE CHIPS CETCO, PURE GOLD™ NSF</u>	_____
	DEPTH TOP OF SAND PACK:	_____
ELEVATION / DEPTH TOP OF SCREEN:	<u>146</u>	
TYPE OF SCREEN: <u>PVC SCH 40</u>	_____	
SLOT SIZE x LENGTH: <u>.02 x 15'</u>	_____	
I.D. OF SCREEN: <u>2"</u>	_____	
TYPE OF SAND PACK: <u>MORIE #2</u>	_____	
ELEVATION / DEPTH BOTTOM OF SCREEN:	<u>161</u>	
ELEVATION / DEPTH BOTTOM OF SAND PACK:	<u>161</u>	
TYPE OF BACKFILL BELOW OBSERVATION WELL: <u>NONE</u>	_____	
ELEVATION / DEPTH OF HOLE:	<u>161</u>	



BORING NO.: EW04

OVERBURDEN MONITORING WELL SHEET

PROJECT <u>NWIRP BETHPAGE SVESAS</u>	LOCATION <u>SITE 1</u>	DRILLER <u>S. WOLF / ADT</u>
PROJECT NO. <u>5253</u>	BORING <u>EW04</u>	DRILLING METHOD <u>4 1/4 HSA</u>
ELEVATION _____	DATE <u>3-25-97</u>	DEVELOPMENT METHOD <u>NONE</u>
FIELD GEOLOGIST <u>FRED W. RIMSER</u>		





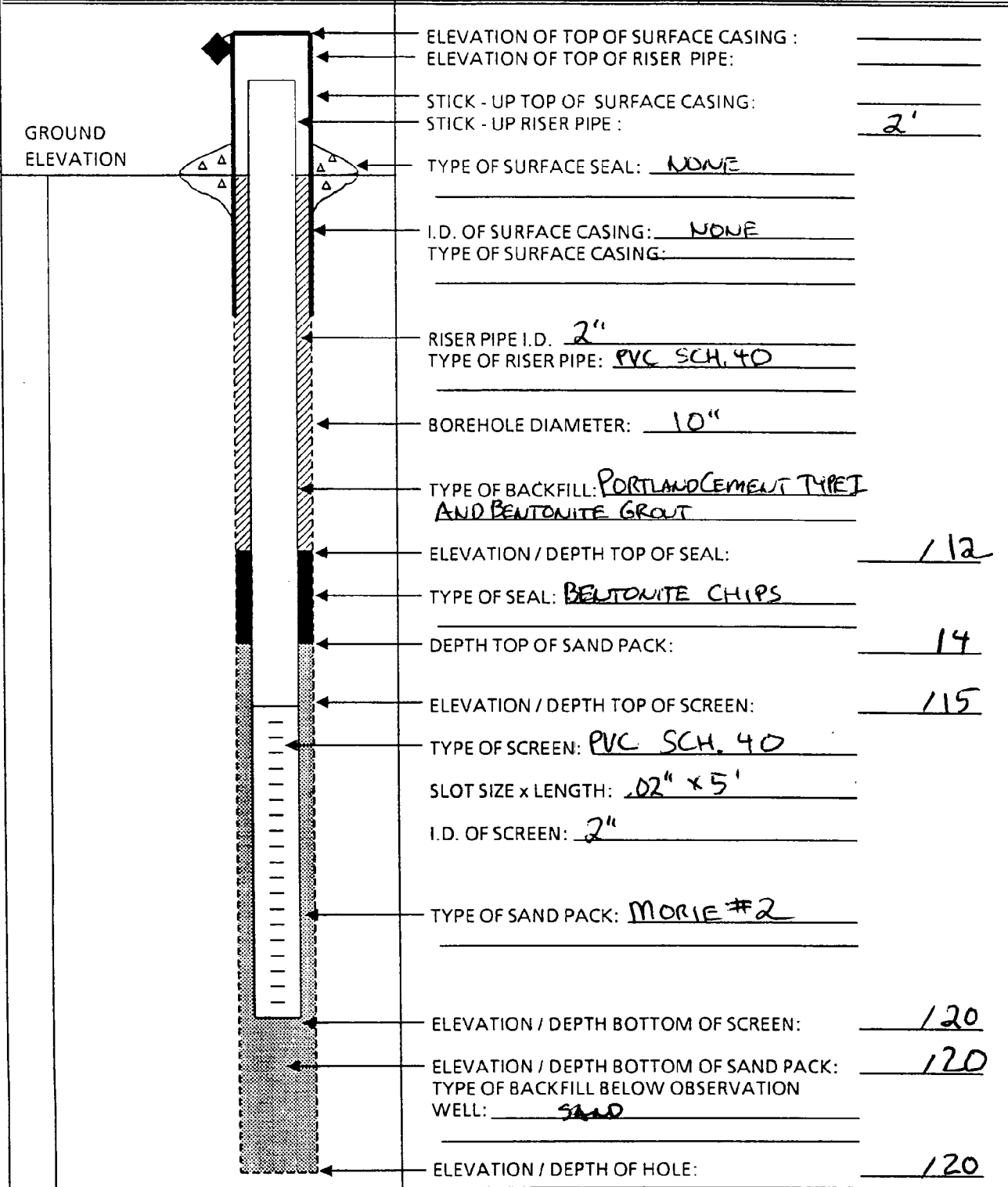
BORING NO.: EW05

OVERBURDEN MONITORING WELL SHEET

PROJECT NWIRPBETHACE SEV/AS
PROJECT NO. 9253
ELEVATION _____
FIELD GEOLOGIST FRED W RAMSER

LOCATION SITE 1
BORING EW05
DATE 3-25-97

DRILLER S. WOLF/ADT
DRILLING METHOD 4 1/4" HSA
DEVELOPMENT METHOD NONE





OVERBURDEN MONITORING WELL SHEET

<p>PROJECT <u>UWIRPBETHANE SVES/AS</u> LOCATION <u>SITE 1</u></p> <p>PROJECT NO. <u>5253</u> BORING <u>GPM 2</u></p> <p>ELEVATION _____ DATE <u>3-20-97</u></p> <p>FIELD GEOLOGIST <u>FRED W. RIMMER</u></p>	<p>DRILLER <u>S. WOLF/ADT</u></p> <p>DRILLING METHOD <u>4 1/4 HSA</u></p> <p>DEVELOPMENT METHOD <u>SUB. PUMP</u></p>
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	<p>ELEVATION OF TOP OF SURFACE CASING: _____</p> <p>ELEVATION OF TOP OF RISER PIPE: _____</p> <p>STICK - UP TOP OF SURFACE CASING: _____</p> <p>STICK - UP RISER PIPE: <u>2'</u></p> <p>TYPE OF SURFACE SEAL: <u>NONE</u></p> <p>I.D. OF SURFACE CASING: <u>NONE</u></p> <p>TYPE OF SURFACE CASING: _____</p> <p>RISER PIPE I.D. <u>2"</u></p> <p>TYPE OF RISER PIPE: <u>PVC SCH. 40</u></p> <p>BOREHOLE DIAMETER: <u>10"</u></p> <p>TYPE OF BACKFILL: <u>PORTLAND CEMENT TYPE I AND BENTONITE GROUT</u></p> <p>ELEVATION / DEPTH TOP OF SEAL: <u>156.5</u></p> <p>TYPE OF SEAL: <u>BENTONITE SLURRY</u></p> <p>DEPTH TOP OF SAND PACK: <u>58.7</u></p> <p>ELEVATION / DEPTH TOP OF SCREEN: <u>160</u></p> <p>TYPE OF SCREEN: <u>PVC SCH. 40</u></p> <p>SLOT SIZE x LENGTH: <u>.02" x 2'</u></p> <p>I.D. OF SCREEN: <u>2"</u></p> <p>TYPE OF SAND PACK: <u>MORIE #2</u></p> <p>ELEVATION / DEPTH BOTTOM OF SCREEN: <u>162</u></p> <p>ELEVATION / DEPTH BOTTOM OF SAND PACK: <u>1</u></p> <p>TYPE OF BACKFILL BELOW OBSERVATION WELL: <u>NONE</u></p> <p>ELEVATION / DEPTH OF HOLE: <u>162</u></p>
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BORING NO.: GPM 3

OVERBURDEN MONITORING WELL SHEET

PROJECT NWIRPPETHRACE S/E/AS LOCATION SITE 1
 PROJECT NO. 5253 BORING GPM 3
 ELEVATION _____ DATE 3-21-97
 FIELD GEOLOGIST FRED W. RAMSER

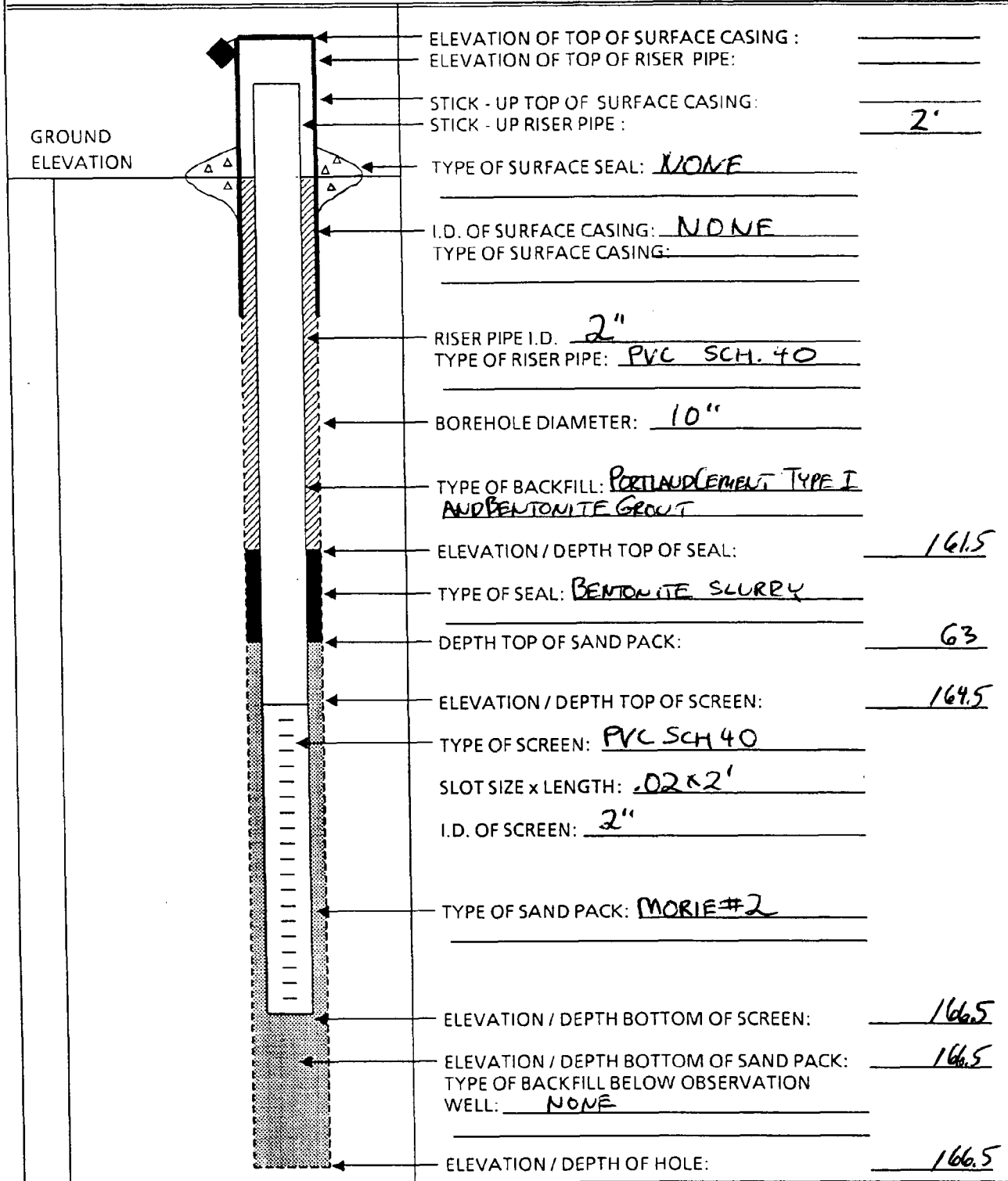
DRILLER S. WOLF/ADT
 DRILLING METHOD 4 1/4 HSA
 DEVELOPMENT METHOD SUB. PUMP.

GROUND ELEVATION		ELEVATION OF TOP OF SURFACE CASING: _____
		ELEVATION OF TOP OF RISER PIPE: _____
		STICK - UP TOP OF SURFACE CASING: _____
		STICK - UP RISER PIPE: <u>2'</u>
		TYPE OF SURFACE SEAL: <u>NONE</u>
		I.D. OF SURFACE CASING: <u>NONE</u>
		TYPE OF SURFACE CASING: _____
		RISER PIPE I.D. <u>2"</u>
		TYPE OF RISER PIPE: <u>PVC SCH. 40</u>
		BOREHOLE DIAMETER: <u>10"</u>
		TYPE OF BACKFILL: <u>PORTLAND CEMENT TYPE I AND BENTONITE GROUT</u>
		ELEVATION / DEPTH TOP OF SEAL: <u>158</u>
		TYPE OF SEAL: <u>BENTONITE SLURRY</u>
		DEPTH TOP OF SAND PACK: <u>60</u>
		ELEVATION / DEPTH TOP OF SCREEN: <u>161</u>
	TYPE OF SCREEN: <u>PVC SCH. 40</u>	
	SLOT SIZE x LENGTH: <u>.02 x 2'</u>	
	I.D. OF SCREEN: <u>2"</u>	
	TYPE OF SAND PACK: <u>MORIE #2</u>	
	ELEVATION / DEPTH BOTTOM OF SCREEN: <u>163</u>	
	ELEVATION / DEPTH BOTTOM OF SAND PACK: <u>163</u>	
	TYPE OF BACKFILL BELOW OBSERVATION WELL: <u>NATURAL MATL.</u>	
	ELEVATION / DEPTH OF HOLE: <u>166</u>	



OVERBURDEN MONITORING WELL SHEET

PROJECT <u>NWIRPBETHPAGE SVF/AS</u> LOCATION <u>SITE 1</u> PROJECT NO. <u>5253</u> BORING <u>IW 01</u> ELEVATION _____ DATE <u>3-18-97</u> FIELD GEOLOGIST <u>FRED W. RAMSER</u>	DRILLER <u>S. WOLF/ADT</u> DRILLING METHOD <u>4 1/4 HSA</u> DEVELOPMENT METHOD <u>SUB PUMP</u>
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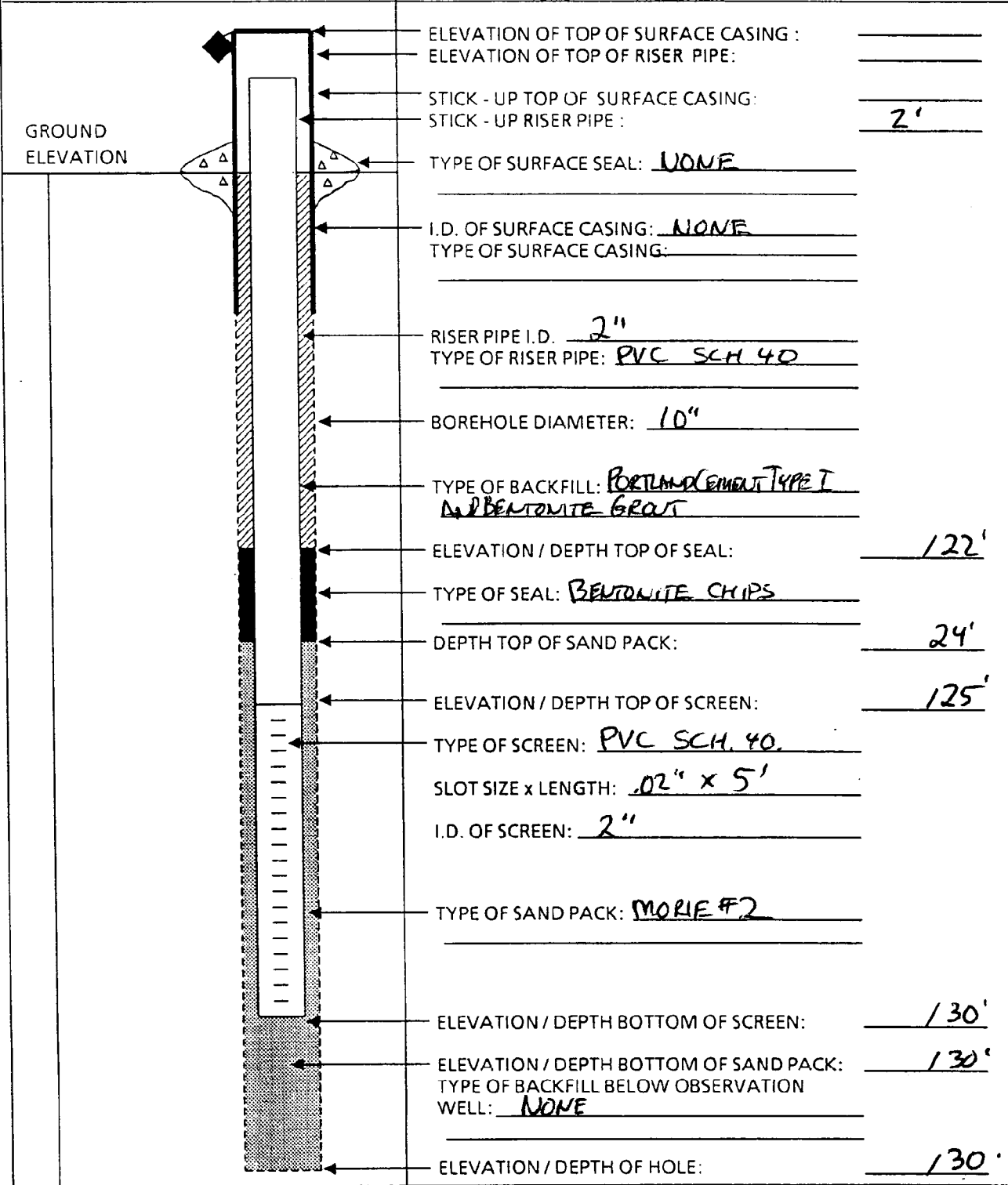


BORING NO.: SVPM 1

OVERBURDEN MONITORING WELL SHEET

PROJECT NW IPP BETHPAGE SYE/AS LOCATION SITE 1
 PROJECT NO. 5253 BORING SVPM 1
 ELEVATION _____ DATE 3-19-97
 FIELD GEOLOGIST FRED W RAMSER

DRILLER S. WOLF/ADT
 DRILLING METHOD 4 1/4 HSA
 DEVELOPMENT METHOD NONE

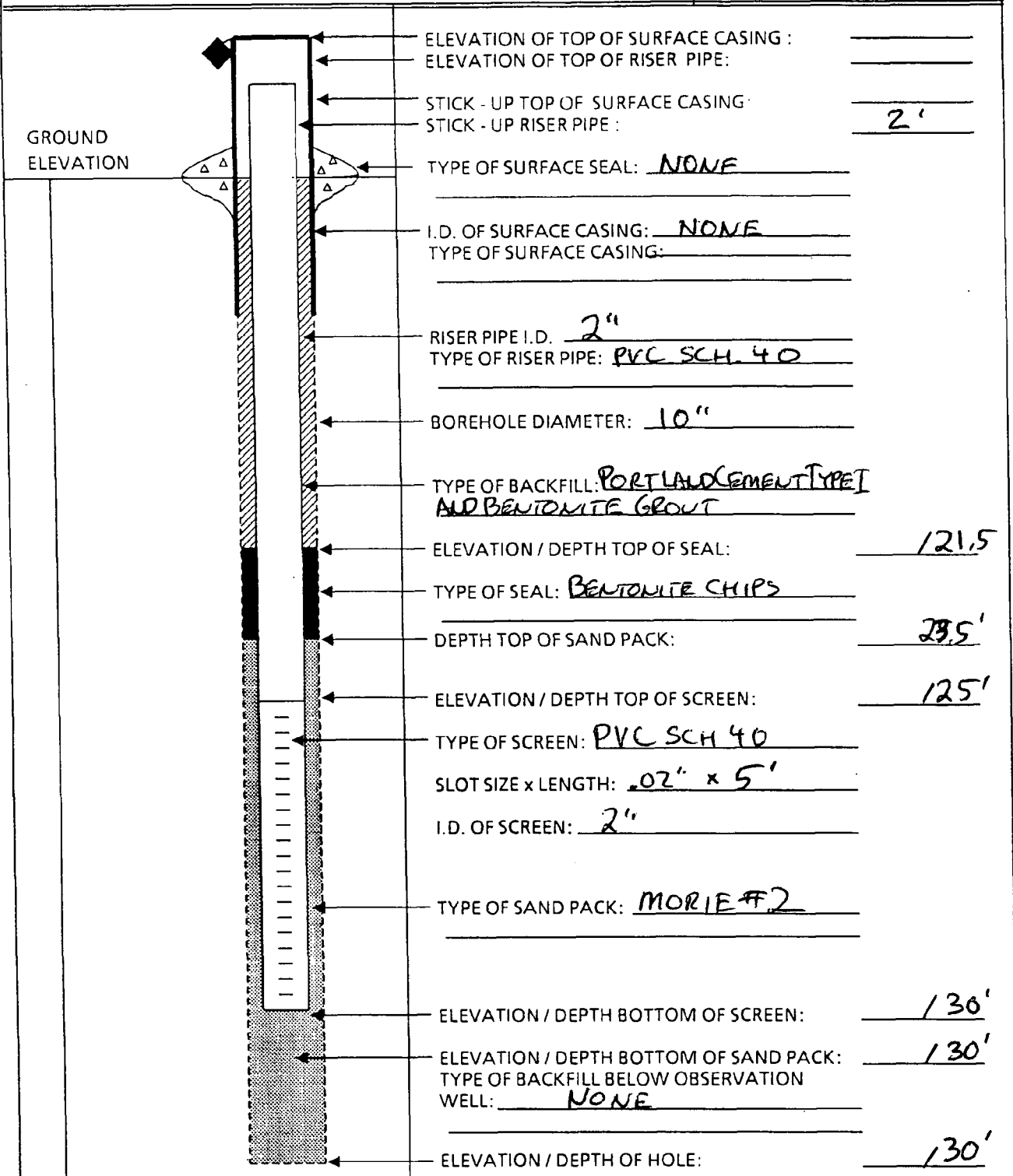


ELEVATION OF TOP OF SURFACE CASING: _____
 ELEVATION OF TOP OF RISER PIPE: _____
 STICK - UP TOP OF SURFACE CASING: _____
 STICK - UP RISER PIPE: 2'
 TYPE OF SURFACE SEAL: NONE
 I.D. OF SURFACE CASING: NONE
 TYPE OF SURFACE CASING: _____
 RISER PIPE I.D. 2"
 TYPE OF RISER PIPE: PVC SCH 40
 BOREHOLE DIAMETER: 10"
 TYPE OF BACKFILL: PORTLAND CEMENT TYPE I
AND BENTONITE GROUT
 ELEVATION / DEPTH TOP OF SEAL: 122'
 TYPE OF SEAL: BENTONITE CHIPS
 DEPTH TOP OF SAND PACK: 24'
 ELEVATION / DEPTH TOP OF SCREEN: 125'
 TYPE OF SCREEN: PVC SCH. 40
 SLOT SIZE x LENGTH: .02" x 5'
 I.D. OF SCREEN: 2"
 TYPE OF SAND PACK: MORIE #2
 ELEVATION / DEPTH BOTTOM OF SCREEN: 130'
 ELEVATION / DEPTH BOTTOM OF SAND PACK: 130'
 TYPE OF BACKFILL BELOW OBSERVATION WELL: NONE
 ELEVATION / DEPTH OF HOLE: 130'



OVERBURDEN MONITORING WELL SHEET

PROJECT <u>NW/RP/BETHPAGE SVE/AS</u>	LOCATION <u>SITE 1</u>	DRILLER <u>S. WOLF/ADT</u>
PROJECT NO. <u>5253</u>	BORING <u>SVPM 2</u>	DRILLING METHOD <u>4 1/4 HSA</u>
ELEVATION _____	DATE <u>3-21-97</u>	DEVELOPMENT METHOD <u>NONE</u>
FIELD GEOLOGIST <u>FREDURAMSER</u>		





BORING NO.: SVPM 3

OVERBURDEN MONITORING WELL SHEET

PROJECT <u>NWIRPBETHPALE SVE/AS</u>	LOCATION <u>SITE 1</u>	DRILLER <u>S. WOLF/ADT</u>
PROJECT NO. <u>5253</u>	BORING <u>SVPM 3</u>	DRILLING METHOD <u>4 1/4 HSA</u>
ELEVATION _____	DATE <u>3-21-97</u>	DEVELOPMENT METHOD <u>NONE</u>
FIELD GEOLOGIST <u>FRED W. RAMSER</u>		

GROUND ELEVATION _____

ELEVATION OF TOP OF SURFACE CASING: _____

ELEVATION OF TOP OF RISER PIPE: _____

STICK - UP TOP OF SURFACE CASING: _____

STICK - UP RISER PIPE: 2

TYPE OF SURFACE SEAL: NONE

I.D. OF SURFACE CASING: NONE

TYPE OF SURFACE CASING: _____

RISER PIPE I.D. 2"

TYPE OF RISER PIPE: PVC SCH. 40

BOREHOLE DIAMETER: 10"

TYPE OF BACKFILL: PORTLAND CEMENT TYPE I AND BENTONITE GROUT

ELEVATION / DEPTH TOP OF SEAL: 121.5

TYPE OF SEAL: BENTONITE CHIPS

DEPTH TOP OF SAND PACK: 23.5

ELEVATION / DEPTH TOP OF SCREEN: 125'

TYPE OF SCREEN: PVC SCH. 40

SLOT SIZE x LENGTH: .02" x 5'

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: MORIE #2

ELEVATION / DEPTH BOTTOM OF SCREEN: 130'

ELEVATION / DEPTH BOTTOM OF SAND PACK: 130'

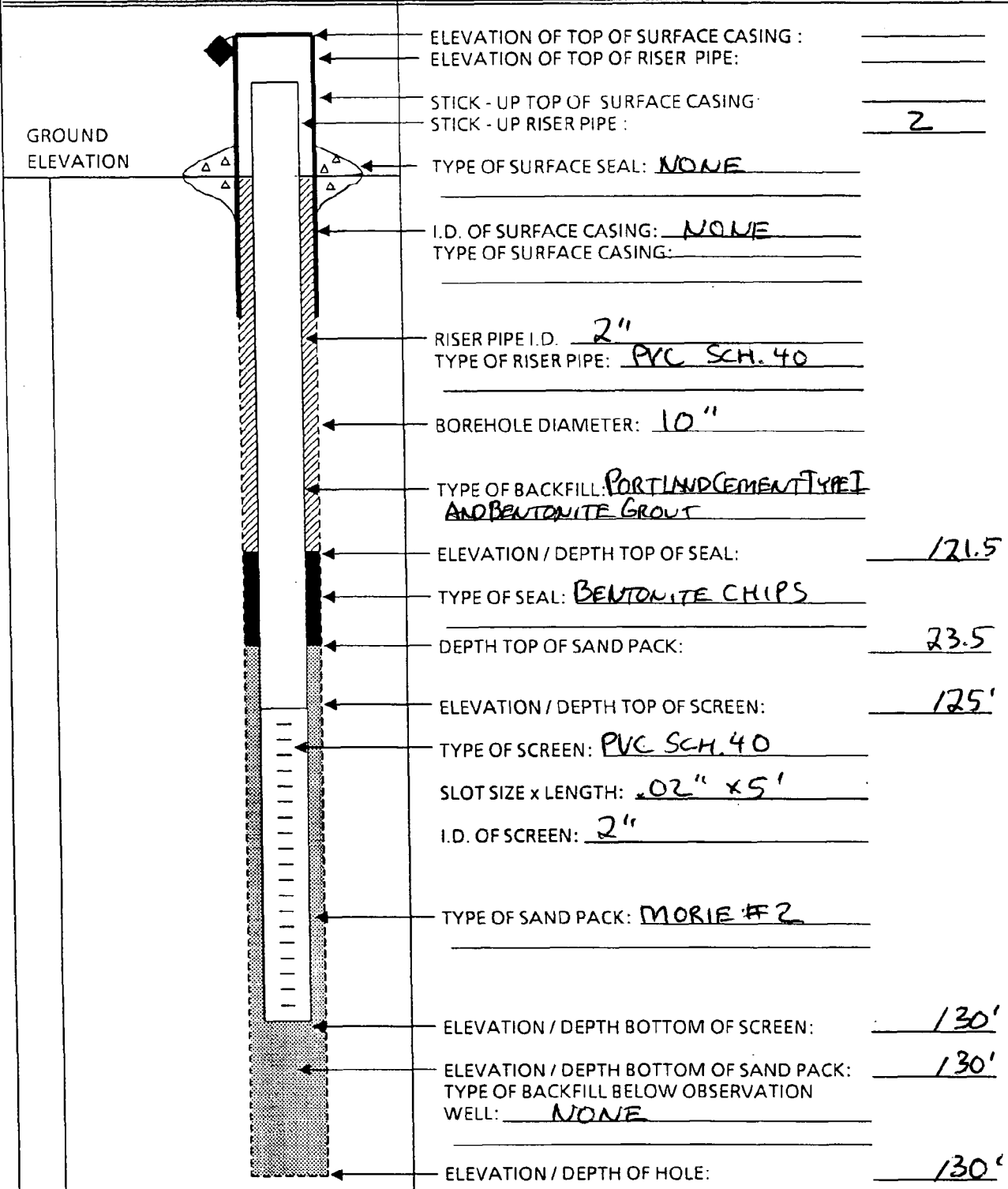
TYPE OF BACKFILL BELOW OBSERVATION WELL: NONE

ELEVATION / DEPTH OF HOLE: 130'



OVERBURDEN MONITORING WELL SHEET

PROJECT <u>NWRP SVFAS BETHPAGE</u>	LOCATION <u>SITE 1</u>	DRILLER <u>SUDOLE/ADT</u>
PROJECT NO. <u>5253</u>	BORING <u>SVPM 4</u>	DRILLING METHOD <u>4 1/4 HSA</u>
ELEVATION _____	DATE <u>3-24-97</u>	DEVELOPMENT METHOD <u>NONE</u>
FIELD GEOLOGIST <u>FRED W RAMSER</u>		



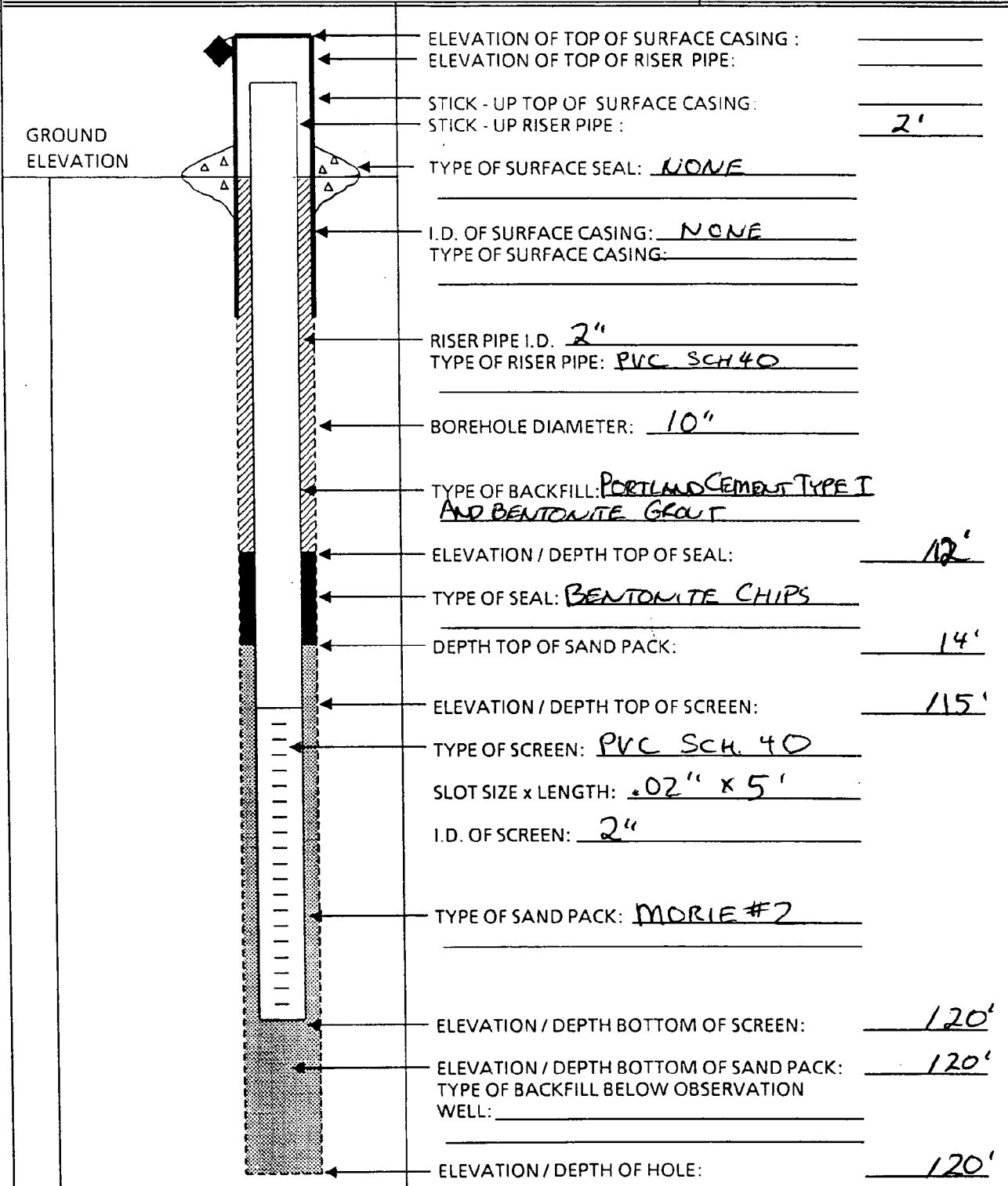


BORING NO.: SVPM 5

OVERBURDEN MONITORING WELL SHEET

PROJECT NWIRPBETHPAGE SVE/AS LOCATION SITE 1
 PROJECT NO. 5253 BORING SVPM 5
 ELEVATION _____ DATE 3-25-97
 FIELD GEOLOGIST FRED W RAMSER

DRILLER S. WOLF/ADT
 DRILLING METHOD 4 1/4 HSA
 DEVELOPMENT METHOD NONE

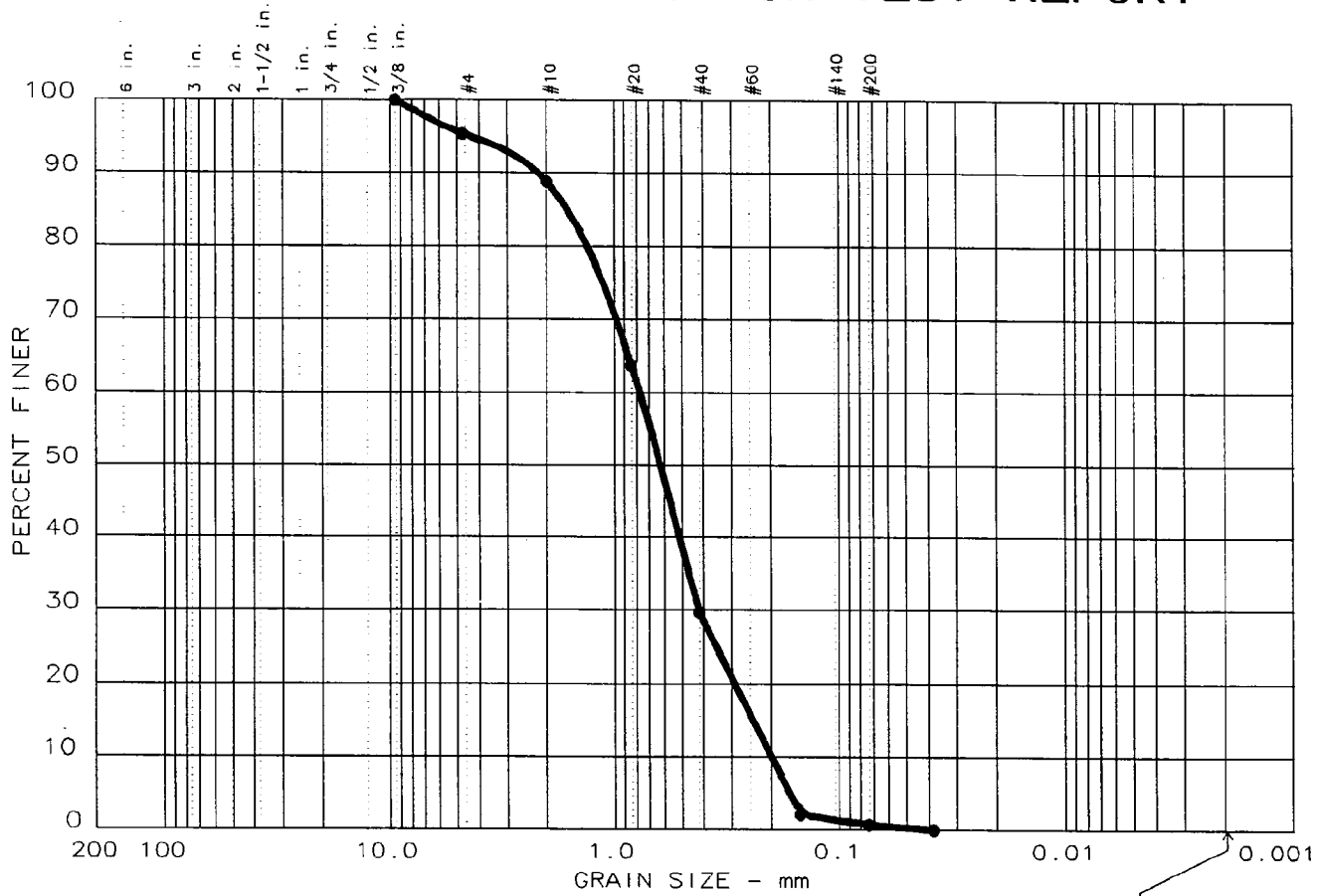




C

APPENDIX C
GEOTECHNICAL ANALYSIS

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
● 12	0.0	4.6	94.8	0.6	

LL	PI	D85	D60	D50	D30	D15	D10	C _c	C _u
● NP	NP	1.62	0.77	0.62	0.421	0.2421	0.2007	1.15	3.8

MATERIAL DESCRIPTION	USCS	AASHTO
● POORLY GRADED SAND	SP	A-1-b

Project No.: 97713
 Project: BETHPAGE, NWIRP
 ● Location: PS-SVPM3-28

 Date: 4-10-97

Remarks:
 MOISTURE CONTENT: 5.4%

GRAIN SIZE DISTRIBUTION TEST REPORT
ACKENHEIL ENGINEERS, INC.

Figure No. _____

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GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 12

Date: 4-10-97
 Project No.: 97713
 Project: BETHPAGE, NWIRP

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Sample Data

Location of Sample: PS-SVPM3-28
 Sample Description: POORLY GRADED SAND
 UCS Class: SP Liquid limit: NP
 AASHTO Class: A-1-b Plasticity index: NP

Notes

Remarks: MOISTURE CONTENT: 5.4%

Fig. No.:

Mechanical Analysis Data

Initial
 Dry sample and tare= 280.70
 Tare = 73.92
 Dry sample weight = 206.78
 Sample split on number 10 sieve
 Split sample data:
 Sample and tare = 99.7 Tare = 0 Sample weight = 99.7
 Cumulative weight retained tare= 0
 Tare for cumulative weight retained= 73.92

Sieve	Cumul. Wt. retained	Percent finer
0.375 inches	73.92	100.0
# 4	83.41	95.4
# 10	97.04	88.8
# 20	28.20	63.7
# 40	66.37	29.7
# 100	97.41	2.0
# 200	98.97	0.7

Hydrometer Analysis Data

Separation sieve is number 10
 Percent -# 10 based on complete sample= 88.8
 Weight of hydrometer sample: 99.7
 Calculated biased weight= 112.25
 Automatic temperature correction
 Composite correction at 20 deg C = -1

Meniscus correction only= 0.5
 Specific gravity of solids= 2.68

Specific gravity correction factor= 0.993

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

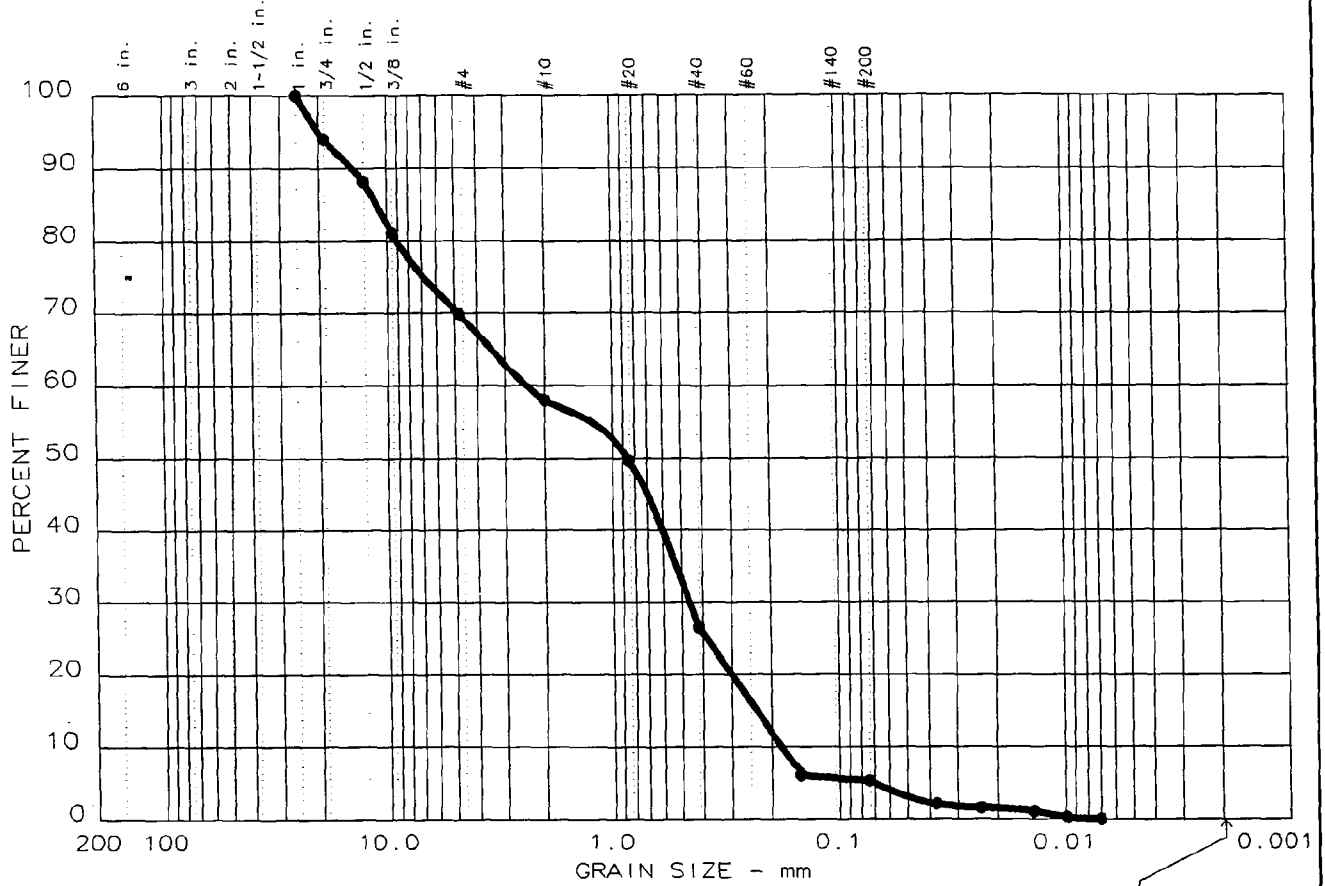
Elapsed time, min	Temp, Actual deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.0	20.0	1.0	-0.0	0.0135	1.5	16.0	0.0383	-0.0

Fractional Components

% + 75mm. = 0.0 % GRAVEL = 4.6 % SAND = 94.8
% FINES = 0.6

D85= 1.62 D60= 0.766 D50= 0.623
D30= 0.4212 D15= 0.24210 D10= 0.20068
Cc = 1.1535 Cu = 3.8194

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
● 11	0.0	30.3	64.5	5.2	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
● NP	NP	11.08	2.40	0.85	0.460	0.2333	0.1811	0.49	13.2

MATERIAL DESCRIPTION	USCS	AASHTO
● POORLY GRADED SAND WITH SILT AND GRAVEL	SP-SM	A-1-b

Project No.: 97713
 Project: BETHPAGE, NWIRP
 ● Location: PS-SVPM3-10
 Date: 4-10-97

Remarks:
 MOISTURE CONTENT: 3.5%

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GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 11

Date: 4-10-97
 Project No.: 97713
 Project: BETHPAGE, NWIRP

=====

Sample Data

Location of Sample: PS-SVPM3-10
 Sample Description: POORLY GRADED SAND WITH SILT AND GRAVEL
 USCS Class: SP-SM Liquid limit: NP
 AASHTO Class: A-1-b Plasticity index: NP

Notes

Remarks: MOISTURE CONTENT: 3.5%

Fig. No.:

Mechanical Analysis Data

Initial

Dry sample and tare= 340.20
 Tare = 57.08
 Dry sample weight = 283.12
 Sample split on number 10 sieve
 Split sample data:
 Sample and tare = 107.2 Tare = 0 Sample weight = 107.2
 Cumulative weight retained tare= 0
 Tare for cumulative weight retained= 57.08

Sieve	Cumul. Wt. retained	Percent finer
1 inches	57.08	100.0
0.75 inches	74.00	94.0
0.5 inches	90.52	88.2
0.375 inches	110.62	81.1
# 4	142.73	69.7
# 10	175.83	58.1
# 20	15.62	49.6
# 40	58.18	26.5
# 100	96.01	6.1
# 200	97.47	5.3

Hydrometer Analysis Data

Separation sieve is number 10
 Percent -# 10 based on complete sample= 58.1
 Weight of hydrometer sample: 107.2
 Calculated biased weight= 184.65
 Automatic temperature correction
 Composite correction at 20 deg C =-1

Meniscus correction only= 0.5

Specific gravity of solids= 2.68

Specific gravity correction factor= 0.993

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

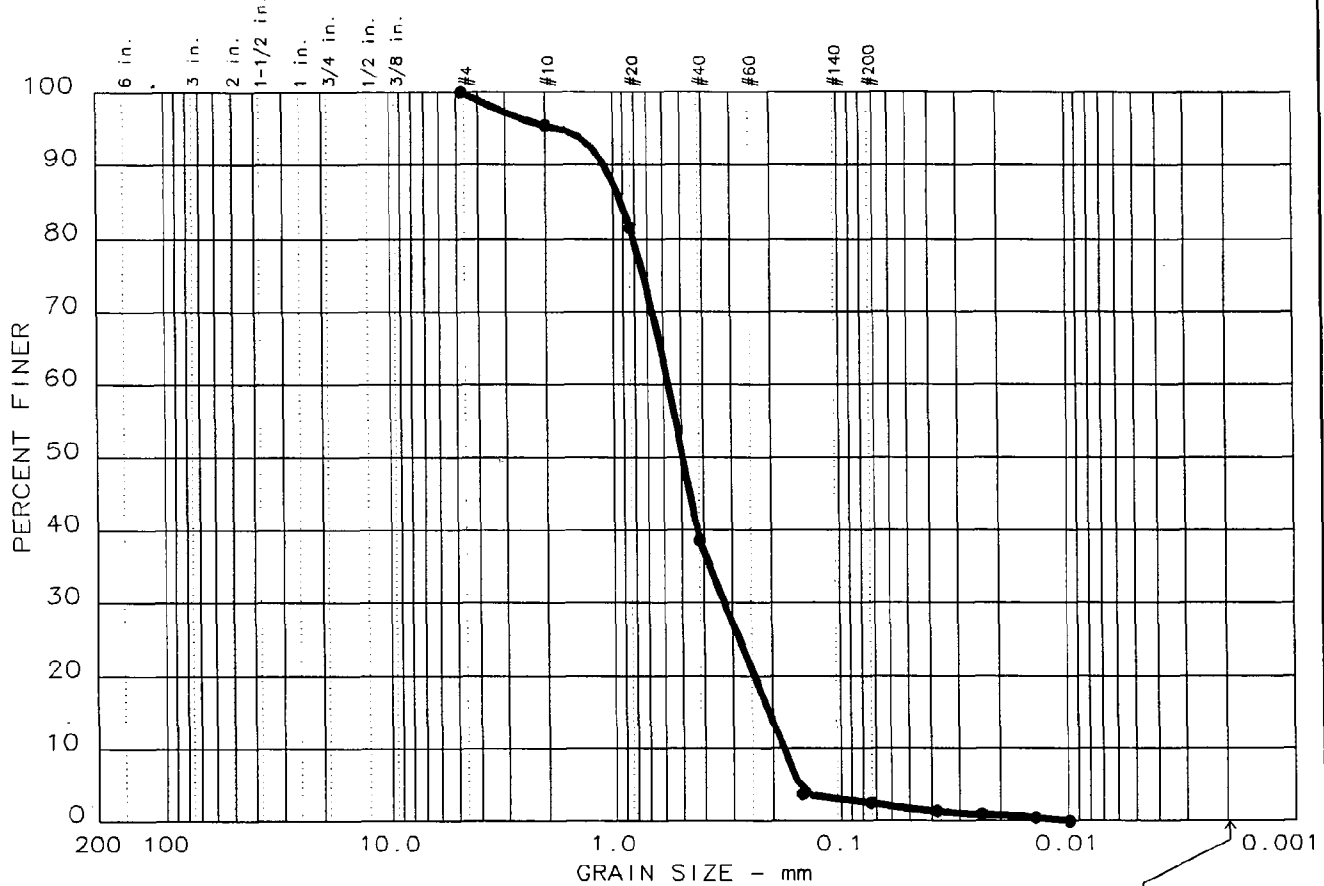
Elapsed time, min	Temp, Actual deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.0	20.0	5.0	4.0	0.0135	5.5	15.4	0.0375	2.1
5.0	20.0	4.0	3.0	0.0135	4.5	15.6	0.0239	1.6
15.0	20.0	3.0	2.0	0.0135	3.5	15.7	0.0138	1.1
30.0	20.0	1.5	0.5	0.0135	2.0	16.0	0.0099	0.2
60.0	20.0	1.0	-0.0	0.0135	1.5	16.0	0.0070	-0.0

Fractional Components

+ 75mm. = 0.0 % GRAVEL = 30.3 % SAND = 64.5
% FINES = 5.2

W₃₅= 11.08 D₆₀= 2.396 D₅₀= 0.850
W₃₀= 0.4603 D₁₅= 0.23335 D₁₀= 0.18113
Cc = 0.4881 Cu = 13.2282

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
• 10	0.0	0.0	97.5	2.5	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• NP	NP	0.91	0.57	0.49	0.325	0.2075	0.1786	1.04	3.2

MATERIAL DESCRIPTION	USCS	AASHTO
• POORLY GRADED SAND	SP	A-1-b

Project No.: 97713
 Project: BETHPAGE, NWIRP
 • Location: PS-GPM3-66

Date: 4-10-97

GRAIN SIZE DISTRIBUTION TEST REPORT
ACKENHEIL ENGINEERS, INC.

Remarks:
 MOISTURE CONTENT: 16.9%

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 10

Date: 4-10-97
 Project No.: 97713
 Project: BETHPAGE, NWIRP

Sample Data

Location of Sample: PS-GPM3-66
 Sample Description: POORLY GRADED SAND
 SCS Class: SP Liquid limit: NP
 AASHTO Class: A-1-b Plasticity index: NP

Notes

Remarks: MOISTURE CONTENT: 16.9%

Fig. No.:

Mechanical Analysis Data

Initial
 Dry sample and tare= 312.87
 Tare = 69.82
 Dry sample weight = 243.05
 Sample split on number 10 sieve
 Split sample data:
 Sample and tare = 104.9 Tare = 0 Sample weight = 104.9
 Cumulative weight retained tare= 0
 Tare for cumulative weight retained= 69.82

Sieve	Cumul. Wt. retained	Percent finer
# 4	69.82	100.0
# 10	81.04	95.4
# 20	15.30	81.5
# 40	62.45	38.6
# 100	100.84	3.7
# 200	102.20	2.5

Hydrometer Analysis Data

Separation sieve is number 10
 Percent -# 10 based on complete sample= 95.4
 Weight of hydrometer sample: 104.9
 Calculated biased weight= 109.98
 Automatic temperature correction
 Composite correction at 20 deg C =-1
 Meniscus correction only= 0.5
 Specific gravity of solids= 2.68
 Specific gravity correction factor= 0.993

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.0	20.0	2.5	1.5	0.0135	3.0	15.8	0.0380	1.3
5.0	20.0	2.0	1.0	0.0135	2.5	15.9	0.0241	0.9
15.0	20.0	1.5	0.5	0.0135	2.0	16.0	0.0140	0.4
30.0	20.0	1.0	-0.0	0.0135	1.5	16.0	0.0099	-0.0

Fractional Components

% + 75mm. = 0.0 % GRAVEL = 0.0 % SAND = 97.5
% FINES = 2.5

D85= 0.91 D60= 0.571 D50= 0.495
D30= 0.3251 D15= 0.20749 D10= 0.17865
Cc = 1.0351 Cu = 3.1989



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APPENDIX D
LINEAR REGRESSION ANALYSIS

EW-01 tests performed at middle of unsaturated zone on 4/21, 4/22, and 4/25/97												
Distance	at 5 cfm	In at 5 cfm	at 10 cfm	In at 10 cfm	at 20 cfm	In at 20 cfm	at 40 cfm	In at 40 cfm	80 cfm	In at 80 cfm		
x												
SVPM 2	16.8	-0.01	-4.96	-0.02	-3.91	-0.03	-0.06	-3.51	-2.81	-0.07	-2.66	
SVPM 3	25.9	-0.01	-4.96	-0.02	-3.91	-0.03	-0.05	-3.51	-3.00	-0.06	-2.81	
SVPM 1	61	-0.01	-4.96	-0.01	-4.61	-0.02	-0.08	-3.91	-2.53	-0.11	-2.21	
SVPM 4	35.1	-		-0.02	-3.91	-0.03	-0.06	-3.51	-2.81	-0.05	-3.00	
EW-04	45	-		-0.01	-4.61	-0.03	-0.06	-3.51	-2.81	-0.06	-2.81	
SVPM 5	53.3	-		-0.02	-3.91	-0.03	-0.05	-3.51	-3.00	-0.05	-3.00	
EW-O5	64	-		-0.02	-3.91	-0.03	-0.05	-3.51	-3.00	-0.05	-3.00	
EW-01 - 5 cfm - Unsaturated Data/Normal												
SUMMARY OUTPUT												
Regression Statistics												
Multiple R	1											
R Square	1											
Adjusted R Square	65535											
Standard Error	0											
Observations	2											
ANOVA												
	df	SS	MS	F	Significance F							
Regression	1	-3.912E-35	-3.91E-35	0	#NUM!							
Residual	0	3.91205E-35	65535									
Total	1	0										
Coefficients												
		tandard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%				
Intercept	16.8	2.4472E-19	0	65535	#NUM!	-0.007	-0.007	-0.007	2.44718E-19	2.44718E-19	2.44718E-19	
		1.1033E+17	Calculated Radius of Influence (0.02 inches of water reference point)									
EW-01 - 5 cfm - Unsaturated Data/Log Normal												
SUMMARY OUTPUT												

Regression Statistics										
Multiple R	1									
R Square	1									
Adjusted R Square	65535									
Standard Error	0									
Observations	2									
ANOVA										
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>					
Regression	1	-3.912E-35	-3.91E-35	0	#NUM!					
Residual	0	3.91205E-35	65535							
Total	1	0								
	<i>Coefficients</i>	<i>tandard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	<i>Upper 95.0%</i>	
Intercept	-0.007	0	65535	#NUM!	-0.007	-0.007	-0.007	-0.007	-0.007	
16.8	2.4472E-19	0	65535	#NUM!	2.44718E-19	2.447E-19	2.44718E-19	2.44718E-19	2.44718E-19	
	-1.595E+19	Calculated Radius of Influence (0.02 inches of water reference point)								
EW-01 - 10 cfm - Unsaturated Data/Normal										
SUMMARY OUTPUT										
Regression Statistics										
Multiple R	0.29138973									
R Square	0.08490797									
Adjusted R Square	-0.143865									
Standard Error	0.00552296									
Observations	6									
ANOVA										
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>					
Regression	1	1.13211E-05	1.132E-05	0.371145	0.575286063					
Residual	4	0.000122012	3.05E-05							
Total	5	0.000133333								
	<i>Coefficients</i>	<i>tandard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	<i>Upper 95.0%</i>	
Intercept	-0.021442	0.008156332	-2.628879	0.058255	-0.04408766	0.0012036	-0.04408766	0.001203649	0.001203649	
16.8	0.00010078	0.000165427	0.6092168	0.575286	-0.000358519	0.0005601	-0.00035852	0.000560081	0.000560081	
	411.208605	Calculated Radius of Influence (0.02 inches of water reference point)								
EW-01 - 10 cfm - Unsaturated Data/Log Normal										
SUMMARY OUTPUT										
Regression Statistics										

Multiple R	0.29138973								
R Square	0.08490797								
Adjusted R Square	-0.143865								
Standard Error	0.38282229								
Observations	6								
ANOVA									
		df	SS	MS	F	Significance F			
Regression	1	0.054392389	0.0543924	0.371145		0.575286063			
Residual	4	0.586211629	0.1465529						
Total	5	0.640604019							
		Standard Error	t Stat	P-value	Lower 95%	Lower 95.0%	Upper 95%	Upper 95.0%	Upper 95.0%
Intercept	-3.8120708	0.565353834	-6.742805	0.002521	-5.38174795	-5.38174795	-2.2423937	-2.24239367	-2.24239367
	16.8	-0.0069856	0.011466534	-0.609217	0.575286	-0.038821874	0.0248507	-0.03882187	0.024850664
		Calculated Radius of Influence (0.02 inches of water reference point)							
EW-01 - 20 cfm - Unsaturated Data/Normal									
SUMMARY OUTPUT									
<i>Regression Statistics</i>									
Multiple R	0.44678274								
R Square	0.19961482								
Adjusted R Square	-0.0004815								
Standard Error	0.00408347								
Observations	6								
ANOVA									
		df	SS	MS	F	Significance F			
Regression	1	1.66346E-05	1.663E-05	0.997594	0.374418114				
Residual	4	6.66988E-05	1.667E-05						
Total	5	8.33333E-05							
		Standard Error	t Stat	P-value	Lower 95%	Lower 95.0%	Upper 95%	Upper 95.0%	Upper 95.0%
Intercept	-0.0341218	0.006030482	-5.658227	0.004808	-0.05085174	-0.05085174	-0.0173785	-0.0173785	-0.0173785
	16.8	0.00012216	0.000122311	0.9987962	0.374418	-0.000217426	0.0004618	-0.00021743	0.000461752
		Calculated Radius of Influence (0.02 inches of water reference point)							
EW-01 - 20 cfm - Unsaturated Data/Log Normal									
SUMMARY OUTPUT									
<i>Regression Statistics</i>									
Multiple R	0.44678274								

Adjusted R Square	-0.1520107										
Standard Error	0.32785962										
Observations	6										
ANOVA											
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>						
Regression	1	0.036572795	0.0365728	0.340238	0.59099707						
Residual	4	0.42996773	0.1074919								
Total	5	0.466540525									
	<i>Coefficients</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>				
Intercept	-3.0749675	0.484184696	-6.350815	0.00315	-4.419282501	-4.4192825	-1.73065247				
	16.8	0.00572815	0.009820258	0.5832989	0.590997	-0.021537318	0.0329936				
	14.8333327	Calculated Radius of Influence (0.05 inches of water reference point)									

Regression Statistics									
Multiple R	0.92222893								
R Square	0.85050619								
Adjusted R Square	0.77575929								
Standard Error	0.45952893								
Observations	4								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	2.40275776	2.4027578	11.37848	0.077771073				
Residual	2	0.422333672	0.2111668						
Total	3	2.825091448							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Upper 95.0%
Intercept	-0.4024738	0.408966588	-0.984124	0.428809	-2.162116269	1.357169	-2.16211627	1.357168591	
X Variable 1	-0.0491909	0.014582857	-3.3732	0.077771	-0.111935909	0.013554	-0.11193591	0.013554114	
	52.6017272	Calculated Radius of Influence (0.05 inches of water reference point)							
EW-01- 10 cfm - Water Data/Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.90190832								
R Square	0.81343862								
Adjusted R Square	0.72015793								
Standard Error	0.33947895								
Observations	4								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	1.004983081	1.0049831	8.720332	0.098091678				
Residual	2	0.230491919	0.115246						
Total	3	1.235475							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Upper 95.0%
Intercept	-1.2855692	0.302125808	-4.255079	0.05104	-2.585512585	0.014374	-2.58551258	0.014374092	
X Variable 1	0.03181333	0.010773147	2.9530209	0.098092	-0.014539815	0.078166	-0.01453981	0.078166474	
	41.9814356	Calculated Radius of Influence (0.05 inches of water reference point)							
EW-01- 10 cfm - Water Data/Log Normal									
SUMMARY OUTPUT									
Regression Statistics									

Multiple R	0.9516636	df		SS		MS		F		Significance F	
R Square	0.90566362										
Adjusted R Square	0.85849542										
Standard Error	0.39324734										
Observations	4										
ANOVA											
Regression	1	2.969267148	2.9692671	19.20073	0.048336396						
Residual	2	0.309286937	0.1546435								
Total	3	3.278554085									
Coefficients											
Intercept	0.21162546	0.349978014	0.6046822	0.606855	-1.294209446	1.71746	-1.29420945	1.717460366			
X Variable 1	-0.0546833	0.012479453	-4.381864	0.048336	-0.108378047	-0.000988	-0.10837805	-0.00098847			
58.5485493											
EW-01- 20 cfm - Water Data/Normal											
SUMMARY OUTPUT											
Regression Statistics											
Multiple R	0.89407713										
R Square	0.79937392										
Adjusted R Square	0.69906088										
Standard Error	1.1395525										
Observations	4										
ANOVA											
df											
Regression	1	10.34811519	10.348115	7.968794	0.105922868						
Residual	2	2.597159807	1.2985799								
Total	3	12.945275									
Coefficients											
Intercept	-3.9708635	1.014166615	-3.915396	0.059471	-8.334473306	0.392746	-8.33447331	0.392746282			
X Variable 1	0.10208463	0.03616297	2.8229052	0.105923	-0.053512175	0.257681	-0.05351217	0.257681443			
39.3875488											
EW-01- 20 cfm - Water Data/Log Normal											
SUMMARY OUTPUT											
Regression Statistics											
Multiple R	0.96011431										

R Square	0.92181948																					
Adjusted R Square	0.88272922																					
Standard Error	0.39636282																					
Observations	4																					
ANOVA																						
	<i>df</i>		<i>SS</i>		<i>MS</i>		<i>F</i>		<i>Significance F</i>													
Regression	1	3.704786054	3.7047861	23.58182	0.039885694																	
Residual	2	0.314206964	0.1571035																			
Total	3	4.018993018																				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>														
Intercept	1.32608055	0.352750694	3.7592571	0.064039	-0.191684239	2.843845	-0.19168424	2.843845345														
X Variable 1	-0.0610817	0.01257832	-4.856112	0.039886	-0.115201911	-0.006962	-0.11520191	-0.00696155														
	70.6607472	Calculated Radius of Influence (0.05 inches of water reference point)																				
EW-01- 40 cfm - Water Data/Normal																						
SUMMARY OUTPUT																						
<i>Regression Statistics</i>																						
Multiple R	0.87167814																					
R Square	0.75982278																					
Adjusted R Square	0.63973417																					
Standard Error	3.86879727																					
Observations	4																					
ANOVA																						
	<i>df</i>		<i>SS</i>		<i>MS</i>		<i>F</i>		<i>Significance F</i>													
Regression	1	94.7027154	94.702715	6.327184	0.128321861																	
Residual	2	29.9351846	14.967592																			
Total	3	124.6379																				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>														
Intercept	-11.509716	3.443110366	-3.342825	0.079027	-26.32423403	3.304803	-26.324234	3.304803026														
X Variable 1	0.30882394	0.122773807	2.5153895	0.128322	-0.219429478	0.837077	-0.21942948	0.837077367														
	37.4314095	Calculated Radius of Influence (0.05 inches of water reference point)																				
EW-01- 40 cfm - Water Data/Log Normal																						
SUMMARY OUTPUT																						
<i>Regression Statistics</i>																						
Multiple R	0.9272522																					
R Square	0.85979665																					

Adjusted R Square	0.81656288								
Standard Error	0.58370143								
Observations	4								
ANOVA									
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>				
Regression	1	4.890642195	4.8906422	14.35438	0.063138972				
Residual	2	0.681414725	0.3407074						
Total	3	5.57205692							
Coefficients									
	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>		
Intercept	2.89063749	0.51947629	5.5645225	0.030811	0.655509858	5.125765	0.655509858	5.125765128	
X Variable 1	-0.0701799	0.018523392	-3.788717	0.063139	-0.149879669	0.00952	-0.14987967	0.009519885	
	83.7937668	Calculated Radius of Influence (0.05 inches of water reference point)							

EW-02 tests performed at water table on 4/24/97											
Distance x	Steady State Soil Vapor Pressure			at 80 cfm	In at 20 cfm	at 80 cfm	In at 80 cfm				
	at 5cfm	In at 5	at 20 cfm					In at 20 cfm	at 80 cfm	In at 80 cfm	
EW-02	0	-0.06	-2.81	-2.4	0.88	-13.00	2.56				
EW-01	44	-0.06	-2.81	-0.46	-0.78	-1.30	0.26				
EW-03	55.6	-0.06	-2.81	-0.41	-0.89	-1.20	0.18				
MW-01	56.1	-0.02	-3.91	-0.3	-1.20	-0.98	-0.02				
27-S3	98			-0.04	-3.22						
EW-02 - 5 cfm - Water Data/Normal											
SUMMARY OUTPUT											
Regression Statistics											
Multiple R	0.43133929										
R Square	0.18605358										
Adjusted R Square	-0.2209196										
Standard Error	0.02209905										
Observations	4										
ANOVA											
	df	SS	MS	F	Significance F						
Regression	1	0.000223264	2E-04	0.457164	0.568660714						
Residual	2	0.000976736	5E-04								
Total	3	0.0012									
		Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%			
Intercept	-0.06265	0.021728458	-2.88	0.102181	-0.156140091	0.0308401	-0.15614009	0.030840054			
X Variable 1	0.00032498	0.000480647	0.676	0.568661	-0.001743075	0.002393	-0.00174308	0.002393044			
	346.63206	Calculated Radius of Influence (0.05 inches of water reference point)									
EW-02 - 5 cfm - Water Data/Log Normal											
SUMMARY OUTPUT											

Regression Statistics											
Multiple R	0.53129098										
R Square	0.28227011										
Adjusted R Square	-0.4354598										
Standard Error	0.75994006										
Observations	3										
ANOVA											
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>						
Regression	1	0.227123743	0.227	0.393282	0.64341419						
Residual	1	0.577508898	0.578								
Total	2	0.804632641									
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	
Intercept	-0.6249369	4.097214457	-0.15	0.903641	-52.68475961	51.434886	-52.6847596	51.43488579			
	0	-0.0492231	0.078490458	-0.63	0.643414	-1.046534642	0.9480885	-1.04653464	0.94808848		
	48.0478475 Calculated Radius of Influence (0.05 inches of water reference point)										
EW-02 - 20 cfm - Water Data/Normal											
SUMMARY OUTPUT											
Regression Statistics											
Multiple R	0.8952577										
R Square	0.80148635										
Adjusted R Square	0.73531514										
Standard Error	0.48975781										
Observations	5										
ANOVA											
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>						
Regression	1	2.905291851	2.905	12.11231	0.040047305						
Residual	3	0.719588149	0.24								
Total	4	3.62488									
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	
Intercept	-1.9567784	0.416954292	-4.69	0.018294	-3.283714252	-0.6298425	-3.28371425	-0.62984247			
X Variable 1	0.0243354	0.00699238	3.48	0.040047	0.002082508	0.0465883	0.002082508	0.046588299			
	82.4633288 Calculated Radius of Influence (0.05 inches of water reference point)										
EW-02 - 20 cfm - Water Data/Log Normal											
SUMMARY OUTPUT											
Regression Statistics											

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Multiple R	0.98766359																			
R Square	0.97547937																			
Adjusted R Square	0.96730582																			
Standard Error	0.26412036																			
Observations	5																			
ANOVA																				
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>															
Regression	1	8.325520842	8.326	119.3459	0.001641768															
Residual	3	0.209278688	0.07																	
Total	4	8.534799529																		
Coefficients																				
	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>													
Intercept	1.04715635	0.224858314	4.657	0.018681	0.331556165	1.7627565	0.331556165													
X Variable 1	-0.0411955	0.003770905	-10.9	0.001642	-0.053196174	-0.0291947	-0.05319617													
98.0000277 Calculated Radius of Influence (0.05 inches of water reference point)																				
EW-02 - 80 cfm - Water Data/Normal																				
SUMMARY OUTPUT																				
<i>Regression Statistics</i>																				
Multiple R	0.98096244																			
R Square	0.96228731																			
Adjusted R Square	0.94343096																			
Standard Error	1.40838628																			
Observations	4																			
ANOVA																				
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>															
Regression	1	101.2256962	101.2	51.03254	0.019037561															
Residual	2	3.96710381	1.984																	
Total	3	105.1928																		
Coefficients																				
	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>													
Intercept	-12.63779	1.384768414	-9.13	0.011794	-18.59597135	-6.6796079	-6.67960786													
X Variable 1	0.21882568	0.030631953	7.144	0.019038	0.087026933	0.3506244	0.350624428													
57.9812643 Calculated Radius of Influence (0.05 inches of water reference point)																				
EW-02 - 80 cfm - Water Data/Log Normal																				
SUMMARY OUTPUT																				
<i>Regression Statistics</i>																				

Multiple R	0.9881974							
R Square	0.9765341							
Adjusted R Square	0.96480115							
Standard Error	0.22842861							
Observations	4							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	4.342913631	4.343	83.23006	0.0118026			
Residual	2	0.104359256	0.052					
Total	3	4.447272888						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	2.51165684	0.224597984	11.18	0.007902	1.545289034	3.4780246	1.545289034	3.47802464
X Variable 1	-0.0453256	0.004968249	-9.12	0.011803	-0.06670226	-0.0239489	-0.06670226	-0.02394893
	121.380801	Calculated Radius of Influence (0.05 inches of water reference point)						

EW-02 tests performed at middle of unsaturated zone on 4/24/97									
Distance	Steady State Soil Vapor Pressure								
x	at 5cfm	ln at 5	at 20 cf	ln at 20 cf	at 80 cfm	ln at 80 cfm	at 80 cfm	ln at 80 cfm	
EW-04	3.7	0.003	-5.81	-0.05	-3.00	-0.09	-2.41	-2.41	
SVPM 4	10.1	-0.01	-4.61	-0.03	-3.51	-0.09	-2.41	-2.41	
SVPM 5	10.5	-0.003	-5.81	-0.04	-3.22	-0.07	-2.66	-2.66	
SVPM 3	19.3	0.003	-5.81	-0.03	-3.51	-0.09	-2.41	-2.41	
EW-05	21.2	-0.02	-3.91	-0.04	-3.22	-0.07	-2.66	-2.66	
SVPM 2	31.7	0.003	-5.81	-0.03	-3.51	-0.07	-2.66	-2.66	
SVPM 1	98.1	0.01	-4.61	-0.03	-3.51	-0.12	-2.12	-2.12	
EW-02 - 5 cfm - Unsaturated Data/Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.50094001								
R Square	0.25094089								
Adjusted R Square	0.10112907								
Standard Error	0.00954388								
Observations	7								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	0.000152572	2E-04	1.675	0.2521345				
Residual	5	0.000455428	9E-05						
Total	6	0.000608							
		Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	
Intercept	-0.0063378	0.004923993	-1.29	0.2544	-0.018995	0.0063197	-0.01899531	0.006319703	
X Variable 1	0.00015604	0.000120563	1.294	0.2521	-0.000154	0.000466	-0.00015388	0.000465951	
361.05629 Calculated Radius of Influence (0.05 inches of water reference point)									
EW-02 - 5 cfm - Unsaturated Data/Log Normal									
SUMMARY OUTPUT									

Regression Statistics									
Multiple R	0.32708474								
R Square	0.10698443								
Adjusted R Square	-0.0716187								
Standard Error	0.82928463								
Observations	7								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	0.411944561	0.412	0.599	0.4739437				
Residual	5	3.438565023	0.688						
Total	6	3.850509584							
Coefficients									
	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Lower 95.0%	Upper 95.0%
Intercept	-5.4195325	0.427854581	-12.7	5E-05	-6.519366	-4.319699	-6.51936587	-4.31969903	-4.31969903
X Variable 1	0.00810787	0.010475894	0.774	0.4739	-0.018821	0.035037	-0.01882123	0.035036971	0.035036971
309.518029 Calculated Radius of Influence (0.05 inches of water reference point)									
EW-02 - 20 cfm - Unsaturated Data/Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.47259061								
R Square	0.22334189								
Adjusted R Square	0.06801026								
Standard Error	0.0075957								
Observations	7								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	8.29556E-05	8E-05	1.4378	0.2842113				
Residual	5	0.000288473	6E-05						
Total	6	0.000371429							
Coefficients									
	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Lower 95.0%	Upper 95.0%
Intercept	-0.0389128	0.003918864	-9.93	0.0002	-0.048987	-0.0288391	-0.04898659	-0.02883911	-0.02883911
X Variable 1	0.00011506	9.59522E-05	1.199	0.2842	-0.000132	0.0003617	-0.0001316	0.000361709	0.000361709
512.035189 Calculated Radius of Influence (0.02 inches of water reference point)									
EW-02 - 20 cfm - Unsaturated Data/Log Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.47724357								

R Square	0.22776142								
Adjusted R Square	0.07331371								
Standard Error	0.19958775								
Observations	7								
ANOVA									
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>				
Regression	1	0.058744394	0.059	1.4747	0.2788277				
Residual	5	0.199176343	0.04						
Total	6	0.257920737							
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	
Intercept	-3.2662711	0.10297373	-31.7	6E-07	-3.530973	-3.0015691	-3.53097306	-3.00156912	
X Variable 1	-0.0030618	0.002521282	-1.21	0.2788	-0.009543	0.0034194	-0.00954291	0.003419393	
	210.248216	Calculated Radius of Influence (0.02 inches of water reference point)							
EW-02 - 80 cfm - Unsaturated Data/Normal									
SUMMARY OUTPUT									
	<i>Regression Statistics</i>								
Multiple R	0.71383464								
R Square	0.50955989								
Adjusted R Square	0.41147186								
Standard Error	0.01390588								
Observations	7								
ANOVA									
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>				
Regression	1	0.001004561	0.001	5.1949	0.0716063				
Residual	5	0.000966868	2E-04						
Total	6	0.001971429							
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	
Intercept	-0.0745836	0.007174491	-10.4	0.0001	-0.093026	-0.0561411	-0.09302622	-0.05614105	
X Variable 1	-0.0004004	0.000175665	-2.28	0.0716	-0.000852	5.118E-05	-0.00085194	5.11783E-05	
	-236.23291	Calculated Radius of Influence (0.02 inches of water reference point)							
EW-02 - 80 cfm - Unsaturated Data/Log Normal									
SUMMARY OUTPUT									
	<i>Regression Statistics</i>								
Multiple R	0.64950632								
R Square	0.42185846								

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EW-04 tests performed at water table on 4/28 and 4/29/97										
Distance	Steady State Soil Vapor Pressure			at 80 cfm	at 80 cfm	In at 20 cfm	at 80 cfm	In at 20 cfm	In at 80 cfm	
	x	at 5cfm	In at 5 cfm							
EW-02	3.7	-0.11	-2.21	-0.07	-2.66		-0.08		-2.53	
EW-01	55.3	-0.11	-2.21	-0.03	-3.51		-0.06		-2.81	
MW-01	74.6	-0.11	-2.21	-0.06	-2.81		-0.06		-2.81	
EW-03	75	-0.1	-2.30	-0.06	-2.81		-0.06		-2.81	
EW-04 - 5cfm - Water Data/Normal										
SUMMARY OUTPUT										
<i>Regression Statistics</i>										
Multiple R	0.45360276									
R Square	0.20575547									
Adjusted R	-0.1913668									
Standard Er	0.00545749									
Observation	4									
ANOVA										
	df	SS	MS	F	Significance F					
Regression	1	1.54317E-05	1.543E-05	0.518116	0.546397237					
Residual	2	5.95683E-05	2.978E-05							
Total	3	7.5E-05								
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%		
Intercept	-0.1110219	0.005602375	-19.81694	0.002537	-0.135127021	-0.0869168	-0.13512702	-0.08691684		
X Variable	6.7535E-05	9.38238E-05	0.7198029	0.546397	-0.000336157	0.0004712	-0.00033616	0.000471226		
	2384.28731 Calculated Radius of Influence (0.05 inches of water reference point)									
EW-04 - 5cfm - Water Data/Log Normal										
SUMMARY OUTPUT										

Regression Statistics									
Multiple R	0.45360276								
R Square	0.20575547								
Adjusted R	-0.1913668								
Standard Er	0.05201541								
Observation	4								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	0.001401817	0.0014018	0.518116	0.546397237				
Residual	2	0.005411206	0.0027056						
Total	3	0.006813023							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Upper 95.0%
Intercept	-2.1975349	0.053396337	-41.15516	0.00059	-2.427280932	-1.9677888	-2.42728093	-1.96778882	
X Variable	-0.0006437	0.000894236	-0.719803	0.546397	-0.004491263	0.0032039	-0.00449126	0.003203916	
1231.1598 Calculated Radius of Influence (0.05 inches of water reference point)									
EW-04 - 20cfm - Water Data/Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.3318008								
R Square	0.11009177								
Adjusted R	-0.3348623								
Standard Er	0.02001146								
Observation	4								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	9.90826E-05	9.908E-05	0.247423	0.668199201				
Residual	2	0.000800917	0.0004005						
Total	3	0.0009							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Upper 95.0%
Intercept	-0.0639243	0.020542736	-3.11177	0.089608	-0.152312601	0.024464	-0.1523126	0.024464044	
X Variable	0.00017113	0.000344032	0.4974161	0.668199	-0.001309125	0.0016514	-0.00130912	0.001651379	
665.729016 Calculated Radius of Influence (0.05 inches of water reference point)									
EW-04 - 20cfm - Water Data/ Log Normal									
SUMMARY OUTPUT									
Regression Statistics									

Multiple R	0.25258312																			
R Square	0.06379823																			
Adjusted R	-0.4043027																			
Standard Er	0.44947286																			
Observation	4																			
ANOVA																				
		df	SS	MS	F	Significance F														
Regression		1	0.027534432	0.0275344	0.136292	0.747416882														
Residual		2	0.404051707	0.2020259																
Total		3	0.431586139																	
		Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Lower 95.0%	Upper 95.0%									
Intercept		-2.7993908	0.461405642	-6.067093	0.026108	-4.784660449	-0.8141212	-4.784660445	-0.8141212											
X Variable		-0.0028527	0.007727226	-0.369177	0.747417	-0.036100305	0.0303949	-0.03610031	0.030394878											
		66.816792	Calculated Radius of Influence (0.05 inches of water reference point)																	
EW-04 - 80cfm - Water Data/Normal																				
SUMMARY OUTPUT																				
Regression Statistics																				
Multiple R	0.96179667																			
R Square	0.92505283																			
Adjusted R	0.88757925																			
Standard Er	0.00335292																			
Observation	4																			
ANOVA																				
		df	SS	MS	F	Significance F														
Regression		1	0.000277516	0.0002775	24.68546	0.038203332														
Residual		2	2.24842E-05	1.124E-05																
Total		3	0.0003																	
		Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Lower 95.0%	Upper 95.0%									
Intercept		-0.0799355	0.003441935	-23.22399	0.001849	-0.094744912	-0.065126	-0.09474491	-0.06512599											
X Variable		0.00028639	5.76426E-05	4.9684469	0.038203	3.83779E-05	0.0005344	3.83779E-05	0.00053441											
		453.694634	Calculated Radius of Influence (0.05 inches of water reference point)																	
EW-04 - 80cfm - Water Data/Log Normal																				
SUMMARY OUTPUT																				
Regression Statistics																				

Multiple R	0.96179667																							
R Square	0.92505283																							
Adjusted R	0.88757925																							
Standard Er	0.04822875																							
Observation	4																							
ANOVA																								
	df	SS	MS	F	Significance F																			
Regression	1	0.057418706	0.0574187	24.68546	0.038203332																			
Residual	2	0.004652026	0.002326																					
Total	3	0.062070731																						
Coefficients																								
	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%																	
Intercept	0.049509151	-51.03414	0.000384	-2.739677961	-2.3136363	-2.73967796	-2.3136363																	
X Variable	0.000829137	-4.968447	0.038203	-0.007687012	-0.000552	-0.00768701	-0.00055203																	
112.474913 Calculated Radius of Influence (0.05 inches of water reference point)																								



EW-04 tests performed at middle of unsaturated zone on 4/28 and 4/29/97									
Distance	Steady State Soil Vapor Pressure			at 20 cfm			at 80 cfm		
x	at 5 cfm	In at 5 cfm	at 20 cfm	In at 20 cfm	at 80 cfm	In at 80 cfm	at 80 cfm	In at 80 cfm	
EW-04	0	-0.11	-2.21	-0.75	-0.29	-4.80	-4.80	1.57	
SVPM-5	10.1	-0.06	-2.81	-0.11	-2.21	-0.43	-0.43	-0.84	
SVPM-4	10.9	-0.05	-3.00	-0.14	-1.97	-0.47	-0.47	-0.76	
SVPM-3	20.1	-0.05	-3.00	-0.07	-2.66	-0.33	-0.33	-1.11	
EW-05	20.7	-0.06	-2.81	-0.08	-2.53	-0.31	-0.31	-1.17	
SVPM-2	31.2	-0.07	-2.66	-0.06	-2.81	-0.23	-0.23	-1.47	
SVPM-1	98	-0.05	-3.00	-0.02	-3.91	-0.06	-0.06	-2.81	
EW-04 - 5 cfm - Unsaturated Data/Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.42594407								
R Square	0.18142835								
Adjusted R Square	0.01771402								
Standard Error	0.02130076								
Observations	7								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	0.000502816	0.000502816	1.1082008	0.340664865				
Residual	5	0.002268613	0.000453723						
Total	6	0.002771429							
	Coefficients	tandard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%	
Intercept	-0.0719223	0.010837027	-6.636719502	0.001170306	-0.099779727	-0.04406	-0.0997797	-0.04406489	
X Variable 1	0.00027988	0.000265861	1.052711166	0.340664865	-0.000403542	0.000963	-0.0004035	0.000963292	
435.631043 Calculated Radius of Influence (0.05 inches of water reference point)									
EW-04 - 5 cfm - Unsaturated Data/Log Normal									
SUMMARY OUTPUT									

Regression Statistics									
Multiple R	0.43991908								
R Square	0.1935288								
Adjusted R Square	0.03223456								
Standard Error	0.27951495								
Observations	7								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	0.093742565	0.093742565	1.199849408	0.323287563				
Residual	5	0.390643044	0.078128609						
Total	6	0.48438561							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%	
Intercept	-2.6786651	0.142206683	-18.83642235	7.76758E-06	-3.044218457	-2.31311	-3.0442185	-2.31311182	
X Variable 1	-0.0038215	0.003488711	-1.095376377	0.323287563	-0.012789454	0.005147	-0.0127895	0.005146551	
	81.4703164	Calculated Radius of Influence (0.05 inches of water reference point)							
EW-04 - 20 cfm - Unsaturated Data/Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.47819163								
R Square	0.22866723								
Adjusted R Square	0.07440068								
Standard Error	0.24634134								
Observations	7								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	0.089951157	0.089951157	1.482286537	0.277736421				
Residual	5	0.303420272	0.060684054						
Total	6	0.393371429							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%	
Intercept	-0.2778549	0.125329196	-2.217000895	0.077419659	-0.600023369	0.044313	-0.6000234	0.044313489	
X Variable 1	0.00374337	0.003074661	1.217491904	0.277736421	-0.00416028	0.011647	-0.0041603	0.011647029	
	87.5827188	Calculated Radius of Influence (0.05 inches of water reference point)							
EW-04 - 20 cfm - Unsaturated Data/Log Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.80886037								

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EW-05 tests performed at water table on 4/23/97									
Distance x	Steady State Soil Vapor Pressure at 5cfm			at 20 cf			at 80 cfm		
	In at 5	In at 20	Pressure	In at 5	In at 20	Pressure	In at 80	In at 80	cfm
EW-02	21.2	0.02	3.91	0.07	2.66	0.04	3.22	0.01	4.61
EW-01	64	0.02	3.91	0.05	3.00	0.01	4.61	0.01	4.61
MW-01	74.6	0.003	5.81	0.03	3.51	0.01	4.61	0.01	4.61
EW-03	75	0.02	3.91	0.05	3.00	0.02	3.91	0.02	3.91
EW-05 - 5cfm - Water Data/Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.41546377								
R Square	0.17261015								
Adjusted R Square	-0.2410848								
Standard Error	0.00946934								
Observations	4								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	3.74132E-05	4E-05	0.4172	0.584536226				
Residual	2	0.000179337	9E-05						
Total	3	0.00021675							
		Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	
Intercept	0.02387489	0.01343996	1.776	0.2176	-0.033952631	0.0817024	-0.03395263	0.081702411	
X Variable 1	-0.0001384	0.000214282	-0.65	0.5845	-0.001060397	0.0007836	-0.0010604	0.000783569	
27.9949686 Calculated Radius of Influence (0.02 inches of water reference point)									
EW-05 - 5cfm - Water Data/Log Normal									
SUMMARY OUTPUT									

R Square	0.60090101									
Adjusted R Square	0.40135151									
Standard Error	0.27045552									
ANOVA										
	df	SS	MS	F	Significance F					
Regression	1	0.220264235	0.22	3.0113	0.22482195					
Residual	2	0.146292373	0.073							
Total	3	0.366556608								
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Lower 95.0%	Upper 95.0%
Intercept	2.41590632	0.38386116	6.294	0.0243	0.7642839	4.0675287	0.7642839	4.067528732	0.7642839	4.067528732
X Variable 1	0.01062035	0.006120156	1.735	0.2248	-0.01571258	0.0369533	-0.01571258	0.036953271	-0.01571258	0.036953271
	-509.01415 Calculated Radius of Influence (0.05 inches of water reference point)									
EW-05 - 80cfm - Water Data/Normal										
SUMMARY OUTPUT										
Regression Statistics										
Multiple R	0.88872238									
R Square	0.78982746									
Adjusted R Square	0.6847412									
Standard Error	0.00794051									
Observations	4									
ANOVA										
	df	SS	MS	F	Significance F					
Regression	1	0.000473896	5E-04	7.516	0.111277622					
Residual	2	0.000126104	6E-05							
Total	3	0.0006								
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Lower 95.0%	Upper 95.0%
Intercept	0.04891655	0.011270078	4.34	0.0492	0.000425285	0.0974078	0.000425285	0.097407819	0.000425285	0.097407819
X Variable 1	-0.0004926	0.000179686	-2.74	0.1113	-0.001265745	0.0002805	-0.00126574	0.000280513	-0.00126574	0.000280513
	58.7 Calculated Radius of Influence (0.02 inches of water reference point)									
EW-05 - 80cfm - Water Data/Log Normal										
SUMMARY OUTPUT										
Regression Statistics										
Multiple R	0.8010109									
R Square	0.64161845									

EW-05 tests performed at middle of unsaturated zone on 4/23/97									
Distance	Steady State Soil Vapor Pressure								
x	at 5 cfm	In at 5 cfm	at 20 cfm	In at 20 cfm	at 80 cfm	In at 80 cfm	at 80 cfm	In at 80 cfm	
EW-05	0	-0.25	-1.39	-1.40	0.34	-8.30	2.12		
SVPM 5	11.7	-0.04	-3.22	-0.11	-2.21	-0.43	-0.84		
EW-04	20.7	-0.01	-4.61	-0.08	-2.53	-0.28	-1.27		
SVPM 4	30.4	-0.02	-3.91	-0.04	-3.22	-0.21	-1.56		
SVPM 3	39.6	-0.01	-4.61	-0.04	-3.22	-0.17	-1.77		
SVPM 2	50.9	-0.01	-4.61	-0.03	-3.51	-0.13	-2.04		
SVPM 1	117.6	-0.01	-4.61	-0.02	-3.91	-0.03	-3.51		
EW-05 - 5 cfm - Unsaturated Data/Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.49307638								
R Square	0.24312432								
Adjusted R Square	0.09174918								
Standard Error	0.08470644								
Observations	7								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	0.011524093	0.011524	1.606105	0.260857069				
Residual	5	0.035875907	0.007175						
Total	6	0.0474							
		Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	
Intercept	-0.0938054	0.047114605	-1.991	0.103118	-0.214917111	0.0273064	-0.214917111	0.027306387	
X Variable 1	0.00113192	0.00089316	1.267322	0.260857	-0.001164016	0.0034279	-0.00116402	0.003427859	
	100.541744	Calculated Radius of Influence (0.02 inches of water reference point)							
EW-05 - 5 cfm - Unsaturated Data/Log Normal									
SUMMARY OUTPUT									

Regression Statistics									
Multiple R	0.59786526								
R Square	0.35744287								
Adjusted R Square	0.22893145								
Standard Error	1.0606015								
Observations	7								
ANOVA									
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>				
Regression	1	3.128739328	3.128739	2.781409	0.156238326				
Residual	5	5.624377758	1.124876						
Total	6	8.753117086							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Upper 95.0%
Intercept	-3.1264815	0.589917589	-5.29986	0.003192	-4.642910438	-1.6100525	-4.64291044	-1.61005252	
X Variable 1	-0.0186508	0.011183176	-1.66776	0.156238	-0.04739803	0.0100964	-0.04739803	0.010096416	
	42.0098994	Calculated Radius of Influence (0.02 inches of water reference point)							
EW-05 - 20 cfm - Unsaturated Data/Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.480653								
R Square	0.23102731								
Adjusted R Square	0.07723277								
Standard Error	0.48987407								
Observations	7								
ANOVA									
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>				
Regression	1	0.360488409	0.360488	1.502181	0.274912241				
Residual	5	1.19988302	0.239977						
Total	6	1.560371429							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Upper 95.0%
Intercept	-0.4907162	0.272473053	-1.80097	0.131593	-1.191129378	0.2096969	-1.19112938	0.209696893	
X Variable 1	0.00663308	0.005165322	1.225635	0.274912	-0.006947061	0.0196087	-0.00694706	0.019608661	
	80.6716764	Calculated Radius of Influence (0.02 inches of water reference point)							
EW-05 - 20 cfm - Unsaturated Data/Log Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.71435345								



R Square	0.51030085												
Adjusted R Square	0.41236101												
Standard Error	1.08622701												
Observations	7												
ANOVA													
	df	SS	MS	F	Significance F								
Regression	1	6.170295196	6.170295	5.21035	0.071304152								
Residual	5	5.921190162	1.184238										
Total	6	12.09148536											
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Lower 95.0%	Upper 95.0%			
Intercept	-1.593928	0.605283184	-2.63336	0.046345	-3.149855429	-0.0380006	-3.14985543	-0.0380006	-3.14985543	-0.0380006			
X Variable 1	-0.0261918	0.011474465	-2.28262	0.071304	-0.055687836	0.0033042	-0.05568784	0.0033042	-0.05568784	0.0033042			
	88.4272557 Calculated Radius of Influence (0.02 inches of water reference point)												
EW-05 - 80 cfm - Unsaturated Data/Normal													
SUMMARY OUTPUT													
Regression Statistics													
Multiple R	0.47181833												
R Square	0.22261253												
Adjusted R Square	0.06713504												
Standard Error	2.9563819												
Observations	7												
ANOVA													
	df	SS	MS	F	Significance F								
Regression	1	12.51420177	12.5142	1.431799	0.285109253								
Residual	5	43.70096965	8.740194										
Total	6	56.21517143											
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Lower 95.0%	Upper 95.0%			
Intercept	-2.8078146	1.644370363	-1.70753	0.148429	-7.034796274	1.4191671	-7.03479627	1.4191671	-7.03479627	1.4191671			
X Variable 1	0.03730049	0.031172632	1.196578	0.285109	-0.042831182	0.1174322	-0.04283118	0.1174322	-0.04283118	0.1174322			
	75.8117321 Calculated Radius of Influence (0.02 inches of water reference point)												
EW-05 - 80 cfm - Unsaturated Data/Normal													
SUMMARY OUTPUT													
Regression Statistics													
Multiple R	0.82082369												
R Square	0.67375153												

Adjusted R Square	0.60850184									
Standard Error	1.07102546									
Observations	7									
ANOVA										
	df	SS	MS	F	Significance F					
Regression	1	11.8446131	11.84461	10.32574	0.023639727					
Residual	5	5.73547764	1.147096							
Total	6	17.58009074								
Coefficients										
	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%			
Intercept	0.595715499	0.227959	0.828707	-1.395534403	1.6671315	-1.3955344	1.667131475			
X Variable 1	0.011293088	-3.21337	0.02364	-0.065318625	-0.0072591	-0.06531862	-0.0072591			
	111.488707 Calculated Radius of Influence (0.02 inches of water reference point)									

IW-01 tests performed at water table on 4/29, 4/30, and 5/21/97							
Initial Water Level (feet)	Steady State Water Level from three consecutive readings with less than 10% difference for each of the wells.						
	at 10 cfm	at 20 cfm	at 30 cfm	at 60 cfm			
EW-01	58.21	56.28	55.77	54.6	52.2		
EW-03	58.1	58.06	58.08	58.02	58.16		
MW-01	59.28	59.21	59.13	59.13	59.24		
EW-02	58.83	58.78	58.8	58.71	58.82		
27-S3	56.91	56.93	56.9	56.81	56.94		
Distance (feet) from IW-01 x	Groundwater Elevation Change (feet) = Initial Water Level - Steady State Water Level						
	Delta at 10 cfm	Delta at 20 cfm	Delta at 30 cfm	Delta at 60 cfm			
	7.8	1.93	2.44	3.54	0.06		
	20	0.04	0.02	-0.02	0.07		
	30	0.07	0.07	0.04	0.04		
39.7	0.05	0.03	0.06	0.05			
27-S3	98	-0.02	0.01	0.09	0.11		
Note: A 1.93 groundwater elevation change indicates water level increased or rose 1.93 feet.							
Distance (feet) from IW-01 x	Steady State Soil Vapor Pressure (inches of water)						
	SVP at 10 cfm	SVP at 20 cfm	SVP at 30 cfm	SVP at 60 cfm			
	7.8	0.43	0.82	0.82	2.4		
	20	0.31	0.59	0.81	1.4		
	30	0.68	1.3	2.2	4.8		
39.7	0.13	0.21	0.33	0.68			
27-S3	98	-	-	-	-		
Distance (feet) from IW-01 x	Hydrostatic Head = Groundwater Elevation Change + (Soil Vapor Pressure/12 feet)						
	Delta at 10 cfm	Delta at 20 cfm	Delta at 30 cfm	Delta at 60 cfm	Delta at 30 cfm	Delta at 60 cfm	In at 60
	7.8	1.97	0.68	3.61	1.28	0.26	-1.35
	20	0.07	-2.72	0.05	-3.05	0.19	-1.68
	30	0.13	-2.07	0.22	-1.50	0.44	-0.82
39.7	0.06	-2.80	0.09	-2.44	0.11	-2.24	
27-S3	98	-0.02	-3.91	0.01	-4.61	0.11	-2.21
IW-01 - 10 cfm - Water Data/Normal							
SUMMARY OUTPUT							

Regression Statistics									
Multiple R	0.54410597								
R Square	0.296051307								
Adjusted R Square	0.061401743								
Standard Error	0.827996797								
Observations	5								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	0.864976969	0.864976969	1.261674224	0.343112122				
Residual	3	2.056736087	0.685578696						
Total	4	2.921713056							
Coefficients									
Intercept	0.959493345	0.592582464	1.619172694	0.203846496	-0.926370298	2.845356988	0.024365136	0.024365136	Upper 95%
X Variable 1	-0.013290537	0.011832293	-1.123242727	0.343112122	-0.050946211	0.024365136	-0.050946211	-0.050946211	Upper 95%
68.43164569 Calculated Radius of Influence (0.05 inches of water reference point)									
IW-01 - 10 cfm - Water Data/Log Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.757744004								
R Square	0.574175975								
Adjusted R Square	0.432234634								
Standard Error	1.296599412								
Observations	5								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	6.800608153	6.800608153	4.045163792	0.137815488				
Residual	3	5.043510104	1.681170035						
Total	4	11.84411826							
Coefficients									
Intercept	-0.70740471	0.927952955	-0.762328204	0.501321335	-3.660567934	2.245758514	-3.660567934	-3.660567934	Upper 95%
X Variable 1	-0.037266117	0.018528749	-2.011259255	0.137815488	-0.09623292	0.021700686	-0.09623292	-0.09623292	Upper 95%
61.251224 Calculated Radius of Influence (0.05 inches of water reference point)									
IW-01 - 20 cfm - Water Data/Normal									
SUMMARY OUTPUT									
Regression Statistics									

Multiple R	0.522932034										
R Square	0.273457912										
Adjusted R Square	0.031277216										
Standard Error	1.549758227										
Observations	5										
ANOVA											
	df	SS	MS	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	Upper 95%	Significance F	
Regression	1	2.711932478	2.711932478	1.546682782	0.219672464	-1.814284547	5.245242028	-1.8142845	5.245242		
Residual	3	7.205251688	2.401750563								
Total	4	9.917184167									
	Coefficients	Standard Error	t Stat								
Intercept	1.715478741	1.109134181	1.546682782								
X Variable 1	-0.023533131	0.022146455	-1.062613883								
	70.77166092	Calculated Radius of Influence (0.05 inches of water reference point)									
IW-01 - 20 cfm - Water Data/Log Normal											
SUMMARY OUTPUT											
Regression Statistics											
Multiple R	0.788430056										
R Square	0.621621954										
Adjusted R Square	0.495495939										
Standard Error	1.551507702										
Observations	5										
ANOVA											
	df	SS	MS	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	Upper 95%	Significance F	
Regression	1	11.86395636	11.86395636	4.928578392	0.91008641	-3.670017638	3.397478223	-3.6700176	3.3974782		
Residual	3	7.221528451	2.40717615								
Total	4	19.08548481									
	Coefficients	Standard Error	t Stat								
Intercept	-0.136269708	1.110386249	-0.122722798								
X Variable 1	-0.049221522	0.022171456	-2.220040178								
	57.97728657	Calculated Radius of Influence (0.05 inches of water reference point)									
IW-01 - 30 cfm - Water Data/Normal											
SUMMARY OUTPUT											
Regression Statistics											
Multiple R	0.504625868										

R Square	0.254647266																		
Adjusted R Square	0.006196355																		
Standard Error	1.560123978																		
Observations	5																		
ANOVA																			
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>														
Regression	1	2.494690355	2.494690355	1.024939958	0.385909367														
Residual	3	7.301960478	2.433986826																
Total	4	9.796650833																	
Coefficients																			
Intercept		1.693854947	1.116552763	1.517039771	0.226533323	-1.859517601	5.247227496	Lower 95%	Upper 95%	Lower 95%	Upper 95%	Lower 95%	Upper 95%	Lower 95%	Upper 95%	Lower 95%	Upper 95%	Lower 95%	Upper 95%
X Variable 1		-0.022570885	0.022294584	-1.012393184	0.385909367	-0.09352227	0.048380499	-0.09352223											
		72.83076971	Calculated Radius of Influence (0.05 inches of water reference point)																
IW-01 - 30 cfm - Water Data/Log Normal																			
SUMMARY OUTPUT																			
Regression Statistics																			
Multiple R		0.464981751																	
R Square		0.216208028																	
Adjusted R Square		-0.045055962																	
Standard Error		1.753347917																	
Observations		5																	
ANOVA																			
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>														
Regression	1	2.544066525	2.544066525	0.827546222	0.430052293														
Residual	3	9.222686751	3.074228917																
Total	4	11.76675328																	
Coefficients																			
Intercept		-0.730173829	1.254839672	-0.581886152	0.601484727	-4.723637453	3.263289796	Lower 95%	Upper 95%	Lower 95%	Upper 95%	Lower 95%	Upper 95%	Lower 95%	Upper 95%	Lower 95%	Upper 95%	Lower 95%	Upper 95%
X Variable 1		-0.022793158	0.025055806	-0.909695675	0.430052293	-0.102531989	0.056945673	-0.102532											
		99.14493513	Calculated Radius of Influence (0.05 inches of water reference point)																
IW-01 - 60 cfm - Water Data/Normal																			
SUMMARY OUTPUT																			
Regression Statistics																			
Multiple R		0.474877967																	
R Square		0.225509083																	



Adjusted R Square	-0.032654556																			
Standard Error	0.140122108																			
Observations	5																			
ANOVA																				
	df	SS	MS	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	Upper 95%	Significance F										
Regression	1	0.017150717	0.017150717	0.060994742	0.8735512181	-0.025304285	0.612986083	-0.0253043	0.6129861	0.418930076										
Residual	3	0.058902616	0.019634205																	
Total	4	0.076053333																		
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	Upper 95%	Significance F											
Intercept	0.293840899	0.100282881	2.930120231	0.060994742	-0.025304285	0.612986083	-0.0253043	0.6129861	0.418930076											
X Variable 1	-0.001871464	0.002002382	-0.934618736	0.418930076	-0.008243943	0.004501015	-0.0082439	0.004501	0.004501											
	130.2942153	Calculated Radius of Influence (0.05 inches of water reference point)																		
IW-01 - 60 cfm - Water Data/Log Normal																				
SUMMARY OUTPUT																				
Regression Statistics																				
Multiple R	0.592220338																			
R Square	0.350724929																			
Adjusted R Square	0.134299905																			
Standard Error	0.557453113																			
Observations	5																			
ANOVA																				
	df	SS	MS	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	Upper 95%	Significance F										
Regression	1	0.503588554	0.503588554	1.620537784	0.050759226	-2.531517978	0.007816864	-2.531518	0.0078169	0.292709982										
Residual	3	0.932261918	0.310753973																	
Total	4	1.435850473																		
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	Upper 95%	Significance F											
Intercept	-1.261850557	0.398959199	-3.162856149	0.050759226	-2.531517978	0.007816864	-2.531518	0.0078169	0.292709982											
X Variable 1	-0.01014094	0.007966152	-1.27300345	0.292709982	-0.035492816	0.015210937	-0.0354928	0.0152109	0.0152109											
	170.4131488	Calculated Radius of Influence (0.05 inches of water reference point)																		

IW-01/EW-02 tests performed at water table on 4/30 and 5/1/97									
X	Y = Steady State Soil Vapor Pressures at Ratio of Air Extraction Rate to Air Injection Rate								
Distance from IW-01	SVP at 1.5 Ratio	SVP at 2.0 Ratio	SVP at 3.0 Ratio						
EW-01	11	0.21	0.17	-0.33					
EW-03	20	0.05	0.03	-0.38					
MW-01	31	1	1.2	1					
EW-02	39	-4.3	-5.9	-12					
IW-01/EW-02 - 1.5 Ratio (30 cfm Extraction Rate/20 cfm Injection Rate) - Water Data/Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.64124293								
R Square	0.411192495								
Adjusted R Square	0.116788742								
Standard Error	2.25198977								
Observations	4								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	7.083284152	7.083284152	1.396695834	0.35875707				
Residual	2	10.14291585	5.071457924						
Total	3	17.2262							
Coefficients									
Intercept	2.398271673	2.899912235	0.827015261	0.495192301	-10.07905231	14.875596	-10.0790523	14.87559655	
X Variable 1	-0.125080066	0.105836918	-1.181818867	0.35875707	-0.580459887	0.3302998	-0.58045989	0.330299754	
18.77414798 Calculated Radius of Influence (0.05 inches of water reference point)									
IW-01/EW-02 - 2.0 Ratio (40 cfm Extraction Rate/20 cfm Injection Rate) - Water Data/Normal									
SUMMARY OUTPUT									

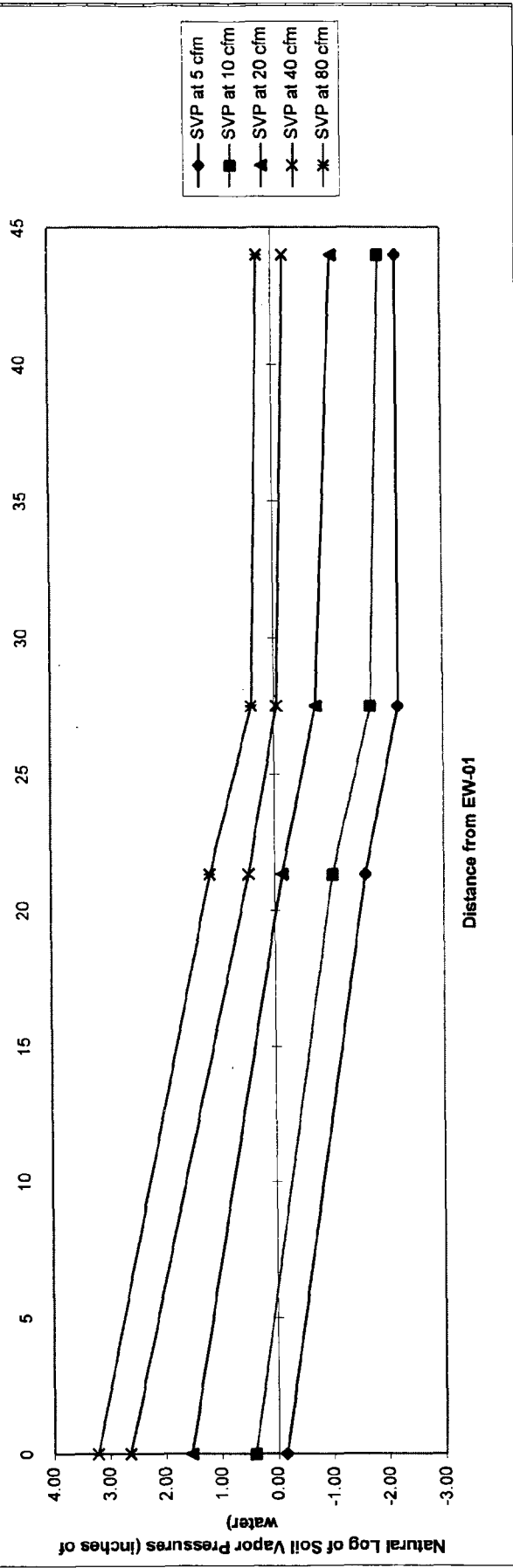
Regression Statistics									
Multiple R	0.64604474								
R Square	0.417373806								
Adjusted R Square	0.126060709								
Standard Error	3.015627354								
Observations	4								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	13.02928332	13.02928332	1.432732722	0.35395526				
Residual	2	18.18801668	9.094008338						
Total	3	31.2173							
Coefficients									
Intercept	3.158437327	3.883256832	0.813347524	0.501448389	-13.54987991	Upper 95%	19.866755	Lower 95.0%	-13.5498799
X Variable 1	-0.169641082	0.141725646	-1.196968138	0.35395526	-0.779437743	Upper 95%	0.4401556	Lower 95.0%	-0.77943774
	18.32361174	Calculated Radius of Influence (0.05 inches of water reference point)							
IW-01/EW-02 - 3.0 Ratio (60 cfm Extraction Rate/20 cfm Injection Rate) - Water Data/Normal									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.680585755								
R Square	0.46319697								
Adjusted R Square	0.194795455								
Standard Error	5.457575169								
Observations	4								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	1	51.40202155	51.40202155	1.725761385	0.319414244				
Residual	2	59.57025345	29.78512673						
Total	3	110.972275							
Coefficients									
Intercept	5.58039757	7.027780151	0.794048398	0.510416515	-24.65772093	Upper 95%	35.818516	Lower 95.0%	-24.6577209
X Variable 1	-0.336946438	0.256490035	-1.313682376	0.319414244	-1.440534755	Upper 95%	0.7666419	Lower 95.0%	-1.44053476
	16.41328395	Calculated Radius of Influence (0.05 inches of water reference point)							

EW-01 tests performed at water table on 4/21, 4/22, and 4/25/97

Distance x	Steady State Soil Vapor Pressure										
	In at 5 cfm	at 10 cfm	In at 10 cfm	at 20 cfm	In at 20 cfm						
EW-01	0	-0.86	-0.15082289	-1.5	0.405465108	-4.7	1.54756251	-14	2.63905733	-25	3.21887582
MW-01	21.3	-0.2	-1.609437912	-0.36	-1.021651248	-0.88	-0.1278334	-1.6	0.47000363	-3.2	1.16315081
EW-03	27.5	-0.11	-2.207274913	-0.18	-1.714798428	-0.48	-0.7339692	-0.96	-0.040822	-1.5	0.40546511
EW-02	44	-0.11	-2.207274913	-0.15	-1.897119985	-0.35	-1.0498221	-0.82	-0.1984509	-1.3	0.26236426

Distance x	Natural Log of Steady State Soil Vapor Pressure					
	SVP at 5 cfm	SVP at 10 cfm	SVP at 20 cfm	SVP at 40 cfm	SVP at 80 cfm	
EW-01	0	-0.15	0.41	1.55	2.64	3.22
MW-01	21.3	-1.61	-1.02	-0.13	0.47	1.16
EW-03	27.5	-2.21	-1.71	-0.73	-0.04	0.41
EW-02	44	-2.21	-1.90	-1.05	-0.20	0.26

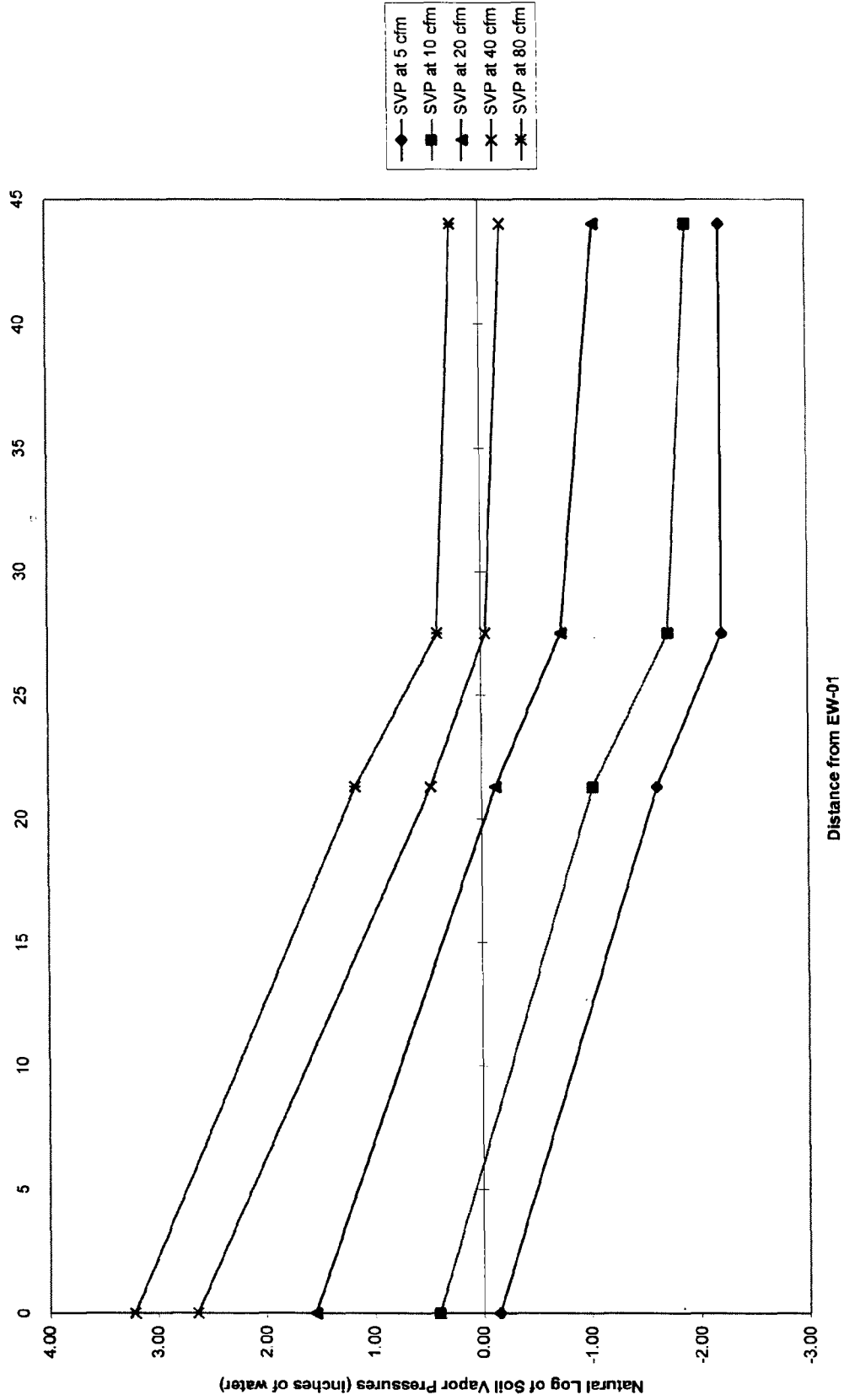
Soil Vapor Pressures at Water Table as a Function of Distance from Extraction Well EW-01



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FIGURE 2

Soil Vapor Pressures at Water Table as a Function of Distance from Extraction Well EW-01



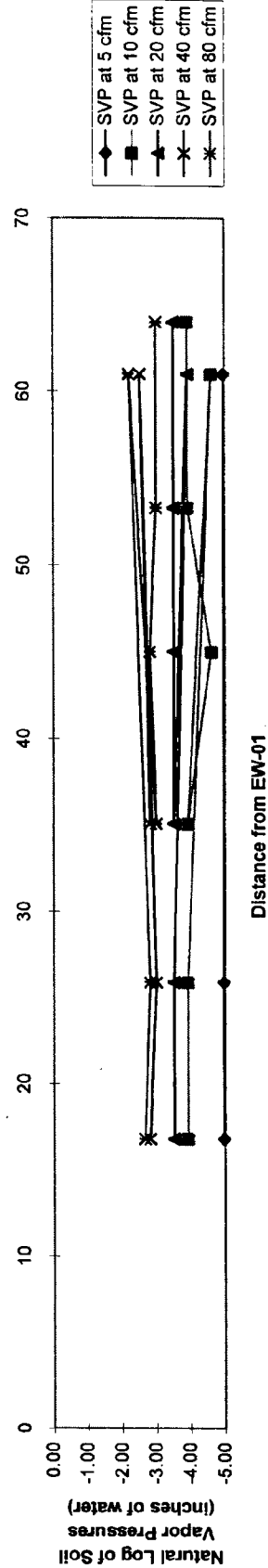
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BP9701W AS.CH Chart 1

EW-01 tests performed at middle of unsaturated zone on 4/21, 4/22, and 4/25/97											
Distance x	Steady State Soil Vapor Pressure at 5 cfm					at 20 cfm					In 80 cfm
	In 5 cfm	at 10 cfm	In 10 cfm	at 20 cfm	In 20 cfm	at 40 cfm	In 40 cfm	at 80 cfm	In 80 cfm		
SVPM 2	16.8	-0.007	-4.962	-0.020	-3.912	-0.030	-3.507	-0.060	-2.813	-0.070	-2.659
SVPM 3	25.9	-0.007	-4.962	-0.020	-3.912	-0.030	-3.507	-0.050	-2.996	-0.060	-2.813
SVPM 1	61	-0.007	-4.962	-0.010	-4.605	-0.020	-3.912	-0.080	-2.526	-0.110	-2.207
SVPM 4	35.1	-	-	-0.020	-3.912	-0.030	-3.507	-0.060	-2.813	-0.050	-2.996
EW-04	45	-	-	-0.010	-4.605	-0.030	-3.507	-0.060	-2.813	-0.060	-2.813
SVPM 5	53.3	-	-	-0.020	-3.912	-0.030	-3.507	-0.050	-2.996	-0.050	-2.996
EW-O5	64	-	-	-0.020	-3.912	-0.030	-3.507	-0.050	-2.996	-0.050	-2.996

EW-01 tests performed at middle of unsaturated zone on 4/21, 4/22, and 4/25/97											
Distance x	Natural Log of Steady State Soil Vapor Pressure SVP at 5 cfm					SVP at 20 cfm					SVP at 80 cfm
	SVP at 5 cfm	SVP at 10 cfm	SVP at 20 cfm	SVP at 40 cfm	SVP at 80 cfm						
SVPM 2	16.8	-4.96	-3.91	-3.51	-2.81	-2.66					
SVPM 3	25.9	-4.96	-3.91	-3.51	-3.00	-2.81					
SVPM 1	61	-4.96	-4.61	-3.91	-2.53	-2.21					
SVPM 4	35.1	-3.91	-3.91	-3.51	-2.81	-3.00					
EW-04	45	-4.61	-3.91	-3.51	-2.81	-2.81					
SVPM 5	53.3	-3.91	-3.91	-3.51	-3.00	-3.00					
EW-O5	64	-3.91	-3.91	-3.51	-3.00	-3.00					

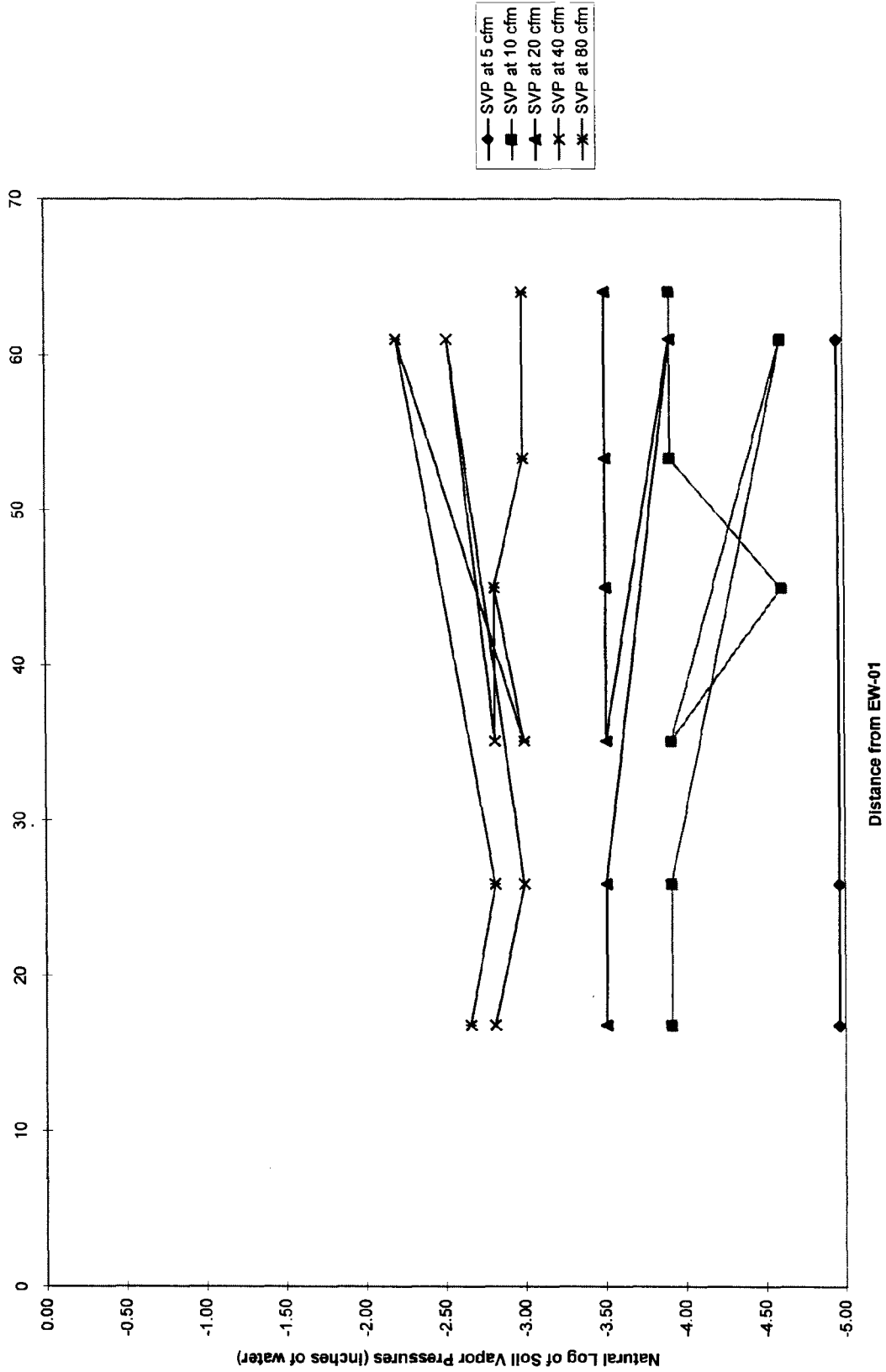
Soil Vapor Pressures at Middle of Unsaturated Zone as a Function of Distance from Extraction Well EW-01



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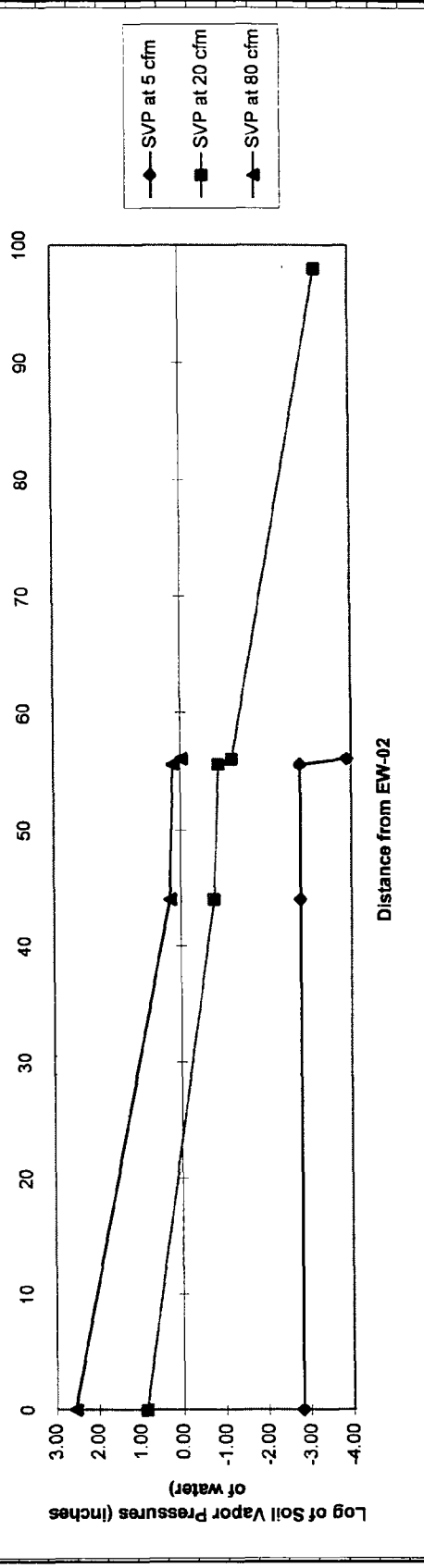
FIGURE 3

Soil Vapor Pressures at Middle of Unsaturated Zone as a Function of Distance from Extraction Well EW-01

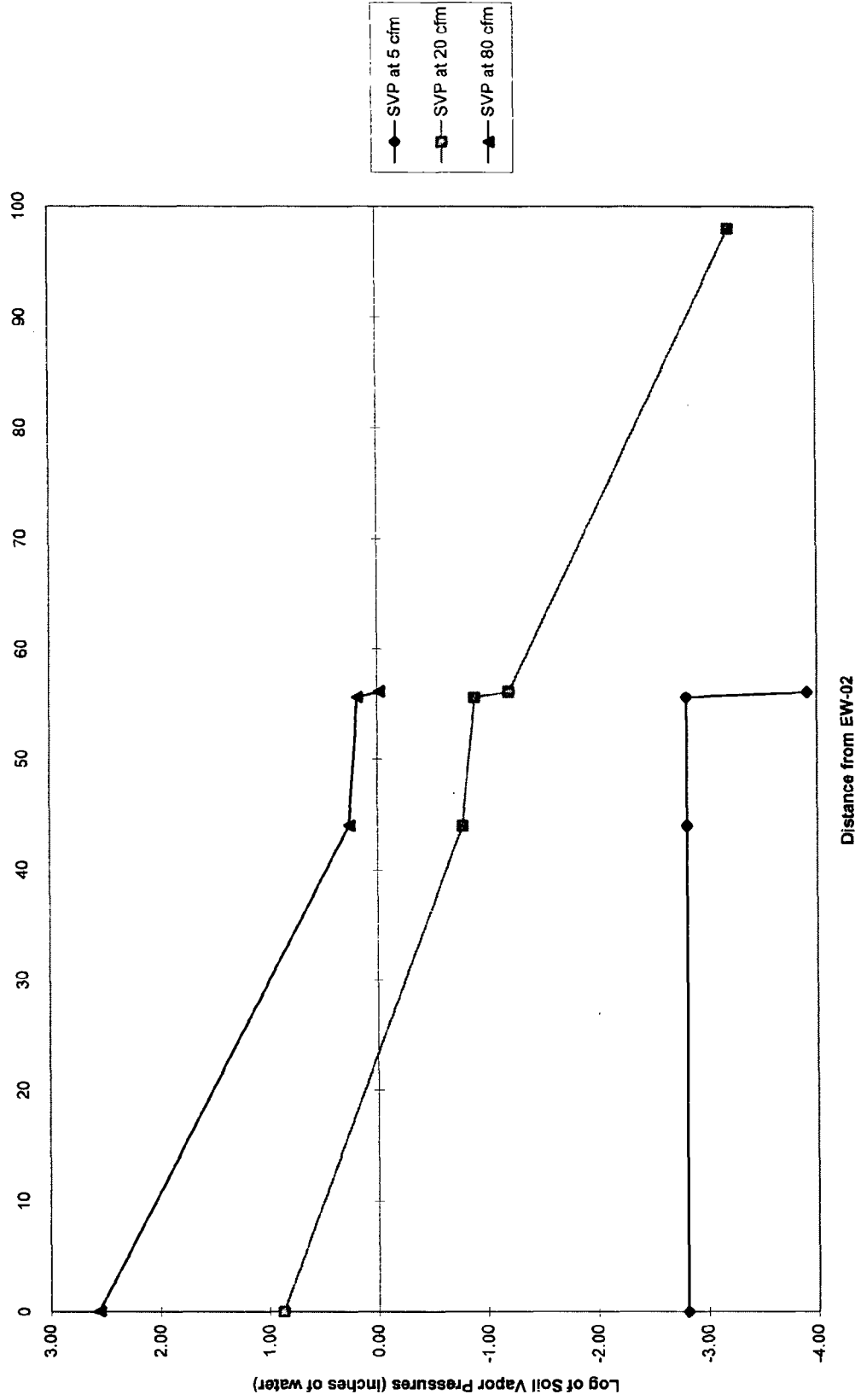


EW-02 tests performed at water table on 4/24/97						
Distance x	Steady State Soil Vapor Pressure at 5cfm			Steady State Soil Vapor Pressure at 80 cfm		
	ln at 5 cfm	ln at 20 cfm	ln at 80 cfm	ln at 5 cfm	ln at 20 cfm	ln at 80 cfm
EW-02	0	-2.813410717	-2.4	0.87546874	-13	2.56494936
EW-01	44	-2.813410717	-0.46	-0.7765288	-1.3	0.26236426
EW-03	55.6	-2.813410717	-0.41	-0.8915981	-1.2	0.18232156
MW-01	56.1	-3.912023005	-0.3	-1.2039728	-0.98	-0.0202027
27-S3	98		-0.04	-3.2188758		
Natural Log of Steady State Soil Vapor Pressure						
Distance x	SVP at 5 cfm	SVP at 20 cfm	SVP at 80 cfm	SVP at 5 cfm	SVP at 20 cfm	SVP at 80 cfm
EW-02	0	-2.81	0.88	2.56		
EW-01	44	-2.81	-0.78	0.26		
EW-03	55.6	-2.81	-0.89	0.18		
MW-01	56.1	-3.91	-1.20	-0.02		
27-S3	98		-3.22			

Soil Vapor Pressures at Water Table as a Function of Distance from Extraction Well EW-02



Soil Vapor Pressures at Water Table as a Function of Distance from Extraction Well EW-02



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BP9702W AS.CH Chart 1

EW-05 tests performed at water table on 4/23/97							
	Distance x	Steady State Soil Vapor Pressure					
		at 5cfm	ln at 5 cfm	at 20 cfm	n at 20 cf	at 80 cfm	n at 80 cfm
EW-02	21.2	0.020	3.912	0.070	2.659	0.040	3.219
EW-01	64	0.020	3.912	0.050	2.996	0.010	4.605
MW-01	74.6	0.003	5.809	0.030	3.507	0.010	4.605
EW-03	75	0.020	3.912	0.050	2.996	0.020	3.912

	Distance x	Natural Log of Steady State Soil Vapor Pressure		
		SVP at 5 cfm	SVP at 20 cfm	SVP at 80 cfm
EW-02	21.2	3.91	2.66	3.22
EW-01	64	3.91	3.00	4.61
MW-01	74.6	5.81	3.51	4.61
EW-03	75	3.91	3.00	3.91

Soil Vapor Pressures at Water Table as a Function of Distance from Extraction Well EW-05

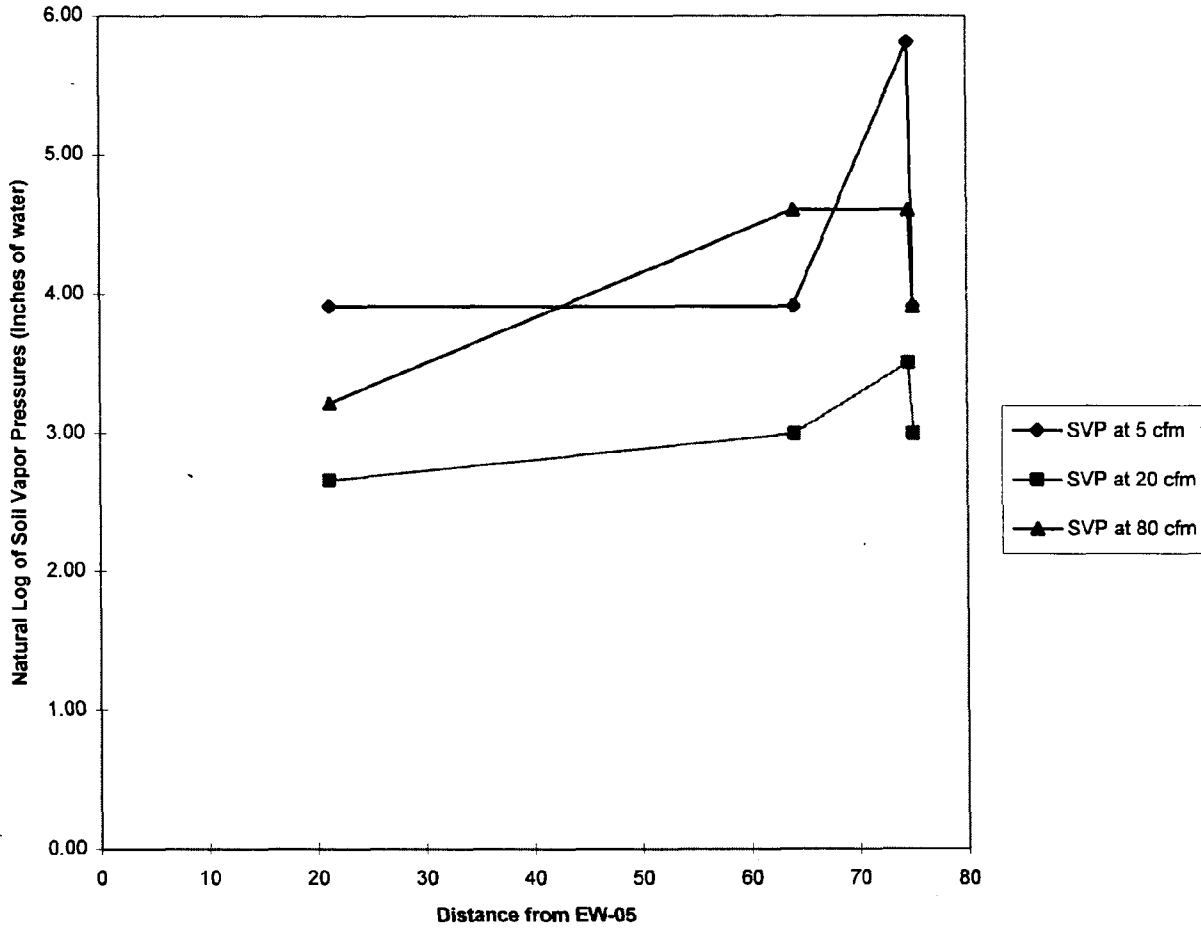
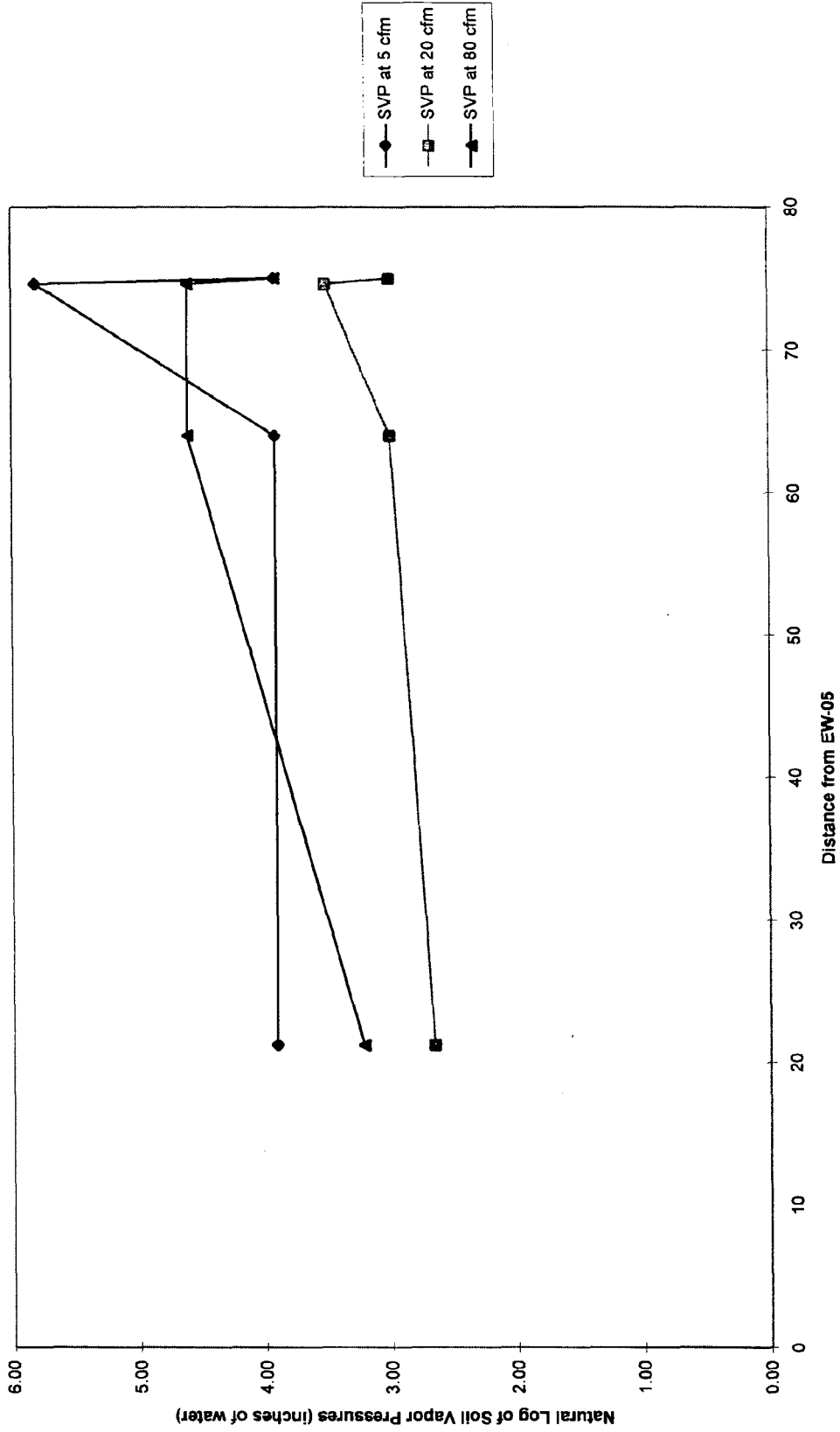


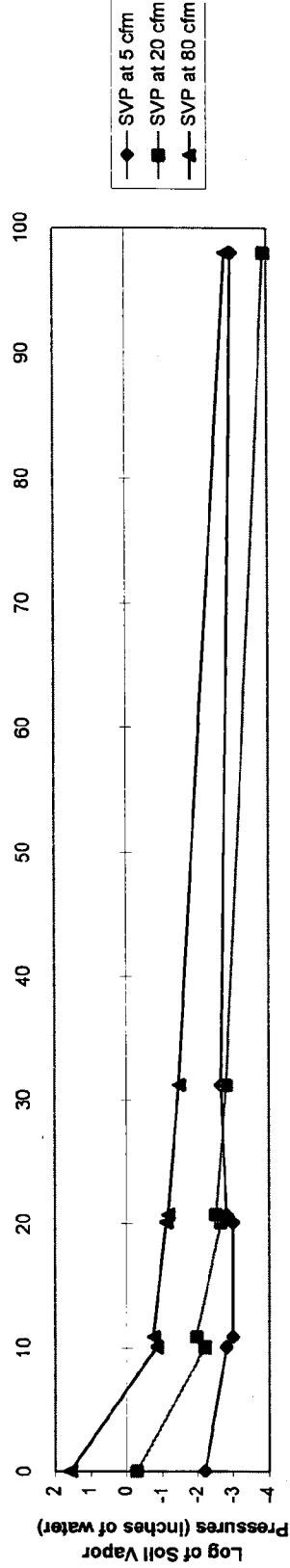
FIGURE 4

Soil Vapor Pressures at Water Table as a Function of Distance from
Extraction Well EW-05

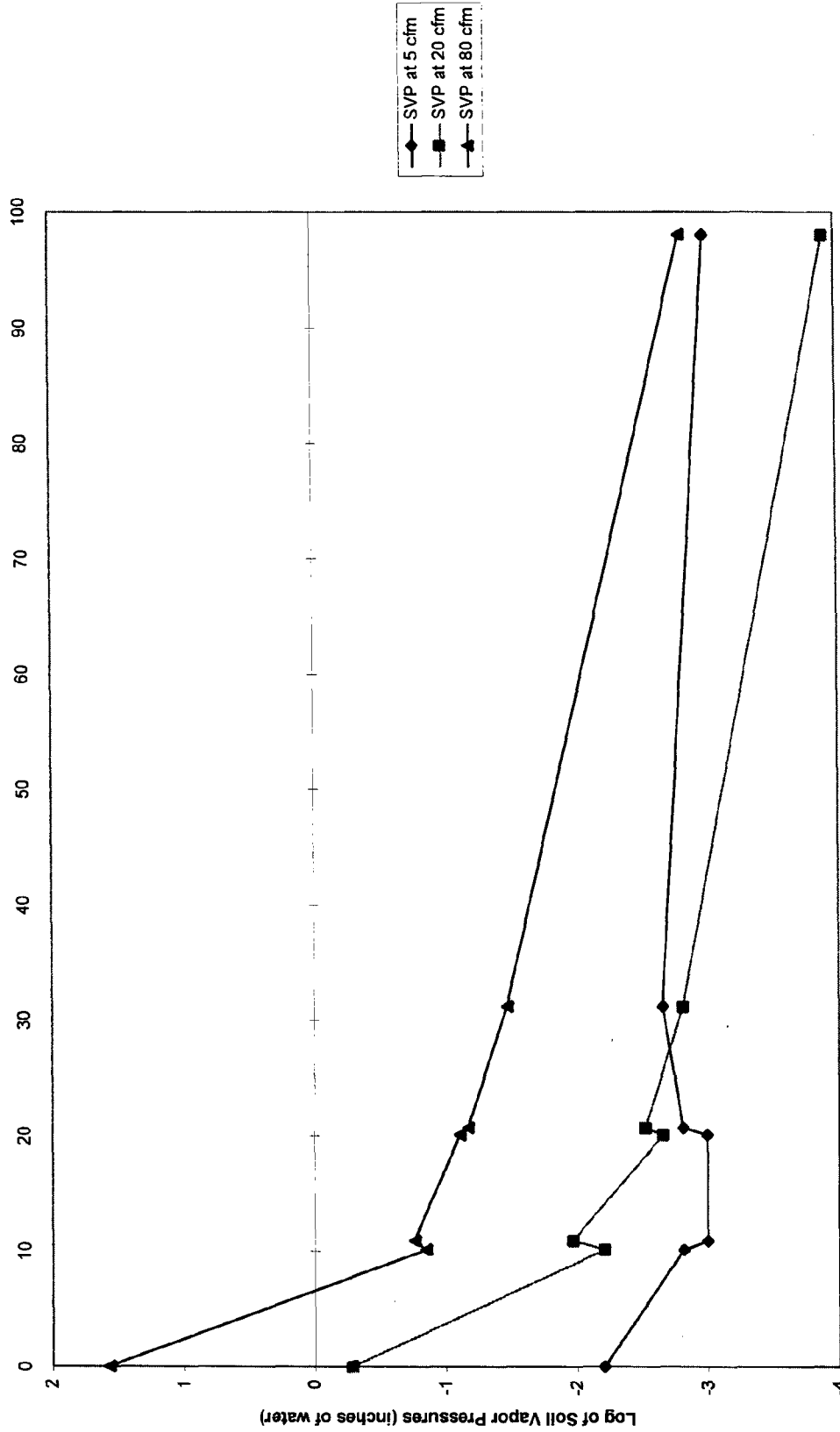


EW-04 tests performed at middle of unsaturated zone on 4/28 and 4/29/97.									
Distance x	Steady State Soil Vapor Pressure			In at 20 cfm	at 80 cfm	In at 80 cfm			
	at 5 cfm	In at 5 cfm	at 20 cfm						
EW-04	0	-0.11	-2.207274913	-0.75	-0.2876821	-4.8	1.56861592		
SVPM-5	10.1	-0.06	-2.813410717	-0.11	-2.2072749	-0.43	-0.8439701		
SVPM-4	10.9	-0.05	-2.995732274	-0.14	-1.9661129	-0.47	-0.7550226		
SVPM-3	20.1	-0.05	-2.995732274	-0.07	-2.65926	-0.33	-1.1086626		
EW-05	20.7	-0.06	-2.813410717	-0.08	-2.5257286	-0.31	-1.1711183		
SVPM-2	31.2	-0.07	-2.659260037	-0.06	-2.8134107	-0.23	-1.469676		
SVPM-1	98	-0.05	-2.995732274	-0.02	-3.912023	-0.06	-2.8134107		
Natural Log of Steady State Soil Vapor Pressure									
Distance x	SVP at 5 cfm	SVP at 20 cfm	SVP at 80 cfm						
EW-04	0	-2.20727491	-0.287682072	1.568615918					
SVPM-5	10.1	-2.81341072	-2.207274913	-0.84397007					
SVPM-4	10.9	-2.99573227	-1.966112856	-0.755022584					
SVPM-3	20.1	-2.99573227	-2.659260037	-1.108662625					
EW-05	20.7	-2.81341072	-2.525728644	-1.171182982					
SVPM-2	31.2	-2.65926004	-2.813410717	-1.46967597					
SVPM-1	98	-2.99573227	-3.912023005	-2.813410717					

Soil Vapor Pressures at Middle of Unsaturated Zone as a Function of Distance from Extraction Well EW-04

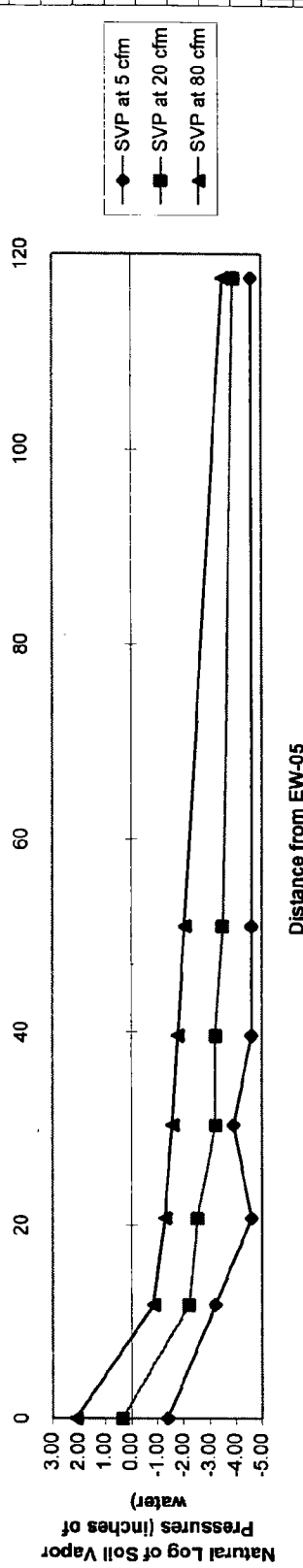


Soil Vapor Pressures at Middle of Unsaturated Zone as a Function of Distance from Extraction Well EW-04



EW-05 tests performed at middle of unsaturated zone on 4/23/97							
Distance x	Steady State Soil Vapor Pressure			ln at 20 cf at 20 cfm	ln at 80 cfm at 80 cfm		
	ln at 5 cfm	at 20 cfm	ln at 80 cfm				
EW-05	0	-0.25	-1.386294361	-1.4	0.336472	-8.3	2.116256
SVPM 5	11.7	-0.04	-3.218875825	-0.11	-2.20727	-0.43	-0.84397
EW-04	20.7	-0.01	-4.605170186	-0.08	-2.52573	-0.28	-1.27297
SVPM 4	30.4	-0.02	-3.912023005	-0.04	-3.21888	-0.21	-1.56065
SVPM 3	39.6	-0.01	-4.605170186	-0.04	-3.21888	-0.17	-1.77196
SVPM 2	50.9	-0.01	-4.605170186	-0.03	-3.50656	-0.13	-2.04022
SVPM 1	117.6	-0.01	-4.605170186	-0.02	-3.91202	-0.03	-3.50656
Natural Log of Steady State Soil Vapor Pressure							
Distance x	SVP at 5 cfm			SVP at 80 cfm			
	SVP at 5 cfm	SVP at 20 cfm	SVP at 80 cfm	SVP at 5 cfm	SVP at 20 cfm	SVP at 80 cfm	
EW-05	0	-1.39	0.34	2.12			
SVPM 5	12	-3.22	-2.21	-0.84			
EW-04	21	-4.61	-2.53	-1.27			
SVPM 4	30	-3.91	-3.22	-1.56			
SVPM 3	40	-4.61	-3.22	-1.77			
SVPM 2	51	-4.61	-3.51	-2.04			
SVPM 1	118	-4.61	-3.91	-3.51			

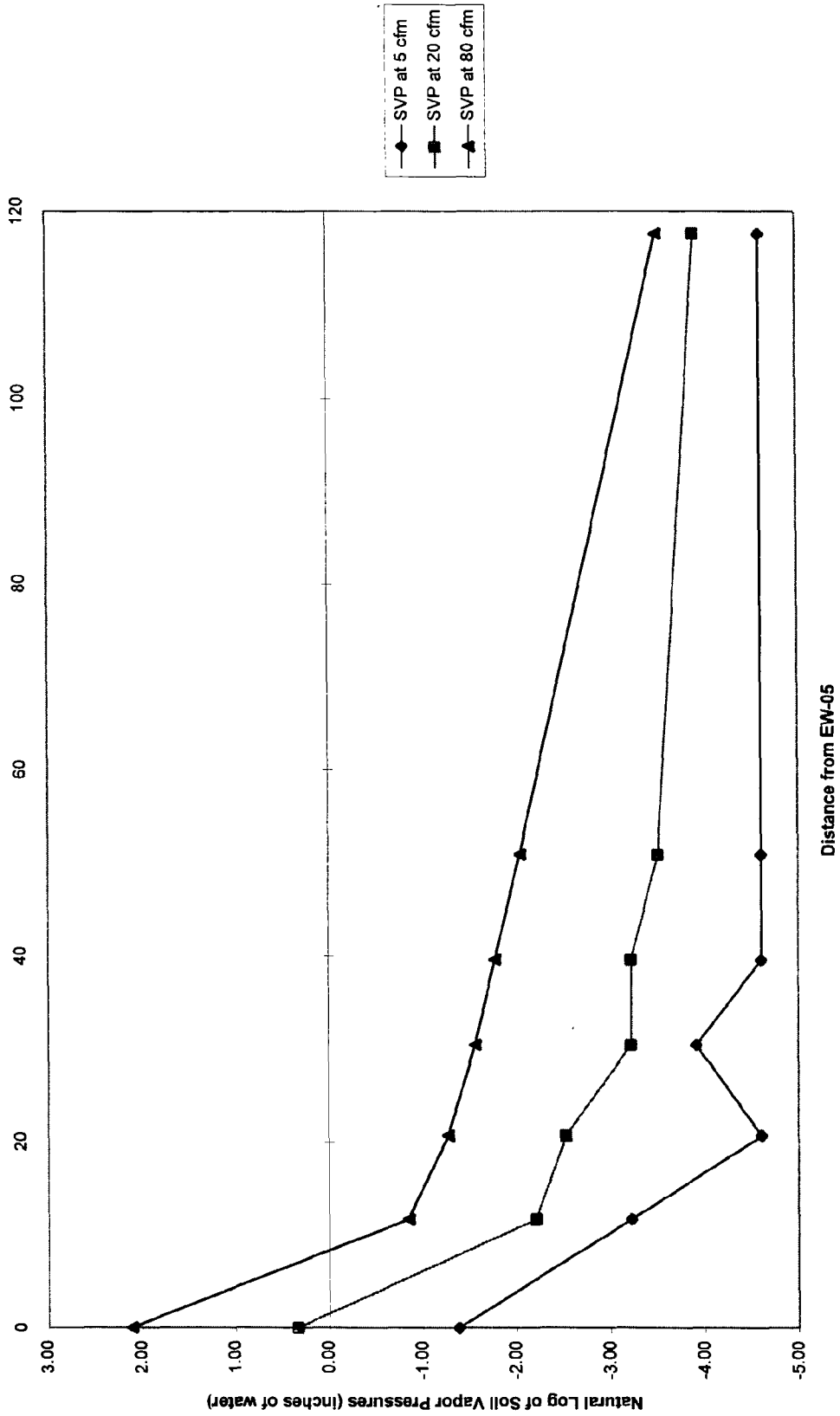
Soil Vapor Pressures at Middle of Unsaturated Zone as a Function of Distance from Extraction Well EW-05



10/9/97 7:24 PM

FIGURE 5

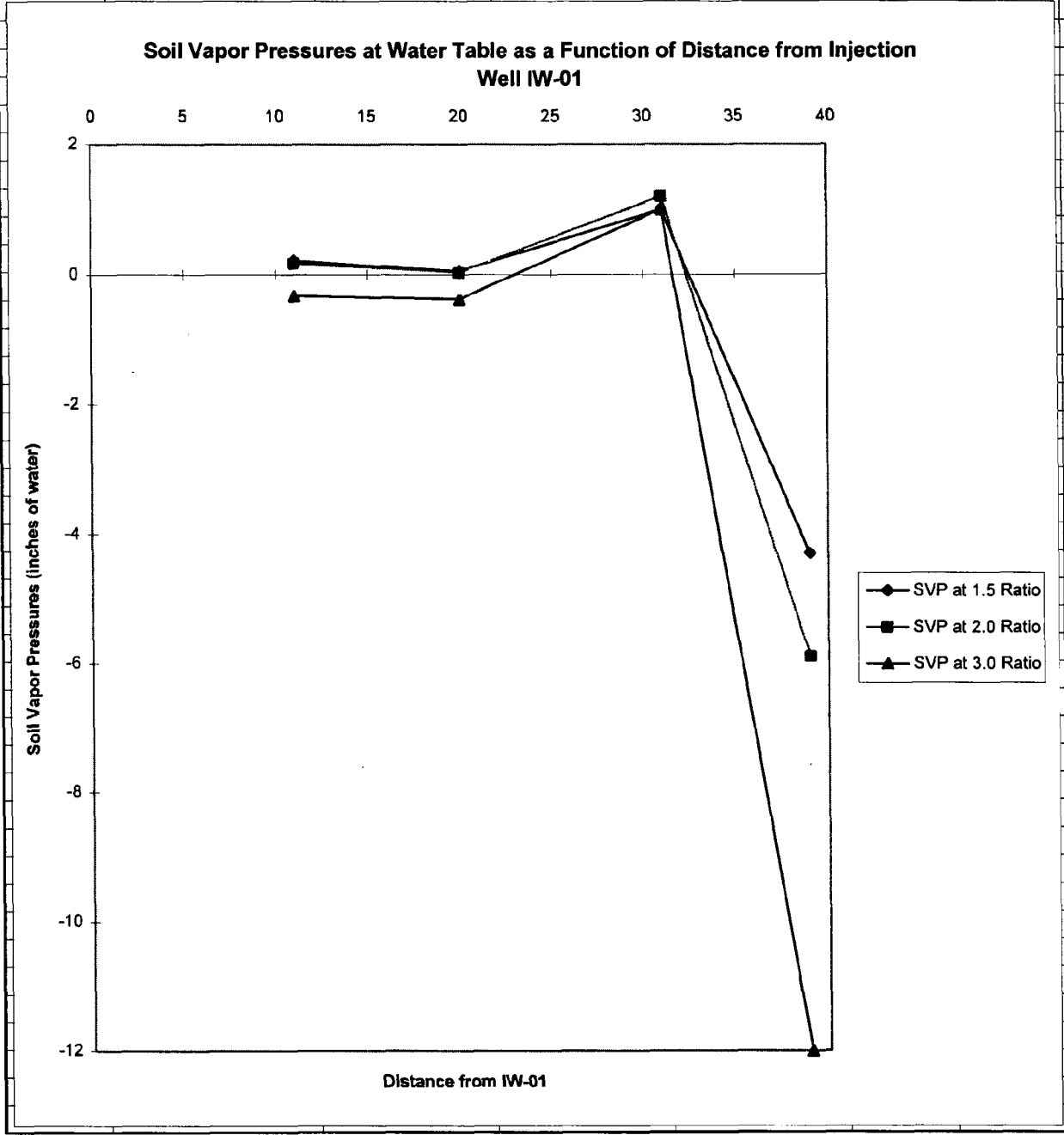
Soil Vapor Pressures at Middle of Unsaturated Zone as a Function of Distance from Extraction Well EW-05



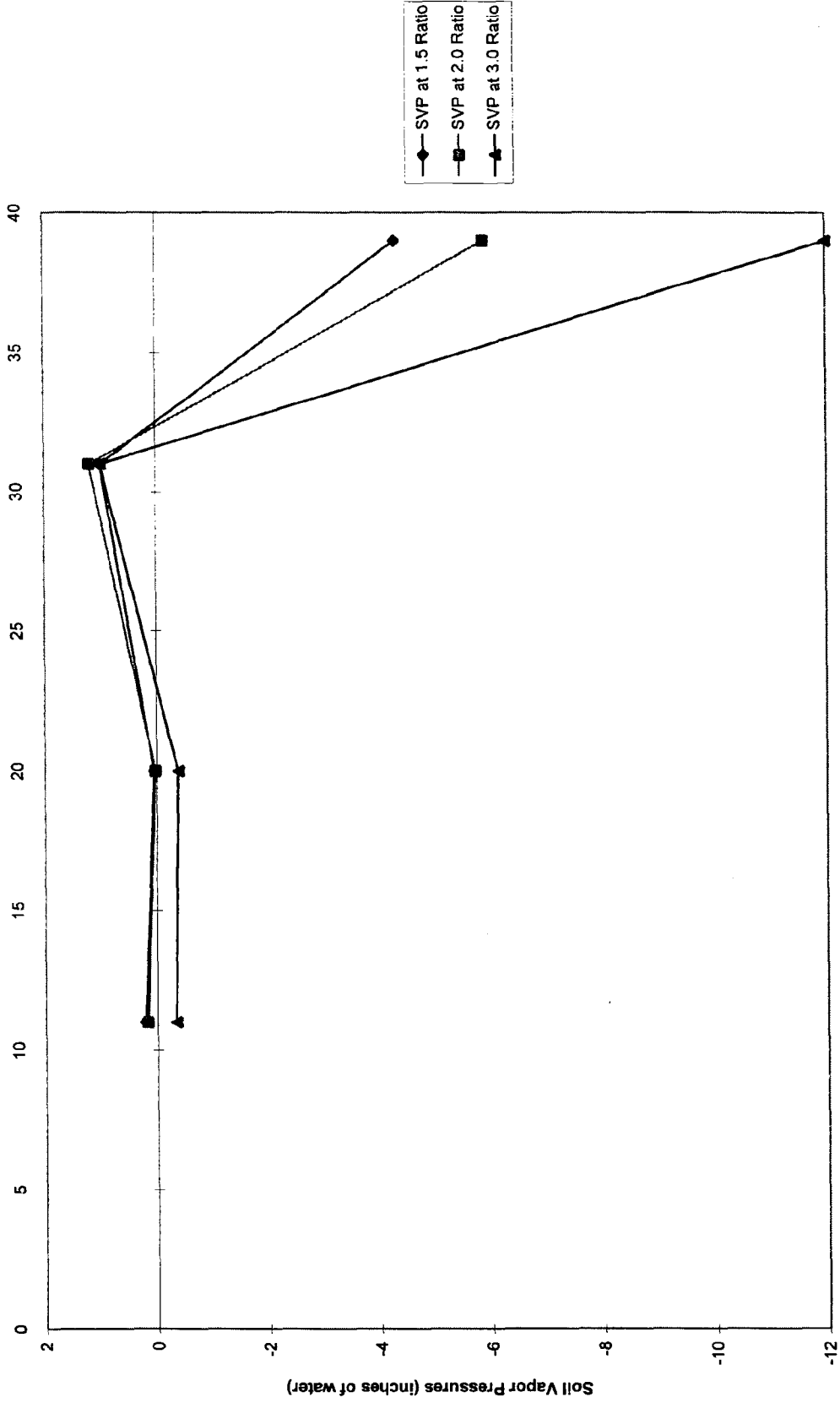
10/9/97 7:24 PM

BP9705M AS CH Chart 1

IW-01/EW-02 tests performed at water table on 4/30 and 5/1/97					
	X	Y = Steady State Soil Vapor Pressures at Ratio of Air Extraction Rate to Air Injection Rate			
	Distance from IW-01	SVP at 1.5 Ratio	SVP at 2.0 Ratio	SVP at 3.0 Ratio	
EW-01	11	0.21	0.17	-0.33	
EW-03	20	0.05	0.03	-0.38	
MW-01	31	1	1.2	1	
EW-02	39	-4.3	-5.9	-12	



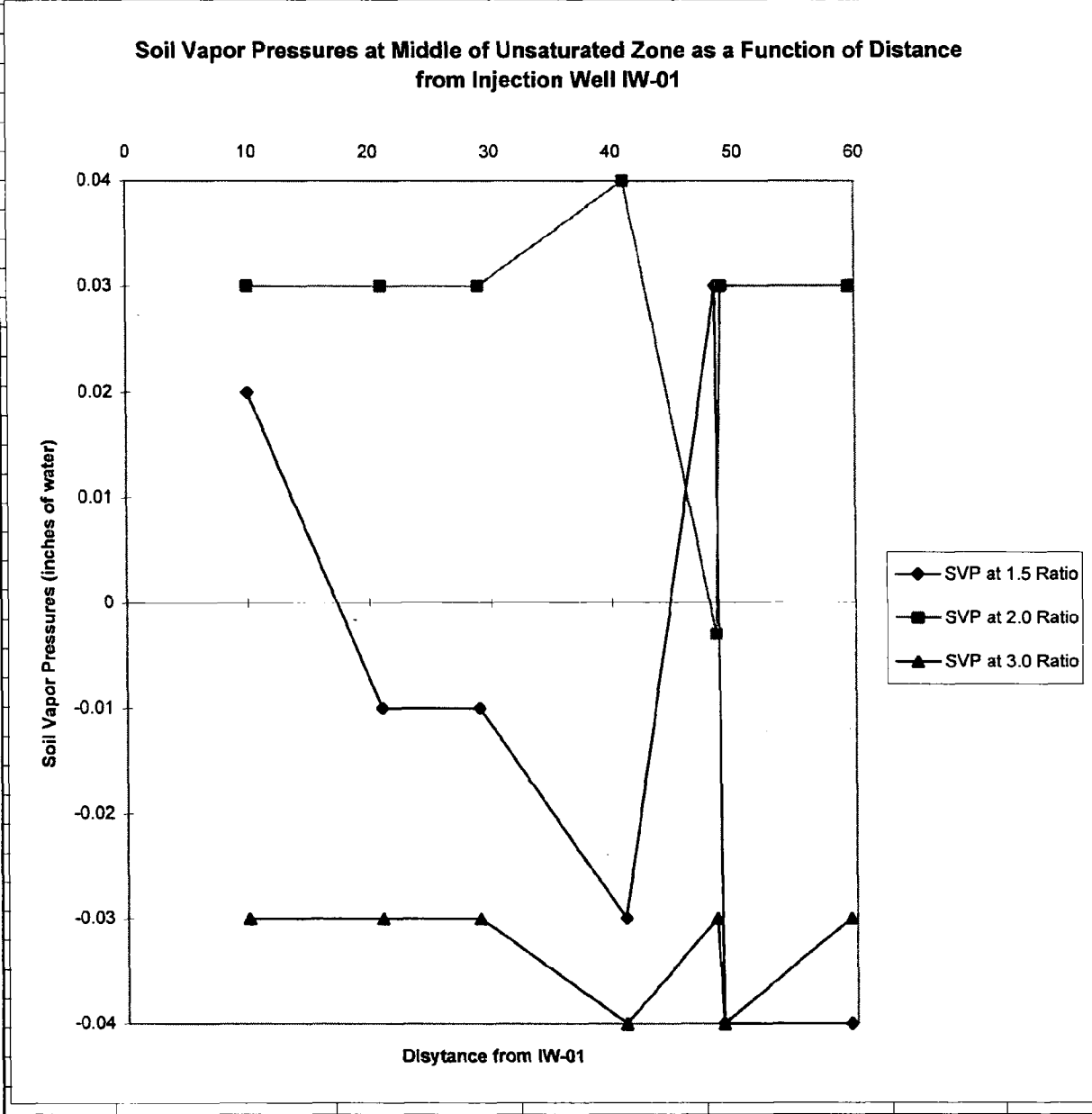
Soil Vapor Pressures at Water Table as a Function of Distance from Injection Well IW-01



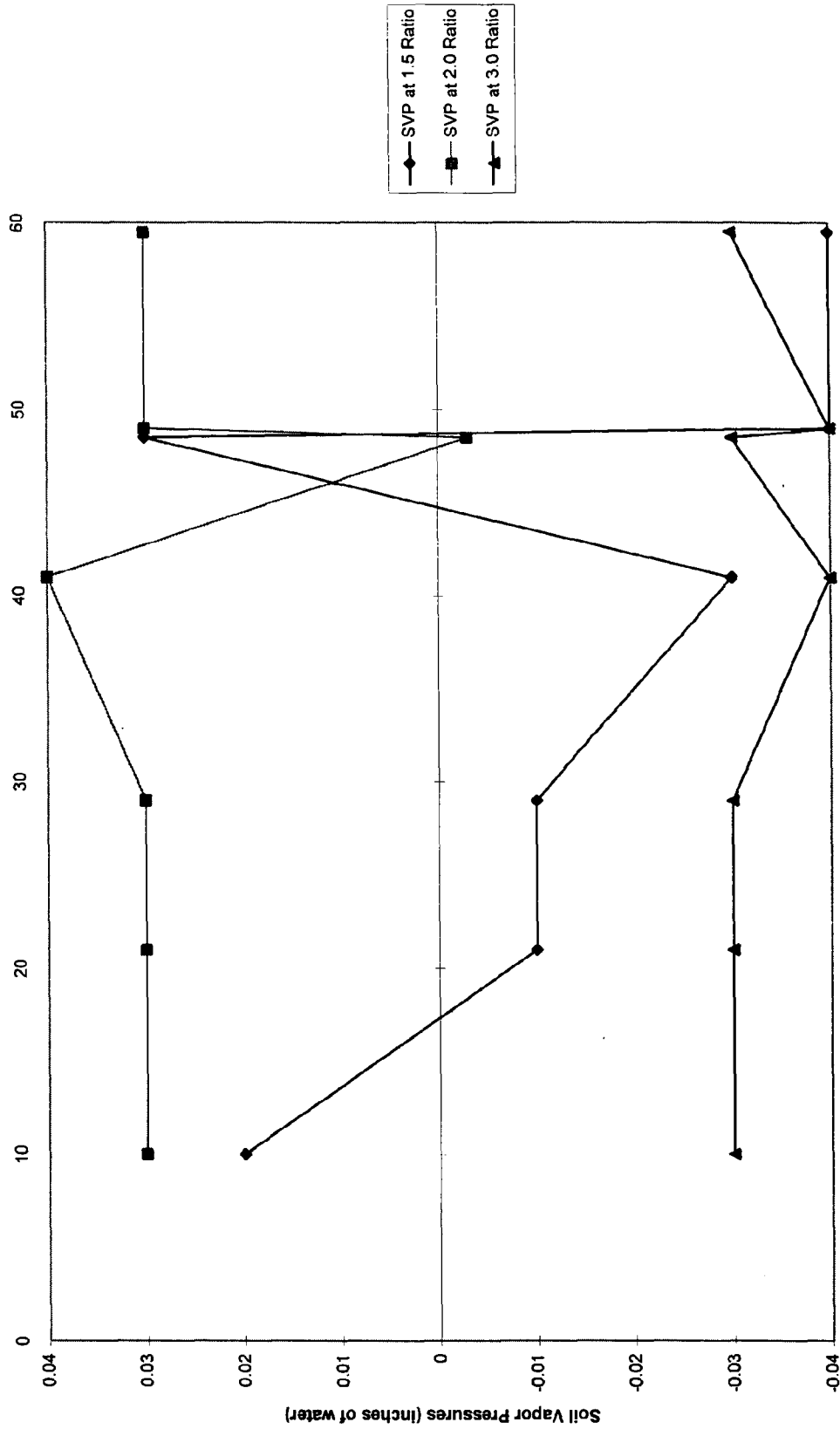
Distance from IW-01

IW-01/EW-02 tests performed at middle of unsaturated zone on 4/30 and 5/1/97

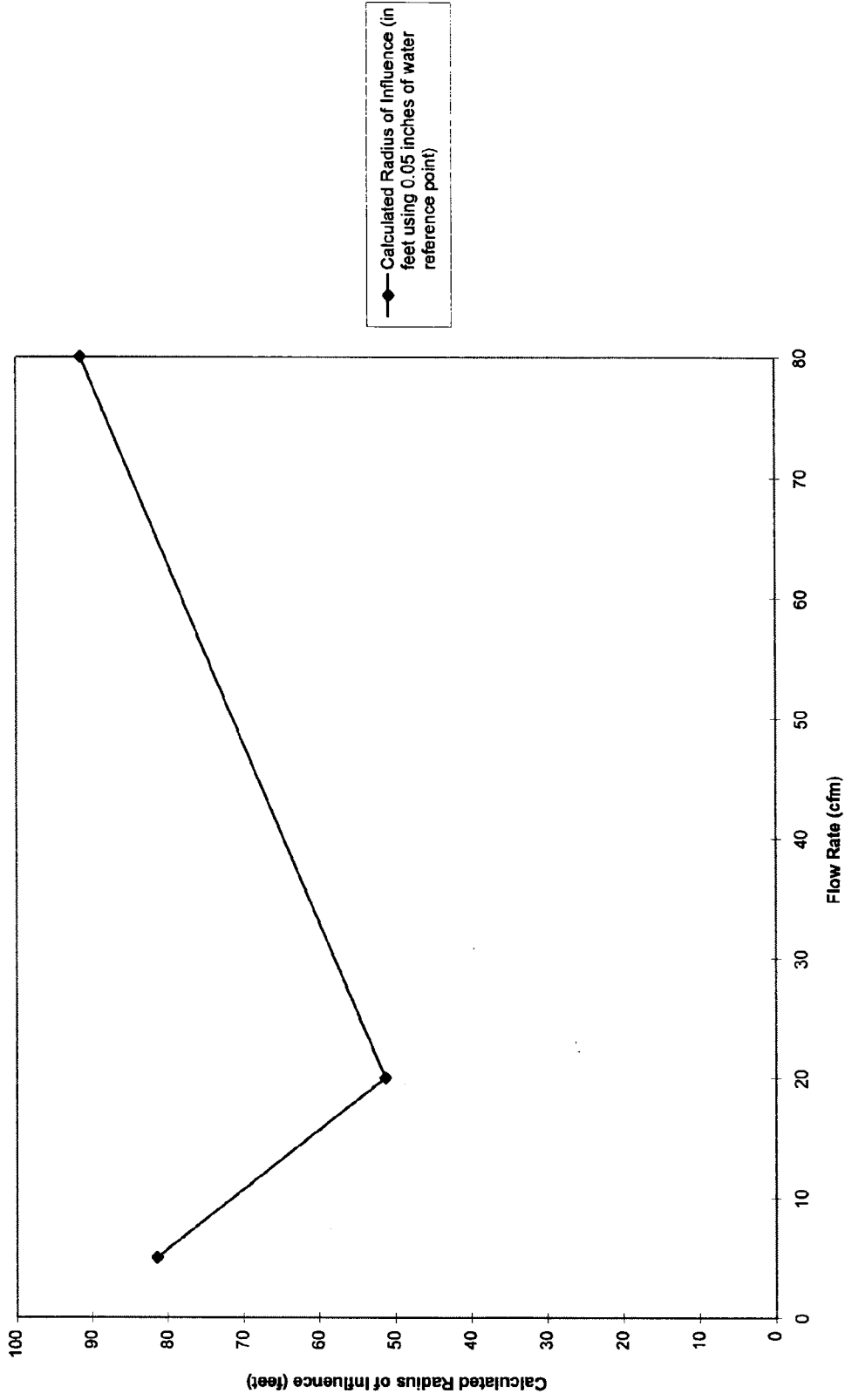
	Y = Steady State Soil Vapor Pressures at Ratio of Extraction to Injection Rates			
	X Distance from IW-01	SVP at 1.5 Ratio	SVP at 2.0 Ratio	SVP at 3.0 Ratio
SVPM 2	10	0.02	0.03	-0.03
SVPM 3	21	-0.01	0.03	-0.03
SVPM 4	29	-0.01	0.03	-0.03
EW-04	41	-0.03	0.04	-0.04
SVPM 1	48.5	0.03	-0.003	-0.03
SVPM 5	49	-0.04	0.03	-0.04
EW-05	59.5	-0.04	0.03	-0.03



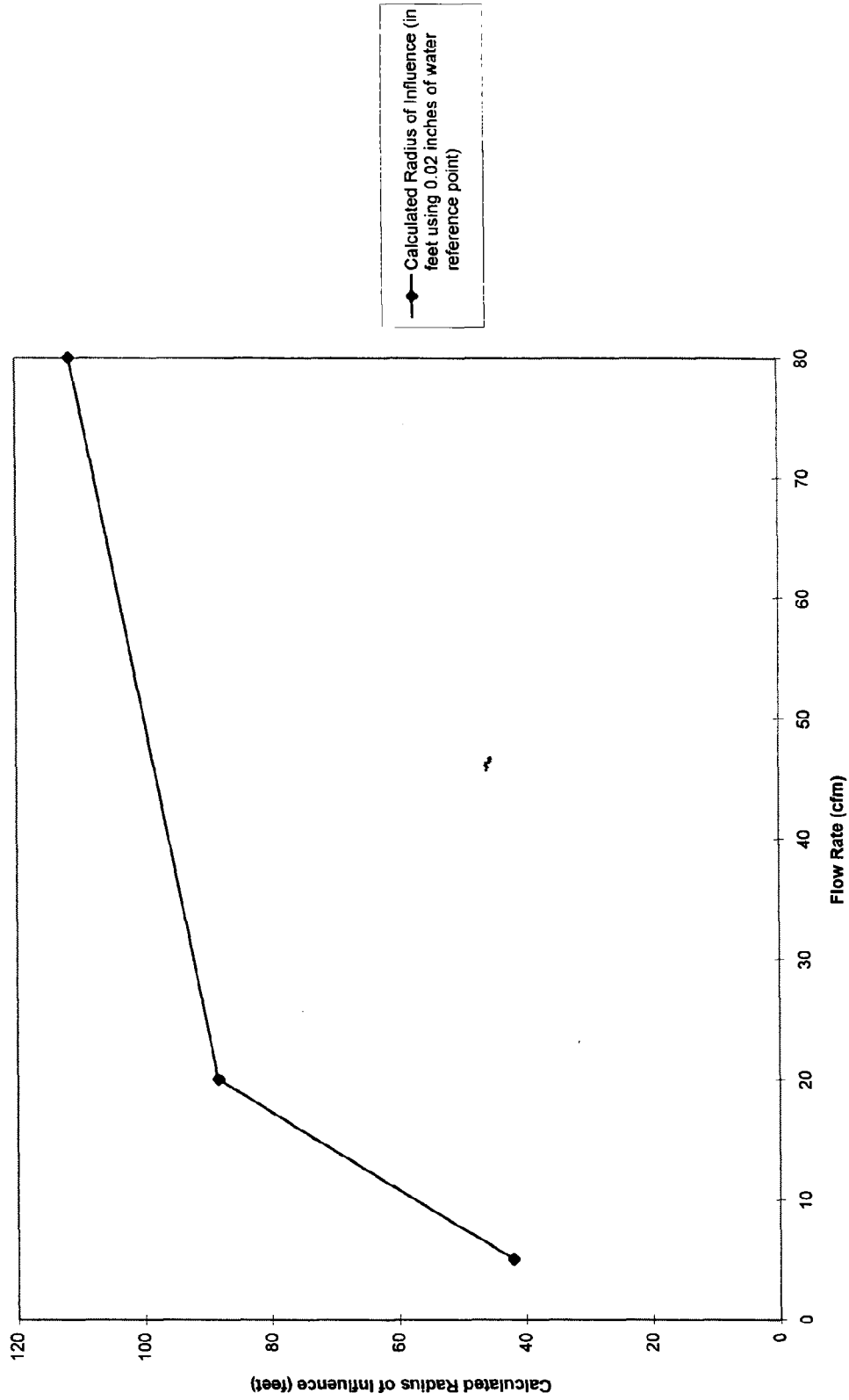
Soil Vapor Pressures at Middle of Unsaturated Zone as a Function of Distance from Injection Well IW-01



Calculated Radius of Influence as a Function of Flow Rate from
Extraction Well EW-04



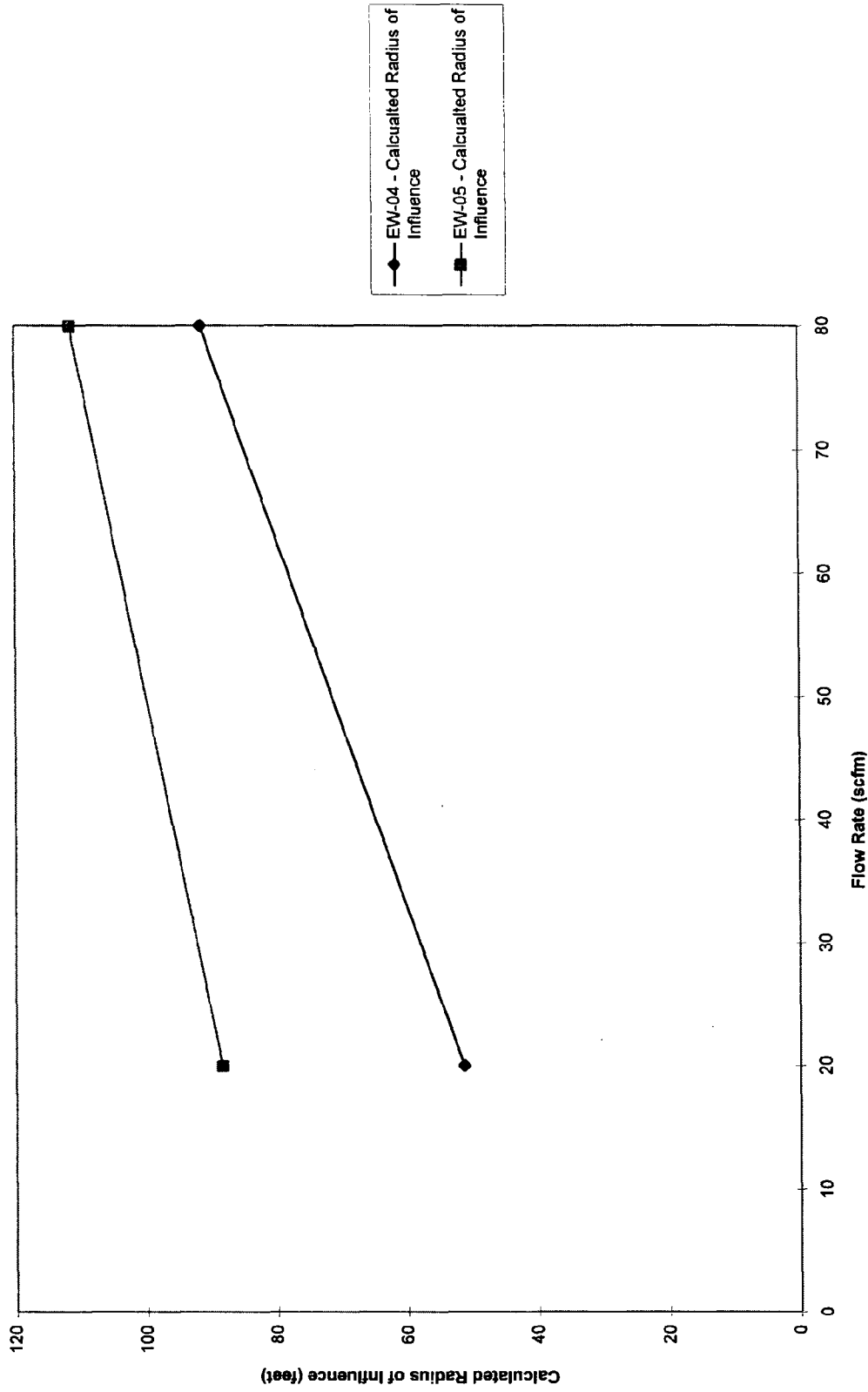
Calculated Radius of Influence as a Function of Flow Rate from
Extraction Well EW-05



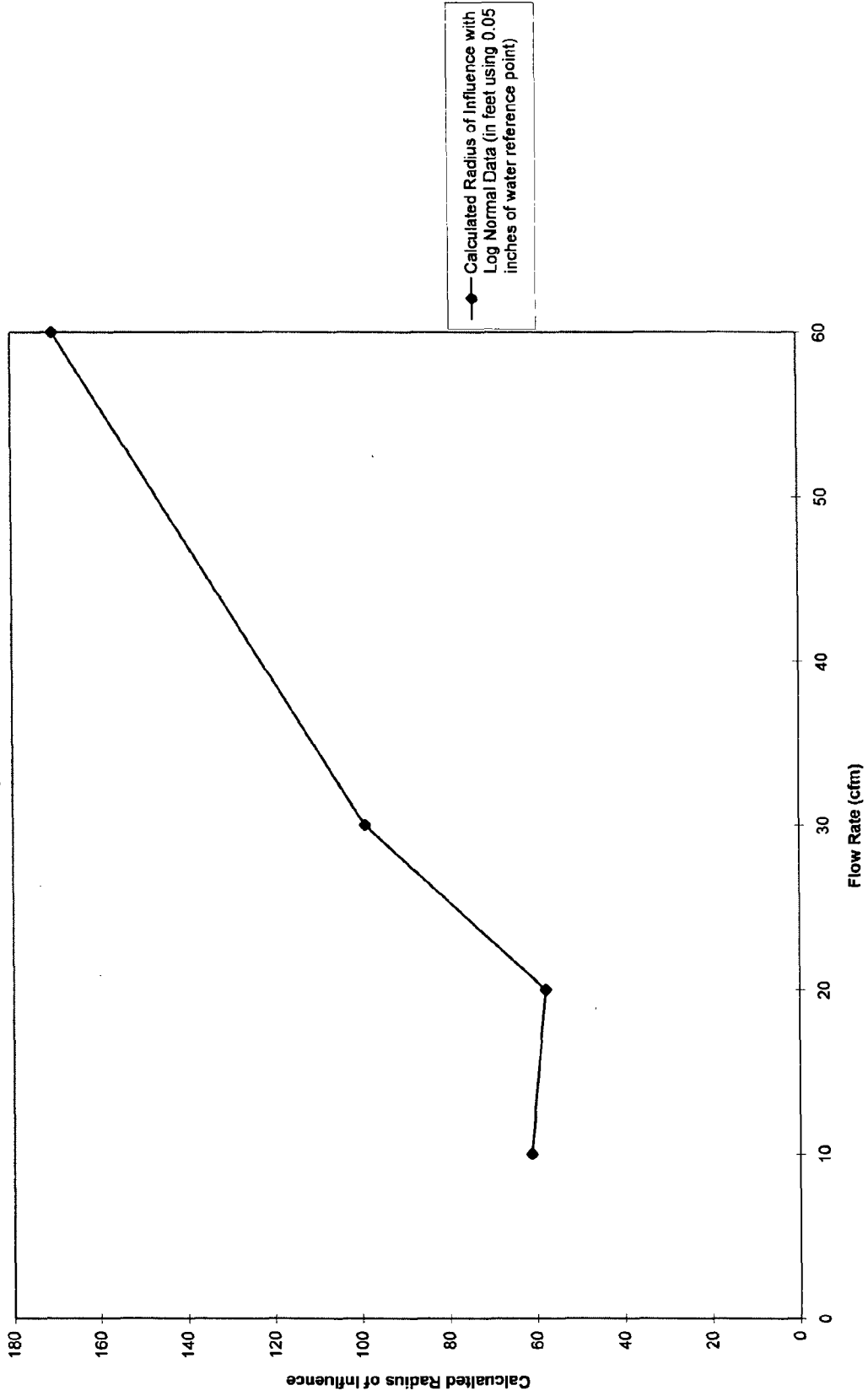
—◆— Calculated Radius of Influence (in feet using 0.02 inches of water reference point)

FIGURE 8

Calculated Radius of Influence as a Function of Flow Rate from Extraction Wells EW-04 and EW-05

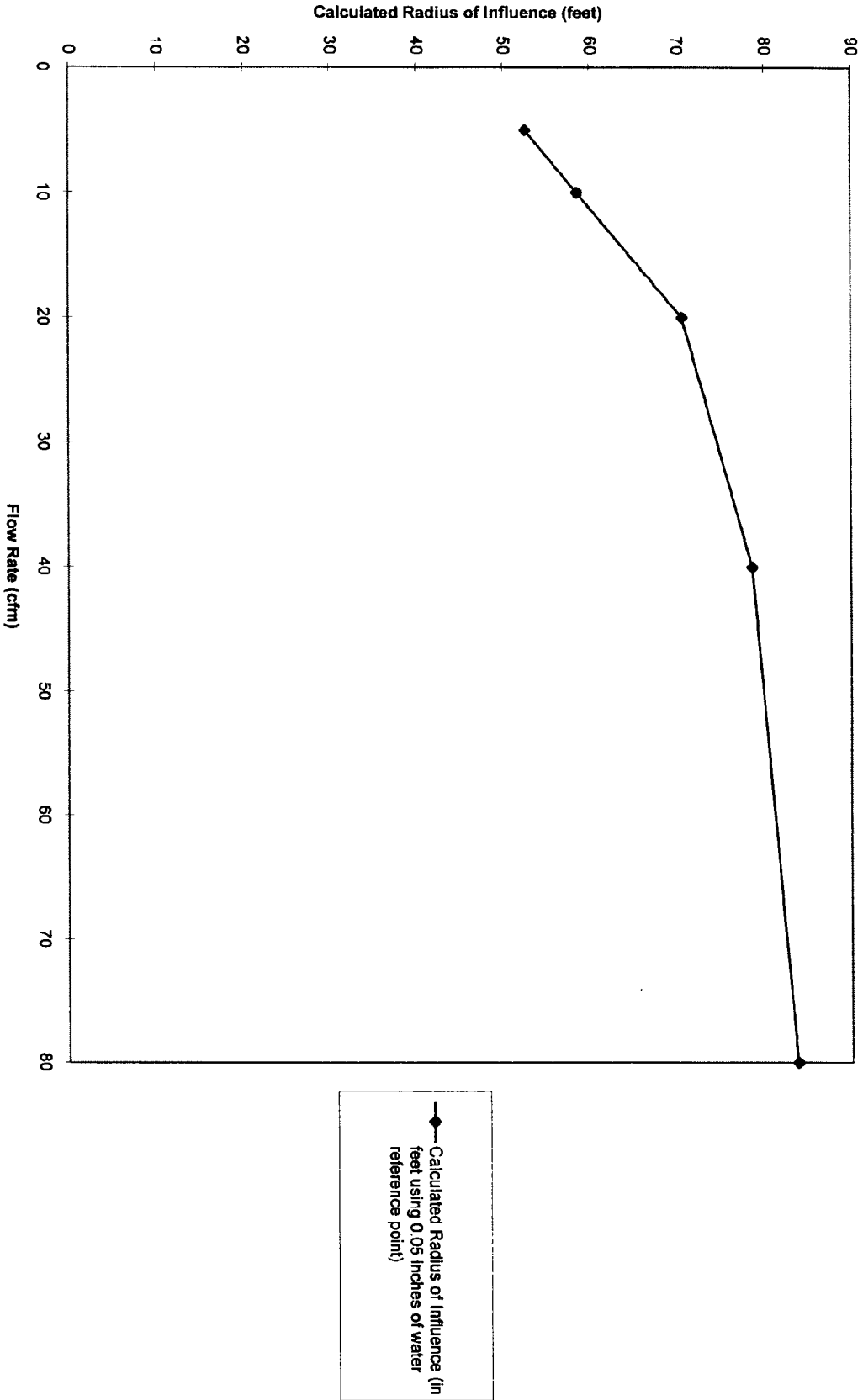


Calculated Radius of Influence as a Function of Flow Rate from Injection Well IW-01

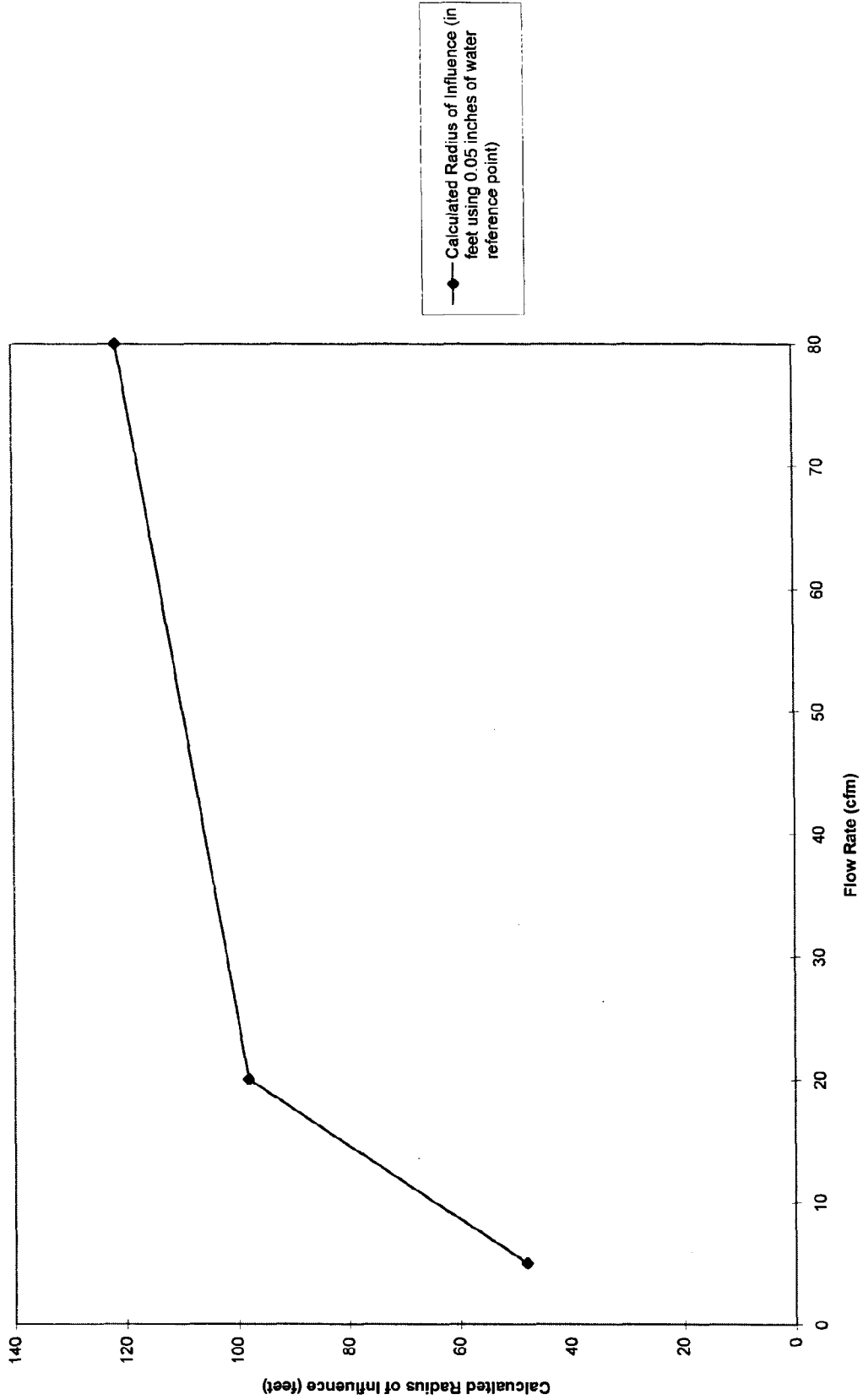


BP9701 AS,RAD Chart 2

Calculated Radius of Influence as a Function of Flow Rate from Extraction Well EW-01

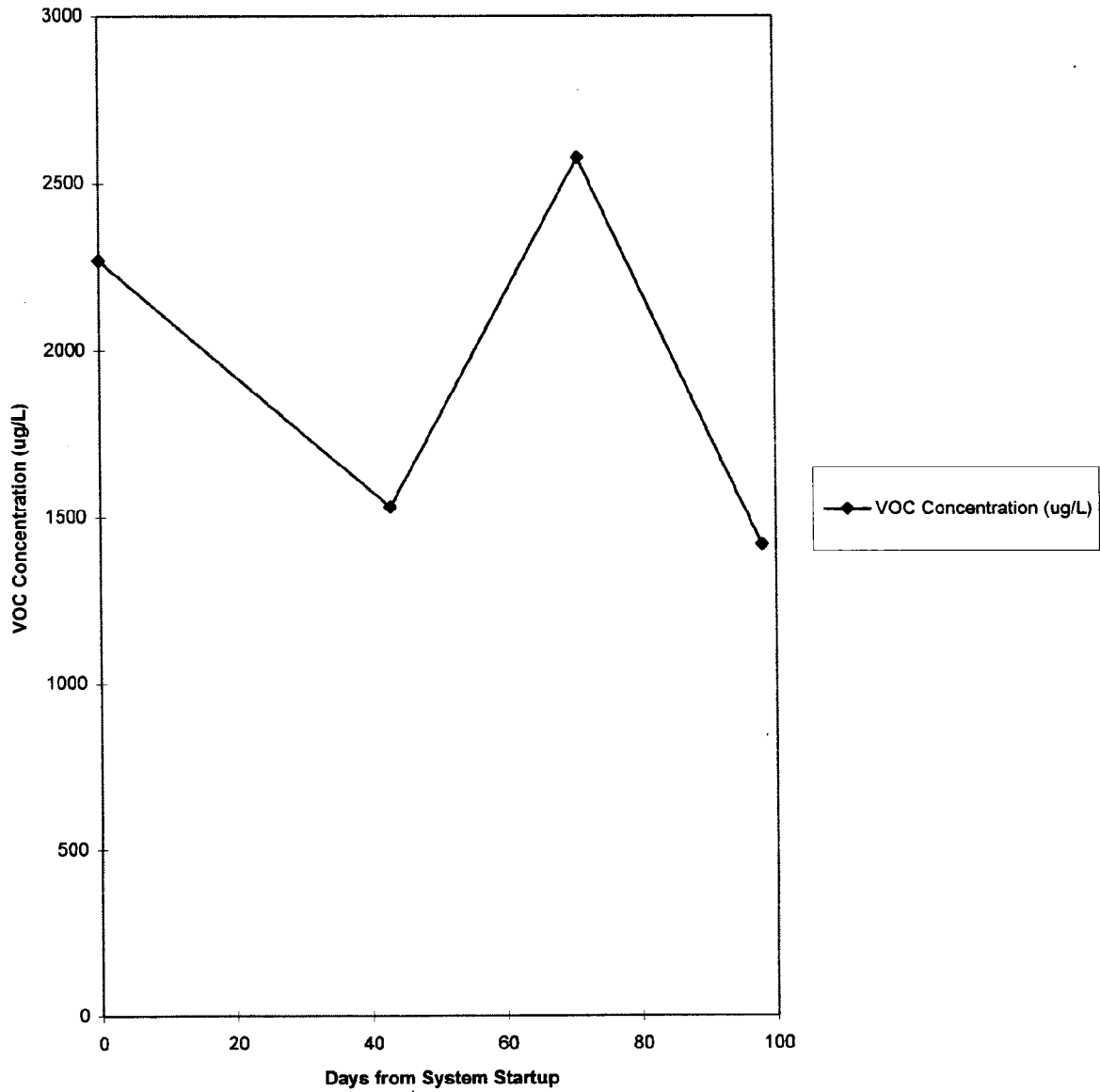


Calculated Radius of Influence as a Function of Flow Rate from Extraction Well EW-02

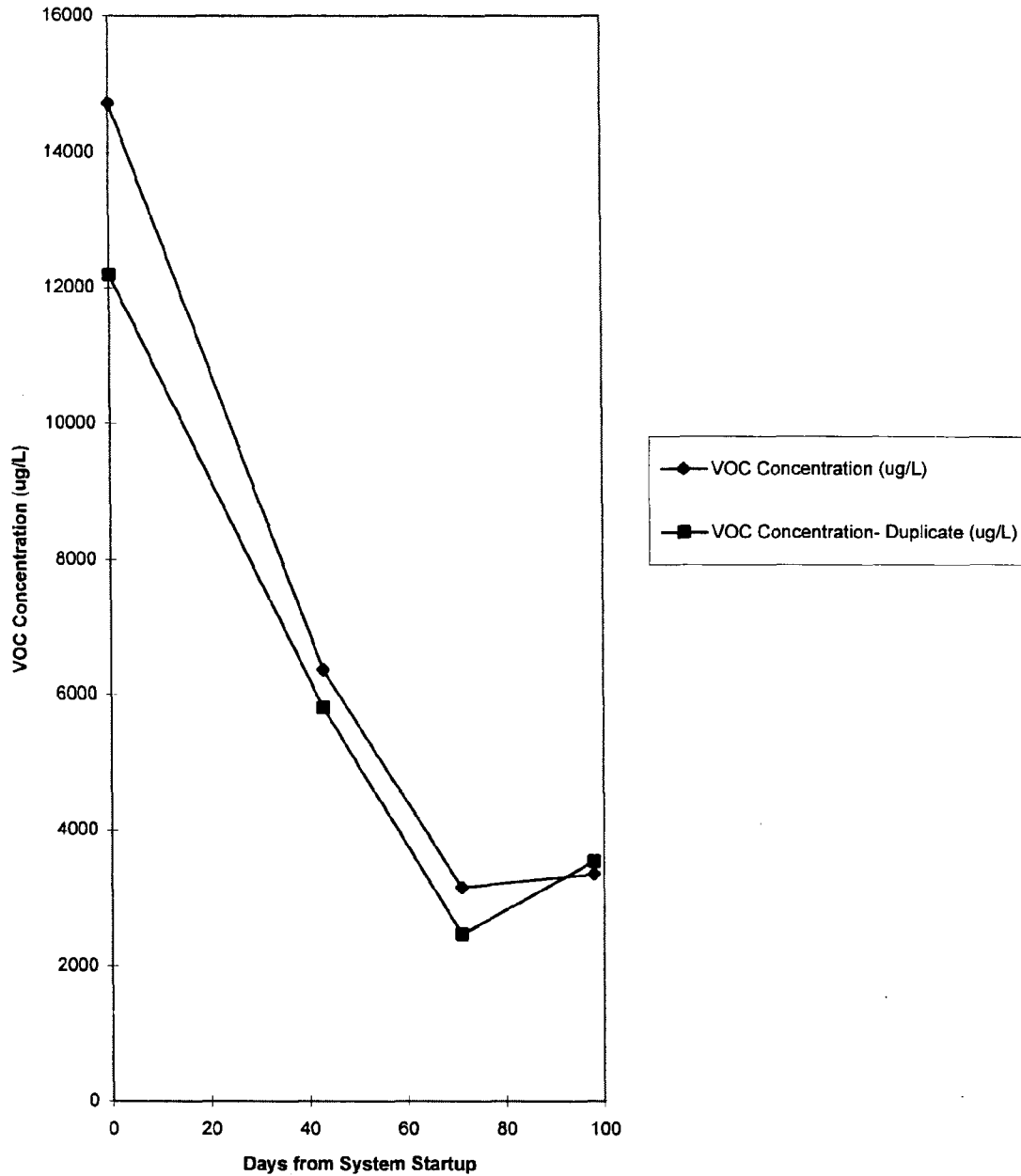


EW-03

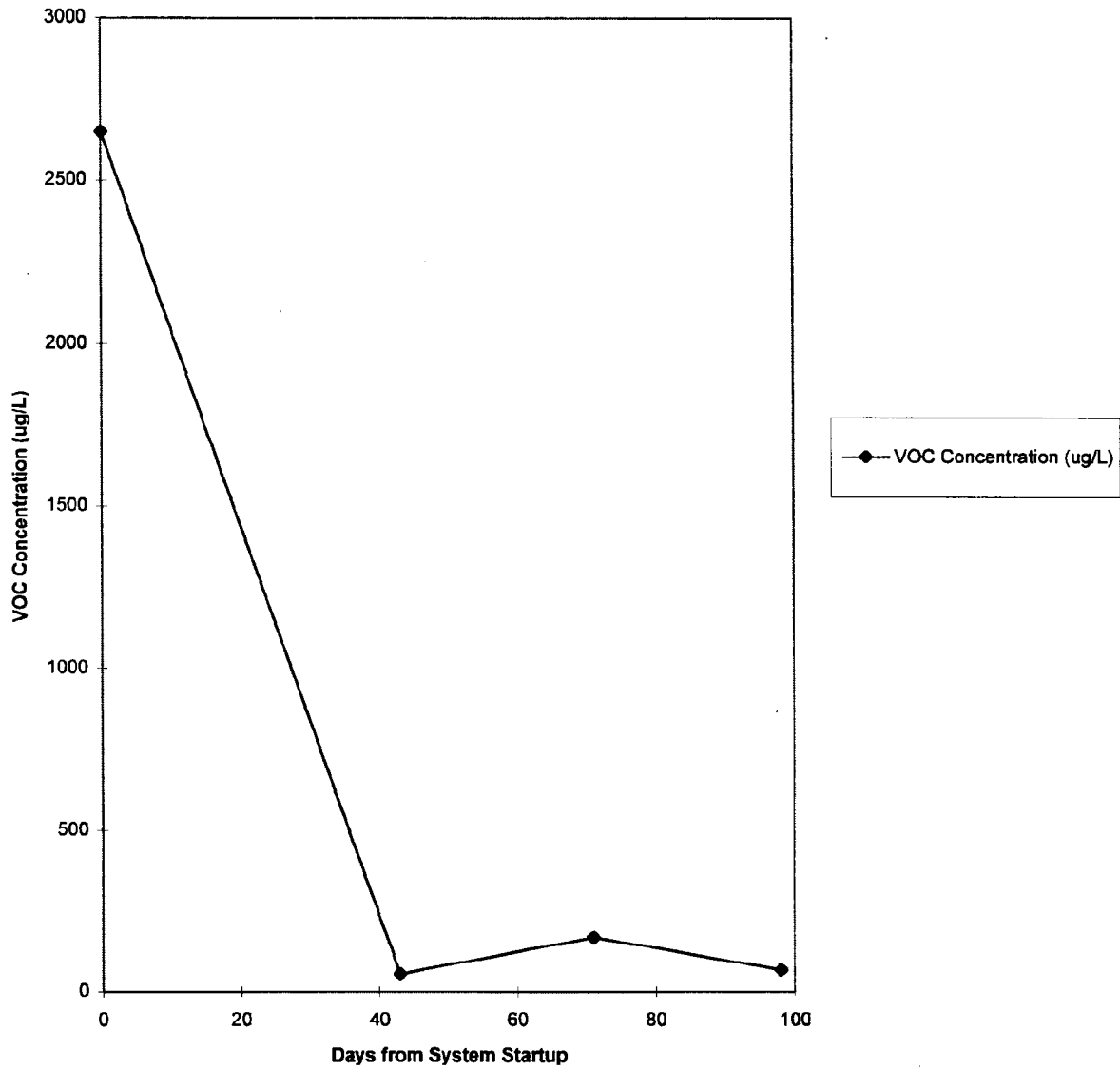
Extraction well EW-03							
Days from System Startup	VOC Concentration (ug/L)						
0	2269						
43	1531						
71	2576						
98	1417						



Extraction well EW-02			
Days from System Startup	VOC Concentration (ug/L)	VOC Concentration- Duplicate (ug/L)	
0	14732	12190	
43	6362	5808	
71	3161	2474	
98	3358.7	3548.3	

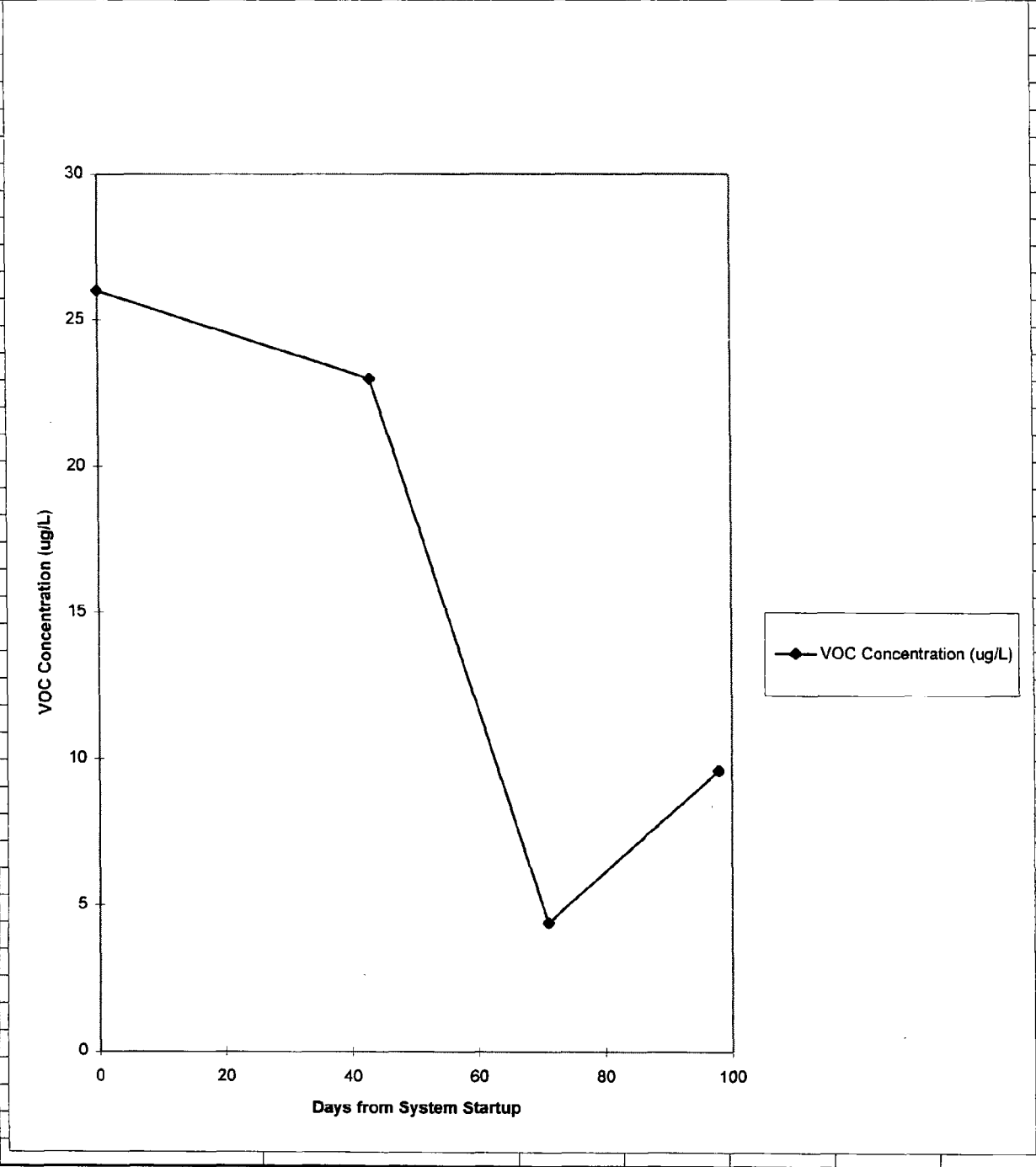


Extraction well EW-01						
Days from System Startup	VOC Concentration (ug/L)					
0	2650					
43	56					
71	169					
98	68					



IW-01

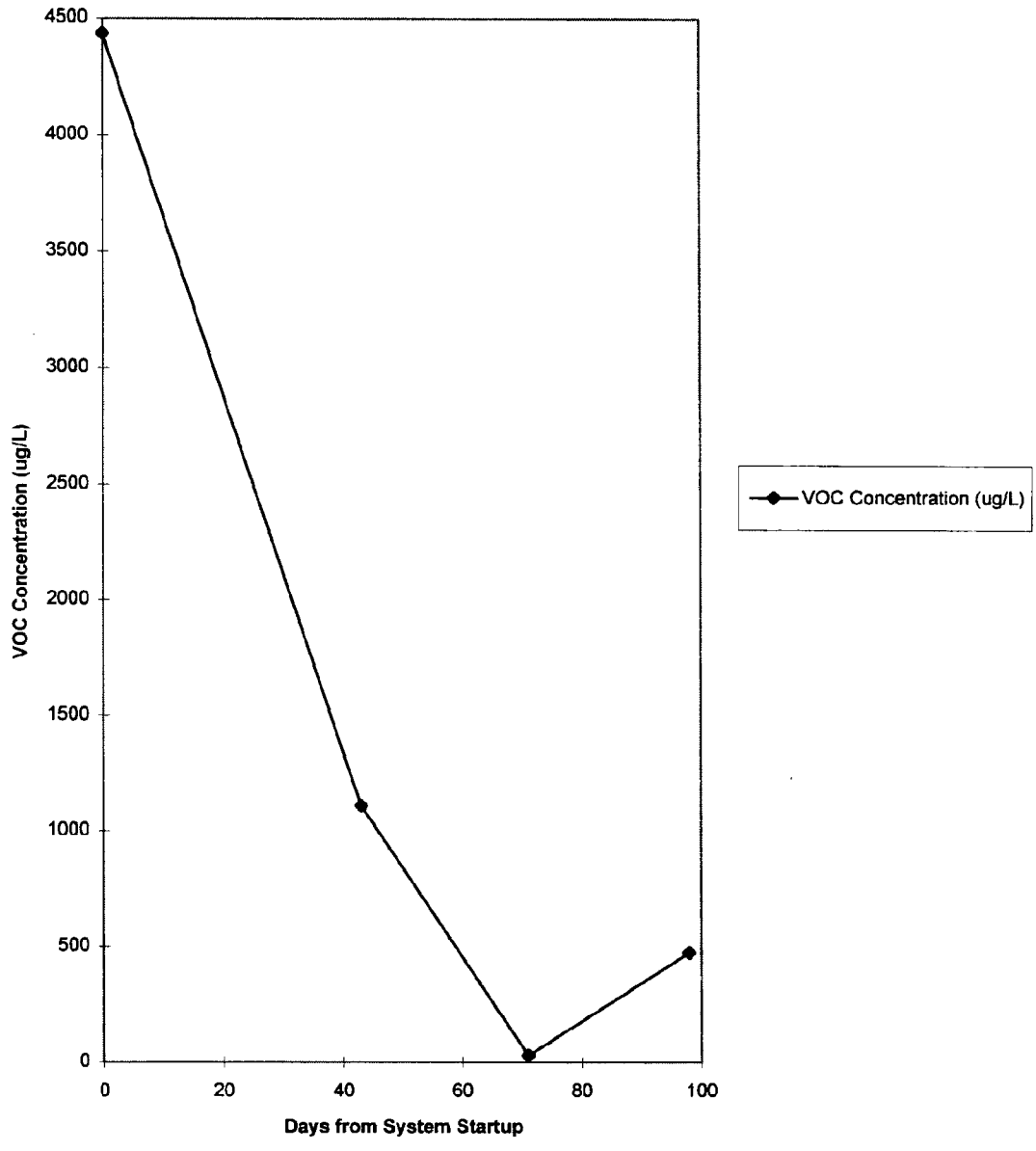
Injection well IW-01	
Days from System Startup	VOC Concentration (ug/L)
0	26
43	23
71	4.4
98	9.6



10/9/97 9:44 AM

MW-01

Days from System Startup	VOC Concentration (ug/L)				
0	4436				
43	1110				
71	29.9				
98	474				



10/9/97 9:43 AM



E

APPENDIX E
SAMPLE LOG SHEETS

SOLID/SOIL/SEDIMENT SAMPLE LOG SHEET



Brown & Root Environmental

- Surface Soil
- Subsurface Soil
- Sediment
- Lagoon/Pond
- Other _____

Project Site Name NWIRP Bethpage

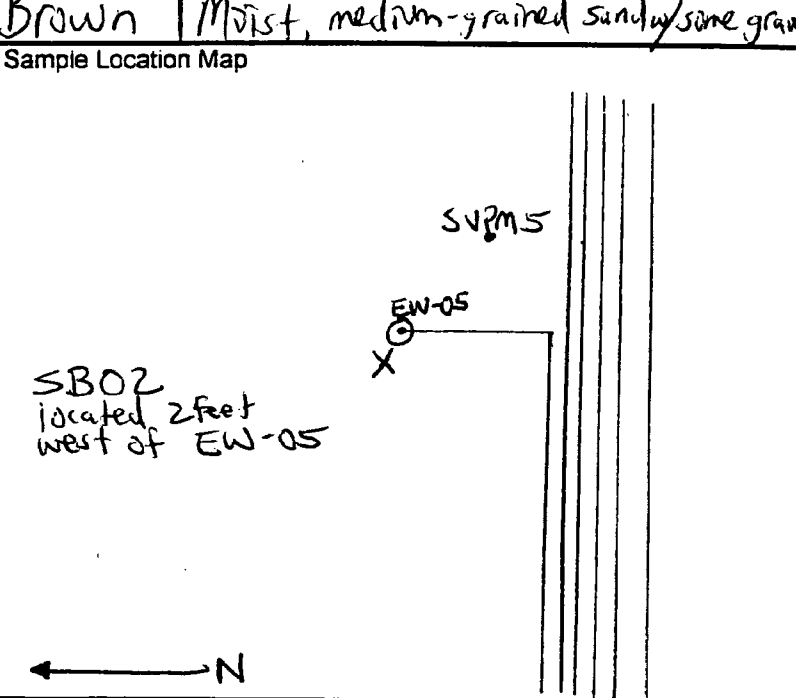
Project Site Number 5253-0142/CTO 213

Source Number PS-SB02-10

Source Location Site 1 - Boring 02

Sample Method:	Composite Sample Data		
Split Spoon / disposable trowel	Sample	Time	Color and Description
Depth Sampled: 8'-10'	N.A.		
Sample Date & Time: 7/15/97 1215			
Sampled by: Starras Patselas			
Signature(s): 			
<p style="text-align: center;">Sample Type</p> <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite			
Sample Data			
	Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)	
	Brown	Moist, medium-grained sandy/some grain	

Analysis	Preservative:
<input checked="" type="checkbox"/> TCL VOAs - 1-4oz CLEAR	dark, 4°C
<input type="checkbox"/> TCL SVOAs	dark, 4°C
<input type="checkbox"/> TCL Pest/PCBs	dark, 4°C
<input type="checkbox"/> TAL Metals	4°C
<input type="checkbox"/> Cyanide	4°C



Observations and Notes

- cuttings left in cesspool 79
- Duplicate sample taken
- PID reading = 0 ppm
- Analysis Parameter is SW-846-8240
- Samples sent to Kemron Env. via FedEx Airbill # 5081400332

Revised 4/5/96

SOLID/SOIL/SEDIMENT SAMPLE LOG SHEET



Brown & Root Environmental

- Surface Soil
- Subsurface Soil
- Sediment
- Lagoon/Pond
- Other _____

Project Site Name NWIRP Bethpage

Project Site Number 5253-0142/CTO 213

Source Number PS-SB02-40

Source Location Site 1 - Boring

<p>Sample Method: <u>Split Spoon / disposable trowel</u></p> <p>Depth Sampled: <u>38'-40'</u></p> <p>Sample Date & Time: <u>7/15/97 1240</u></p> <p>Sampled by: <u>Stavros Patselas</u></p> <p>Signature(s): <u>[Signature]</u></p> <p style="text-align: center;">Sample Type</p> <p><input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Analysis</th> <th style="width: 50%;">Preservative:</th> </tr> <tr> <td><input checked="" type="checkbox"/> TCL VOAs - 1-4oz CLEAR</td> <td>dark, 4°C</td> </tr> <tr> <td><input type="checkbox"/> TCL SVOAs</td> <td>dark, 4°C</td> </tr> <tr> <td><input type="checkbox"/> TCL Pest/PCBs</td> <td>dark, 4°C</td> </tr> <tr> <td><input type="checkbox"/> TAL Metals</td> <td>4°C</td> </tr> <tr> <td><input type="checkbox"/> Cyanide</td> <td>4°C</td> </tr> </table> <p>Observations and Notes - cutting left in cesspool 79 <input type="checkbox"/> Duplicate sample taken - PID reading = 0 ppm Analysis Parameter is <u>SW-846-8240</u> Samples sent to Kemron Env. via FedEx Airbill # <u>5081400332</u></p>	Analysis	Preservative:	<input checked="" type="checkbox"/> TCL VOAs - 1-4oz CLEAR	dark, 4°C	<input type="checkbox"/> TCL SVOAs	dark, 4°C	<input type="checkbox"/> TCL Pest/PCBs	dark, 4°C	<input type="checkbox"/> TAL Metals	4°C	<input type="checkbox"/> Cyanide	4°C	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3" style="text-align: center;">Composite Sample Data</th> </tr> <tr> <th style="width: 33%;">Sample</th> <th style="width: 33%;">Time</th> <th style="width: 33%;">Color and Description</th> </tr> <tr> <td colspan="3" style="text-align: center; height: 100px; vertical-align: middle;">N.A.</td> </tr> </table> <p style="text-align: center;">Sample Data</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;">Color</th> <th>Description: (Sand, Clay, Dry, Moist, Wet, etc.)</th> </tr> <tr> <td><u>Yellow-orange</u></td> <td><u>Medium-grained sand, moist</u></td> </tr> </table> <p>Sample Location Map</p> <p style="font-size: 1.2em; text-align: center;">See PS-SB02-10 Sample Log Sheet</p>	Composite Sample Data			Sample	Time	Color and Description	N.A.			Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)	<u>Yellow-orange</u>	<u>Medium-grained sand, moist</u>
Analysis	Preservative:																									
<input checked="" type="checkbox"/> TCL VOAs - 1-4oz CLEAR	dark, 4°C																									
<input type="checkbox"/> TCL SVOAs	dark, 4°C																									
<input type="checkbox"/> TCL Pest/PCBs	dark, 4°C																									
<input type="checkbox"/> TAL Metals	4°C																									
<input type="checkbox"/> Cyanide	4°C																									
Composite Sample Data																										
Sample	Time	Color and Description																								
N.A.																										
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)																									
<u>Yellow-orange</u>	<u>Medium-grained sand, moist</u>																									

Revised 4/5/96

SOLID/SOIL/SEDIMENT SAMPLE LOG SHEET



Brown & Root Environmental

- Surface Soil
- Subsurface Soil
- Sediment
- Lagoon/Pond
- Other _____

Project Site Name NWIRP Bethpage
 Source Number PS-SB03-20

Project Site Number 5253-0142/CTD 213
 Source Location Site 1 - Boring 03

Sample Method: <u>Split Spoon / disposable trowel</u>	Composite Sample Data		
Depth Sampled: <u>20' - 22'</u>	Sample	Time	Color and Description
Sample Date & Time: <u>7/15/97 1050</u>	N.A.		
Sampled by: <u>Starras Patselas</u>			
Signature(s): 			
Sample Type <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite	Sample Data		
Analysis <input checked="" type="checkbox"/> TCL VOAs - 1-4oz CLEAR <input type="checkbox"/> TCL SVOAs <input type="checkbox"/> TCL Pest/PCBs <input type="checkbox"/> TAL Metals <input type="checkbox"/> Cyanide	Preservative: dark, 4°C dark, 4°C dark, 4°C 4°C 4°C	Color Description: (Sand, Clay, Dry, Moist, Wet, etc.)	

Observations and Notes - cuttings containerized <input type="checkbox"/> Duplicate sample taken - PID reading = 68.7 ppm Analysis Parameter is <u>SN-846-8240</u> Samples sent to Kemron Env. via FedEx Airbill # <u>5081400332</u>	Sample Location Map <p style="text-align: center;">← N</p>
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Revised 4/5/96

SOLID/SOIL/SEDIMENT SAMPLE LOG SHEET



Brown & Root Environmental

- Surface Soil
- Subsurface Soil
- Sediment
- Lagoon/Pond
- Other _____

Project Site Name NWIRP Bethpage

Project Site Number 5253-0142/CTO 213

Source Number PS-SB03-40

Source Location Site 1 - Boring 03

<p>Sample Method: <u>Split Spoon / disposable trowel</u></p> <p>Depth Sampled: <u>40'-42'</u></p> <p>Sample Date & Time: <u>7/15/97 1110</u></p> <p>Sampled by: <u>Starras Patselas</u></p> <p>Signature(s): </p> <p style="text-align: center;">Sample Type</p> <p><input checked="" type="checkbox"/> Low Concentration</p> <p><input type="checkbox"/> High Concentration</p> <p><input checked="" type="checkbox"/> Grab</p> <p><input type="checkbox"/> Composite</p> <p><input type="checkbox"/> Grab - Composite</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Analysis</th> <th style="width: 50%;">Preservative:</th> </tr> <tr> <td><input checked="" type="checkbox"/> TCL VOAs - 1-4oz CLEAR</td> <td>dark, 4°C</td> </tr> <tr> <td><input type="checkbox"/> TCL SVOAs</td> <td>dark, 4°C</td> </tr> <tr> <td><input type="checkbox"/> TCL Pest/PCBs</td> <td>dark, 4°C</td> </tr> <tr> <td><input type="checkbox"/> TAL Metals</td> <td>4°C</td> </tr> <tr> <td><input type="checkbox"/> Cyanide</td> <td>4°C</td> </tr> </table>	Analysis	Preservative:	<input checked="" type="checkbox"/> TCL VOAs - 1-4oz CLEAR	dark, 4°C	<input type="checkbox"/> TCL SVOAs	dark, 4°C	<input type="checkbox"/> TCL Pest/PCBs	dark, 4°C	<input type="checkbox"/> TAL Metals	4°C	<input type="checkbox"/> Cyanide	4°C	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3" style="text-align: center;">Composite Sample Data</th> </tr> <tr> <th style="width: 33%;">Sample</th> <th style="width: 33%;">Time</th> <th style="width: 34%;">Color and Description</th> </tr> <tr> <td colspan="3" style="text-align: center; height: 100px; vertical-align: middle;">N.A.</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">Sample Data</th> </tr> <tr> <th style="width: 50%;">Color</th> <th style="width: 50%;">Description: (Sand, Clay, Dry, Moist, Wet, etc.)</th> </tr> <tr> <td style="vertical-align: top;">Gray w/ yellow</td> <td style="vertical-align: top;">Medium grained sand w/ some silty clay</td> </tr> </table> <p style="text-align: center;">Sample Location Map</p> <p style="text-align: center; font-size: 1.2em;">See PS-SB03-20 Sample Log Sheet</p>	Composite Sample Data			Sample	Time	Color and Description	N.A.			Sample Data		Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)	Gray w/ yellow	Medium grained sand w/ some silty clay
Analysis	Preservative:																											
<input checked="" type="checkbox"/> TCL VOAs - 1-4oz CLEAR	dark, 4°C																											
<input type="checkbox"/> TCL SVOAs	dark, 4°C																											
<input type="checkbox"/> TCL Pest/PCBs	dark, 4°C																											
<input type="checkbox"/> TAL Metals	4°C																											
<input type="checkbox"/> Cyanide	4°C																											
Composite Sample Data																												
Sample	Time	Color and Description																										
N.A.																												
Sample Data																												
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)																											
Gray w/ yellow	Medium grained sand w/ some silty clay																											
<p>Observations and Notes</p> <p>- cuttings containerized</p> <p><input type="checkbox"/> Duplicate sample taken</p> <p>- PID reading = > 2000 ppm</p> <p>- Analysis Parameter is SW-846-8240</p> <p>- Samples sent to Kemron Env. via Fed Ex Airbill # 5081400332</p>																												

SOLID/SOIL/SEDIMENT SAMPLE LOG SHEET



Brown & Root Environmental

- Surface Soil
- Subsurface Soil
- Sediment
- Lagoon/Pond
- Other _____

Project Site Name NWIRP Bethpage

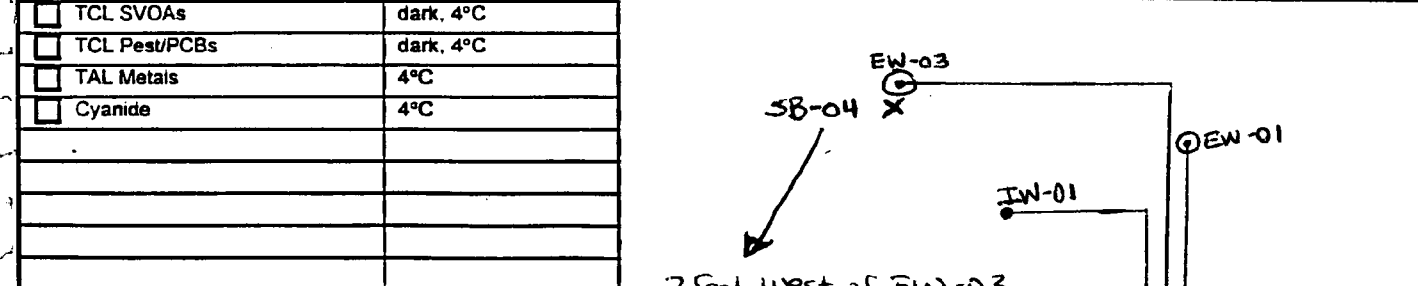
Project Site Number 5253-0142/CTD 213

Source Number PS-SB04-30

Source Location Site 1 - Boring 04

Sample Method: <u>Split Spoon / disposable tower</u> Depth Sampled: <u>30' - 32'</u> Sample Date & Time: <u>7/15/97 0925</u> Sampled by: <u>Starras Patselas</u> Signature(s): Sample Type: <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center;">Composite Sample Data</th> </tr> <tr> <th style="width: 33%;">Sample</th> <th style="width: 33%;">Time</th> <th style="width: 33%;">Color and Description</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center; height: 100px; vertical-align: middle;">N.A.</td> </tr> </tbody> </table>	Composite Sample Data			Sample	Time	Color and Description	N.A.		
Composite Sample Data										
Sample	Time	Color and Description								
N.A.										

Analysis: <input checked="" type="checkbox"/> TCL VOAs - 1-4oz CLEAR <input type="checkbox"/> TCL SVOAs <input type="checkbox"/> TCL Pest/PCBs <input type="checkbox"/> TAL Metals <input type="checkbox"/> Cyanide	Preservative: dark, 4°C dark, 4°C dark, 4°C 4°C 4°C	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Sample Data</th> </tr> <tr> <th style="width: 50%;">Color</th> <th style="width: 50%;">Description: (Sand, Clay, Dry, Moist, Wet, etc.)</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;">Yellow-orange</td> <td style="vertical-align: top;">Medium grained sand w/ some gravel - moist</td> </tr> </tbody> </table>	Sample Data		Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)	Yellow-orange	Medium grained sand w/ some gravel - moist
Sample Data								
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)							
Yellow-orange	Medium grained sand w/ some gravel - moist							



Observations and Notes

Duplicate sample taken (PS-SB04-30D)
 PID reading = 0 ppm.
 Analysis Parameter is
 SW-846-8240
 Samples sent to Kemron Env.
 with Fed Ex. Airbill # 5081400332

Revised 4/5/96

SOLID/SOIL/SEDIMENT SAMPLE LOG SHEET



Brown & Root Environmental

- Surface Soil
- Subsurface Soil
- Sediment
- Lagoon/Pond
- Other _____

Project Site Name NWIRP Bethpage
Source Number PS-SB04-40

Project Site Number 5253-0142/CTD 213
Source Location Site 1 - Boring 04

<p>Sample Method: <u>Split Spoon / disposable trowel</u></p> <p>Depth Sampled: <u>40' - 42'</u></p> <p>Sample Date & Time: <u>7/15/97 0940</u></p> <p>Sampled by: <u>Starras Patselas</u></p> <p>Signature(s): </p> <p style="text-align: center;">Sample Type</p> <p><input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Analysis</th> <th style="width: 50%;">Preservative:</th> </tr> <tr> <td><input checked="" type="checkbox"/> TCL VOAs - 1-4Hz CLEAR</td> <td>dark, 4°C</td> </tr> <tr> <td><input type="checkbox"/> TCL SVOAs</td> <td>dark, 4°C</td> </tr> <tr> <td><input type="checkbox"/> TCL Pest/PCBs</td> <td>dark, 4°C</td> </tr> <tr> <td><input type="checkbox"/> TAL Metals</td> <td>4°C</td> </tr> <tr> <td><input type="checkbox"/> Cyanide</td> <td>4°C</td> </tr> </table>	Analysis	Preservative:	<input checked="" type="checkbox"/> TCL VOAs - 1-4Hz CLEAR	dark, 4°C	<input type="checkbox"/> TCL SVOAs	dark, 4°C	<input type="checkbox"/> TCL Pest/PCBs	dark, 4°C	<input type="checkbox"/> TAL Metals	4°C	<input type="checkbox"/> Cyanide	4°C	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3" style="text-align: center;">Composite Sample Data</th> </tr> <tr> <th style="width: 33%;">Sample</th> <th style="width: 33%;">Time</th> <th style="width: 33%;">Color and Description</th> </tr> <tr> <td colspan="3" style="text-align: center; vertical-align: middle; font-size: 2em;">N.A.</td> </tr> </table> <p style="text-align: center;">Sample Data</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Color</th> <th style="width: 50%;">Description: (Sand, Clay, Dry, Moist, Wet, etc.)</th> </tr> <tr> <td><u>Yellow-orange</u></td> <td><u>Moist, medium-grained sand</u></td> </tr> </table> <p>Sample Location Map</p> <p style="font-size: 1.5em; text-align: center;"><u>See PS-SB04-30 sample log sheet</u></p>	Composite Sample Data			Sample	Time	Color and Description	N.A.			Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)	<u>Yellow-orange</u>	<u>Moist, medium-grained sand</u>
Analysis	Preservative:																									
<input checked="" type="checkbox"/> TCL VOAs - 1-4Hz CLEAR	dark, 4°C																									
<input type="checkbox"/> TCL SVOAs	dark, 4°C																									
<input type="checkbox"/> TCL Pest/PCBs	dark, 4°C																									
<input type="checkbox"/> TAL Metals	4°C																									
<input type="checkbox"/> Cyanide	4°C																									
Composite Sample Data																										
Sample	Time	Color and Description																								
N.A.																										
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)																									
<u>Yellow-orange</u>	<u>Moist, medium-grained sand</u>																									
<p>Observations and Notes</p> <p><input type="checkbox"/> Duplicate sample taken - PID reading = 0ppm Analysis Parameter is <u>SW-846-8240</u> Samples sent to Kemron Env. via FedEx Airbill # <u>5081400332</u></p>																										

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
CF Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other Extraction well

Project Site Name NWIRP Bethpage--Site 1

Project Site Number 5253-0142 / CTO 213

Source Number PS-EW-01

Source Location EW-01

Total Well Depth: <u>63.80' TOC</u>	Purge Data				
Well Casing Size & Depth: <u>2" PVC 63.8'</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Static Water Level: <u>58.10' TOC</u>	X				
One Casing Volume: <u>5.7' ≈ 3.5L</u>					
Start Purge (hrs.): <u>—</u>					
End Purge (hrs.): <u>—</u>					
Total Purge Time (min.): <u>—</u>					
Total Amount Purged (gal.): <u>3gal = 11L</u>					
Monitor reading: <u>No PID reading above background levels</u>					
Purge Method: <u>2" stainless steel bailer</u>					
Sample Method: <u>2" s.s. bailer</u>					
Depth Sampled: <u>—</u>					
Sample Date & Time: <u>4/8/97 1315</u>	SAMPLE DATA				
Sampled by: <u>Fred W. Ramser</u>					
Signature(s):	pH	S.C.	Temp (°C)	Color and Turbidity	

- Type of Sample**
- Low Concentration
 - High Concentration
 - Grab
 - Composite
 - Grab - Composite

Analysis	Preservative:
<input checked="" type="checkbox"/> TCL VOAs / <u>2-40ml. vials</u>	HCl to pH<2, 4°C
<input type="checkbox"/> TCL SVOAs	4°C
<input type="checkbox"/> TCL Pest/PCBs	4°C
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2
<input type="checkbox"/> Cyanide	NaOH to pH>12

Observations/Notes:

- Duplicate sample taken

5.7' standing H₂O × 0.616 liters / ft. = 3.5 liters

3.5 liters / vol × 3 vol ≈ 11 liters

Samples sent to Kemron Environmental Services
Fed Ex Airbill # 4595916474

Revised 4/5/98

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
CF Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other: Extraction well

Project Site Name NWIRP Bethpage - Site 1

Project Site Number 5253-042/CTO 213

Source Number PS-EW-02

Source Location EW-02

Total Well Depth: <u>64.20' TOC</u>	Purge Data								
Well Casing Size & Depth: <u>2" PVC 64.20' TOC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity				
Static Water Level: <u>58.80' TOC</u>	<div style="font-size: 4em; opacity: 0.5;">X</div>								
One Casing Volume: <u>5.4' = 3.3L</u>									
Start Purge (hrs): <u>—</u>									
End Purge (hrs.): <u>—</u>									
Total Purge Time (min.): <u>—</u>									
Total Amount Purged (gal.): <u>—</u>									
Monitor reading: <u>No PID reading above background levels</u>									
Purge Method: <u>2" stainless steel bailer</u>									
Sample Method: <u>2" s.s. bailer</u>									
Depth Sampled: <u>—</u>									
Sample Date & Time: <u>4/8/97 1400</u>	<div style="font-size: 4em; opacity: 0.5;">X</div>								
Sampled by: <u>Fred W. Ramser</u>									
Signature(s):									
SAMPLE DATA									
pH						S.C.	Temp (°C)	Color and Turbidity	
Type of Sample <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite									
						Analysis <input checked="" type="checkbox"/> TCL VOAs / 2-40ml. vials <input type="checkbox"/> TCL SVOAs <input type="checkbox"/> TCL Pest/PCBs <input type="checkbox"/> TAL Metals <input type="checkbox"/> Cyanide			
Preservative: <input checked="" type="checkbox"/> HCl to pH<2, 4°C <input type="checkbox"/> 4°C <input type="checkbox"/> 4°C <input type="checkbox"/> HNO ₃ to pH<2 <input type="checkbox"/> NaOH to pH>12									
Observations/Notes: <input checked="" type="checkbox"/> Duplicate sample taken — <u>PS-DUP-01</u> $5.4' \text{ standing } H_2O \times 0.616 \frac{\text{liters}}{\text{ft}} = 3.3 \text{ liters}$ $3.3 \frac{\text{liters}}{\text{volume}} * 3 \text{ ml.} \approx 10 \text{ L.}$									
Samples sent to Kemron Environmental Services Fed Ex Airbill # 4595916474									

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
CF Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other Extraction well

Project Site Name NWIRP Bethpage - Site 1
Source Number PS-EW-03

Project Site Number 5253-042/CTO 213
Source Location EW-03

Total Well Depth: <u>62.90 Top of Casing</u>	Purge Data				
Well Casing Size & Depth: <u>2" PVC 63' TOC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Static Water Level: <u>58.07' TOC</u>	X				
One Casing Volume: <u>4.83' ≈ 3 liters</u>					
Start Purge (hrs.): <u>—</u>					
End Purge (hrs.): <u>—</u>					
Total Purge Time (min.): <u>—</u>					
Total Amount Purged (gal.): <u>2.4 gal = 9L</u>					
Monitor reading: <u>No PID reading above background levels</u>					
Purge Method: <u>2" stainless steel bailer</u>					
Sample Method: <u>2" s.s. bailer</u>					
Depth Sampled: <u>—</u>					
Sample Date & Time: <u>4/8/97 1130</u>	SAMPLE DATA				
Sampled by: <u>Fred W. Ramser</u>	pH	S.C.	Temp (°C)	Color and Turbidity	
Signature(s):					

Type of Sample	
<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> High Concentration	
<input checked="" type="checkbox"/> Grab	
<input type="checkbox"/> Composite	
<input type="checkbox"/> Grab - Composite	
Analysis	Preservative:
<input checked="" type="checkbox"/> TCL VOAs / <u>2-40ml. vials</u>	HCl to pH<2, 4°C
<input type="checkbox"/> TCL SVOAs	4°C
<input type="checkbox"/> TCL Pest/PCBs	4°C
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2
<input type="checkbox"/> Cyanide	NaOH to pH>12

Observations/Notes:
 Duplicate sample taken

$4.83' \text{ standing H}_2\text{O} \times 0.616 \frac{\text{liters}}{\text{ft.}} = 2.97 \frac{\text{liters}}{\text{vol}}$

$2.97 \frac{\text{liters}}{\text{vol}} \times 3 \text{ vol} = 9 \text{ liters}$

Samples sent to Kemron Environmental Services
 Fed Ex Airbill # 4595916474

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
CF Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other Injection well

Project Site Name NWIRP Bethpage - Site 1

Project Site Number 5253-042/CT0213

Source Number PS-IW-01

Source Location IW-01

Total Well Depth: <u>68.65 TOC</u>	Purge Data								
Well Casing Size & Depth: <u>2" PVC 68.7</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity				
Static Water Level: <u>58.0' TOC</u>	X	X	X	X	X				
One Casing Volume: <u>10.65' = 6.6L</u>									
Start Purge (hrs): <u>—</u>									
End Purge (hrs.): <u>—</u>									
Total Purge Time (min.): <u>—</u>									
Total Amount Purged (gal.): <u>5.3gal = 20L</u>									
Monitor reading: <u>No PID reading above background levels</u>									
Purge Method: <u>2" stainless steel bailer</u>									
Sample Method: <u>2" s.s. bailer</u>									
Depth Sampled: <u>—</u>									
Sample Date & Time: <u>4/8/97 1340</u>	X	X	X	X	X				
Sampled by: <u>Fred W. Ramser</u>									
Signature(s):									
SAMPLE DATA									
						pH	S.C.	Temp (°C)	Color and Turbidity

Type of Sample	
<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> High Concentration	
<input checked="" type="checkbox"/> Grab	
<input type="checkbox"/> Composite	
<input type="checkbox"/> Grab - Composite	
Analysis	Preservative:
<input checked="" type="checkbox"/> TCL VOAs / 2-40ml. vials	HCl to pH<2, 4°C
<input type="checkbox"/> TCL SVOAs	4°C
<input type="checkbox"/> TCL Pest/PCBs	4°C
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2
<input type="checkbox"/> Cyanide	NaOH to pH>12

Observations/Notes:
 Duplicate sample taken

10.65' standing x 0.616 $\frac{\text{liters}}{\text{ft.}} = 6.6 \frac{\text{liters}}{\text{volume}}$

6.6 $\frac{\text{liters}}{\text{vol.}} \times 3 \text{ vol.} \approx 20L$

Samples sent to Kemron Environmental Services
Fed Ex Airbill # 4595916474

Revised 4/5/98

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C.F. Brawn Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other _____

Project Site Name NWIRP Bethpage - Site 1

Project Site Number 5253-0142/CTO 213

Source Number PS-MW-01

Source Location CFB-MW-01

Total Well Depth: <u>66.75' TOL</u>	Purge Data				
Well Casing Size & Depth: <u>2" PVC - 66.75'</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Static Water Level: <u>59.20' TOL</u>	N/A				
One Casing Volume: <u>7.55' ²</u>					
Start Purge (hrs): <u>-</u>					
End Purge (hrs.): <u>-</u>					
Total Purge Time (min.): <u>-</u>					
Total Amount Purged (gal.): <u>3.7gal = 14L</u>					
Monitor reading: <u>No PID reading above background levels</u>					
Purge Method: <u>2" stainless steel bailer</u>					
Sample Method: <u>2" s.s. bailer</u>					
Depth Sampled: <u>-</u>					
Sample Date & Time: <u>4/8/97 1245</u>					
Sampled by: <u>Fred W. Ramser</u>					
Signature(s):	SAMPLE DATA				
	pH	S.C.	Temp (°C)	Color and Turbidity	

Type of Sample	
<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> High Concentration	
<input checked="" type="checkbox"/> Grab	
<input type="checkbox"/> Composite	
<input type="checkbox"/> Grab - Composite	
Analysis	Preservative:
<input checked="" type="checkbox"/> TCL VOA _s / 2-40ml. vials	HCl to pH<2, 4°C
<input type="checkbox"/> TCL SVOA _s	4°C
<input type="checkbox"/> TCL Pest/PCBs	4°C
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2
<input type="checkbox"/> Cyanide	NaOH to pH>12

Observations/Notes:
 Duplicate sample taken

7.55' of standing H₂O x 0.616 $\frac{\text{liters}}{\text{ft}}$ = 4.7 $\frac{\text{liters}}{\text{volume}}$

4.7 $\frac{\text{liters}}{\text{volume}}$ x 3 vol \approx 14L

Samples sent to Kemron Environmental Services — Fed. Ex. Airbill # 4595916474

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
CF Bravn Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other _____

Project Site Name NWIRP Bethpage - Site 1 Project Site Number 5253-0142/CTD 213
 Source Number TB-040897-1 Source Location QA/QC

Total Well Depth: _____	Purge Data				
	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Well Casing Size & Depth: _____	NA				
Static Water Level: _____					
One Casing Volume: _____					
Start Purge (hrs): _____					
End Purge (hrs.): _____					
Total Purge Time (min.): _____					
Total Amount Purged (gal.): _____					
Monitor reading: _____					
Purge Method: <u>stainless steel bailer</u>					
Sample Method: <u>2" s.s. bailer</u>					
Depth Sampled: _____					
Sample Date & Time: <u>4/8/97 1500</u>					
Sampled by: <u>Fred W. Ramser</u>					
Signature(s): _____					
	SAMPLE DATA				
	pH	S.C.	Temp (°C)	Color and Turbidity	

Type of Sample	
<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> High Concentration	
<input checked="" type="checkbox"/> Grab	
<input type="checkbox"/> Composite	
<input type="checkbox"/> Grab - Composite	
Analysis	Preservative:
<input checked="" type="checkbox"/> TCL VOA's - 2-40ml vials	HCl to pH<2, 4°C
<input type="checkbox"/> TCL SVOA's	4°C
<input type="checkbox"/> TCL Pest/PCBs	4°C
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2
<input type="checkbox"/> Cyanide	NaOH to pH>12

Observations/Notes:
 Duplicate sample taken

Trip Blank paired with deionized water (CAT. No. 9150-5) with Lot #A231 from Ricca Chemical Co.

Samples sent to Kemron Environmental Services via Fed Ex Airbill # 4595916474

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
CF Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other - Extraction well

Project Site Name NWIRP Bethpage - Site 1
Source Number PS-EW-01

Project Site Number 5253-0412 / CTO 213
Source Location EW-01

Total Well Depth: <u>63.80' TOC</u>	Purge Data								
Well Casing Size & Depth: <u>2" PVC 63.8' TOC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity				
Static Water Level: <u>58.27' TOC</u>	NA								
One Casing Volume: <u>5.53' ≈ 3.4 l</u>									
Start Purge (hrs): <u>—</u>									
End Purge (hrs.): <u>—</u>									
Total Purge Time (min.): <u>—</u>									
Total Amount Purged (gal.): <u>2.64 gal = 10 l</u>									
Monitor reading: <u>No PID readings above background levels</u>									
Purge Method: <u>2" stainless steel bailer</u>									
Sample Method: <u>2" s.s. bailer</u>									
Depth Sampled: <u>—</u>									
Sample Date & Time: <u>5/21/97 0845</u>	NA								
Sampled by: <u>Stavros Patselas</u>									
Signature(s): 									
SAMPLE DATA									
pH						S.C.	Temp (°C)	Color and Turbidity	
Type of Sample <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite		Observations/Notes: <input type="checkbox"/> Duplicate sample taken $5.53' \text{ standing H}_2\text{O} \times 0.616 \frac{\text{liters}}{\text{ft.}} = 3.4 \frac{\text{l}}{\text{vol.}}$ $3.4 \frac{\text{l}}{\text{vol.}} \times 3 \text{ vol} \approx 10 \text{ l}$							
Analysis <input checked="" type="checkbox"/> TCL VOAs / 2-40ml vials <input type="checkbox"/> TCL SVOAs <input type="checkbox"/> TCL Pest/PCBs <input type="checkbox"/> TAL Metals <input type="checkbox"/> Cyanide	Preservative: <input checked="" type="checkbox"/> HCl to pH<2, 4°C <input type="checkbox"/> 4°C <input type="checkbox"/> 4°C <input type="checkbox"/> HNO ₃ to pH<2 <input type="checkbox"/> NaOH to pH>12	Samples sent to Kemron Environmental Fed Ex Airbill # 5347199701							

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
CF Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other - Extraction Well

Project Site Name NWIRP Bethpage - Site 1

Project Site Number 5253-0412 / CTO 213

Source Number PS-EW-03

Source Location EW-03

Total Well Depth: <u>62.9' TOC</u>	Purge Data				
Well Casing Size & Depth: <u>2" PVC 63' TOC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Static Water Level: <u>58.18' TOC</u>	N/A				
One Casing Volume: <u>4.72' ±</u>					
Start Purge (hrs): <u>—</u>					
End Purge (hrs.): <u>—</u>					
Total Purge Time (min.): <u>—</u>					
Total Amount Purged (gal.): <u>2.4 gal = 9 l</u>					
Monitor reading: <u>No PID readings above background levels</u>					
Purge Method: <u>2" stainless steel bailer</u>					
Sample Method: <u>2" s.s. bailer</u>					
Depth Sampled: <u>—</u>					
Sample Date & Time: <u>5/21/97 0910</u>	SAMPLE DATA				
Sampled by: <u>Stavros Patselas</u>					
Signature(s): 	pH	S.C.	Temp (°C)	Color and Turbidity	
Type of Sample	Observations/Notes:				
<input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite	<input type="checkbox"/> Duplicate sample taken $4.72' \text{ standing } \times 0.616 \frac{\text{liters}}{\text{ft.}} = 2.91 \frac{\text{l}}{\text{vol}}$ $2.91 \frac{\text{l}}{\text{vol}} \times 3 \text{ vol} = 8.72 \text{ l} = 9 \text{ l}$				
Analysis	Samples sent to Kemron Environmental Fed Ex Airbill # 5347199701				
<input checked="" type="checkbox"/> TCL VOAs / 2-40ml. vials					
<input type="checkbox"/> TCL SVOAs					
<input type="checkbox"/> TCL Pest/PCBs					
<input type="checkbox"/> TAL Metals					
<input type="checkbox"/> Cyanide					
Preservative:					
<input checked="" type="checkbox"/> HCl to pH<2, 4°C					
<input type="checkbox"/> 4°C					
<input type="checkbox"/> 4°C					
<input type="checkbox"/> HNO ₃ to pH<2					
<input type="checkbox"/> NaOH to pH>12					

Revised 4/3/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
CF Braun Engineering Corp.

Monitoring Well Data
 Domestic Well Data
 Other Extraction Well

Project Site Name NWIRP Bethpage - Site 1

Project Site Number 5253-0412/CTO 213

Source Number PS-EW-02

Source Location EW-02

Total Well Depth: <u>64.20' TOC</u>	Purge Data				
Well Casing Size & Depth: <u>2" PVC 64.2' TOC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Static Water Level: <u>58.43' TOC</u>	X				
One Casing Volume: <u>5.77' ≈ 3.55l</u>					
Start Purge (hrs): <u>—</u>					
End Purge (hrs.): <u>—</u>					
Total Purge Time (min.): <u>—</u>					
Total Amount Purged (gal.): <u>2.9gal = 11l</u>					
Monitor reading: <u>No PID readings above background levels</u>					
Purge Method: <u>2" stainless steel bailer</u>					
Sample Method: <u>2" s.s. bailer</u>					
Depth Sampled: <u>—</u>					
Sample Date & Time: <u>5/21/97 0910</u>					
Sampled by: <u>Starros Patselas</u>					
Signature(s): 	SAMPLE DATA				
	pH	S.C.	Temp (°C)	Color and Turbidity	

Type of Sample

Low Concentration
 High Concentration
 Grab
 Composite
 Grab - Composite

Analysis	Preservative:
<input checked="" type="checkbox"/> TCL VOAs / 2-40ml. vials	HCl to pH<2, 4°C
<input type="checkbox"/> TCL SVOAs	4°C
<input type="checkbox"/> TCL Pest/PCBs	4°C
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2
<input type="checkbox"/> Cyanide	NaOH to pH>12

Observations/Notes:
 Duplicate sample taken = PS-DUP-02 at 00:00

$5.77' \text{ standing } H_2O \times 0.616 \frac{l}{foot} = 3.55 \frac{l}{foot}$
 $3.55 \frac{l}{foot} \times 3 \text{ foot} = 10.66 \approx 11l$

Samples sent to Kemron Environmental
 Fed Ex Airbill # 5347199701

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C.F. Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other _____

Project Site Name NWIRP Bethpage - Site 1

Project Site Number 5253-0142/CTO 213

Source Number PS-MW-01

Source Location CFB-MW-01

Total Well Depth: <u>66.75' TOC</u>	Purge Data				
Well Casing Size & Depth: <u>2" PVC 66.75' TOC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Static Water Level: <u>59.30' TOC</u>					
One Casing Volume: <u>7.45' = 4.6l</u>					
Start Purge (hrs): <u> </u>					
End Purge (hrs.): <u> </u>					
Total Purge Time (min.): <u> </u>					
Total Amount Purged (gal.): <u>3.7gal = 14l</u>					
Monitor reading: <u>NO PID reading above background levels</u>					
Purge Method: <u>2" stainless steel bailer</u>					
Sample Method: <u>2" s.s. bailer</u>					
Depth Sampled: <u> </u>					
Sample Date & Time: <u>5/21/97 0840</u>					
Sampled by: <u>Stavros Patselas</u>					
Signature(s): 	SAMPLE DATA				
	pH	S.C.	Temp (°C)	Color and Turbidity	

Type of Sample	
<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> High Concentration	
<input checked="" type="checkbox"/> Grab	
<input type="checkbox"/> Composite	
<input type="checkbox"/> Grab - Composite	
Analysis	Preservative:
<input checked="" type="checkbox"/> TCL VOAs /2-40ml. vials	HCl to pH<2, 4°C
<input type="checkbox"/> TCL SVOAs	4°C
<input type="checkbox"/> TCL Pest/PCBs	4°C
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2
<input type="checkbox"/> Cyanide	NaOH to pH>12

Observations/Notes:
 Duplicate sample taken

$7.45' \text{ standing } \times 0.616 \frac{\text{l}}{\text{feet}} = 4.6 \frac{\text{l}}{\text{vol.}}$
 $4.6 \frac{\text{l}}{\text{vol.}} \times 3 \text{ vol} = 14 \text{ l}$

Samples sent to Kemron Environmental
 Fed Ex Airbill #5347199701

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
CF Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other - Injection Well

Project Site Name NWIRP Bethpage - Site 1
Source Number PS-IW-01

Project Site Number 5253-0412 / CTO 213
Source Location IW-01

Total Well Depth: <u>68.85' TOC</u>	Purge Data				
Well Casing Size & Depth: <u>2" PVC 68.85' TOC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Static Water Level: <u>59.05' TOC</u>	N/A				
One Casing Volume: <u>9.8' ≈ 6ℓ</u>					
Start Purge (hrs): <u>—</u>					
End Purge (hrs.): <u>—</u>					
Total Purge Time (min.): <u>—</u>					
Total Amount Purged (gal.): <u>1.6gal = 6ℓ</u>					
Monitor reading: <u>No PID readings above background levels</u>					
Purge Method: <u>2" stainless steel bailer</u>					
Sample Method: <u>2" s.s. bailer</u>					
Depth Sampled: <u>—</u>					
Sample Date & Time: <u>5/21/97 0815</u>	SAMPLE DATA				
Sampled by: <u>Stavros Patselas</u>					
Signature(s): 					
Type of Sample	Observations/Notes:				
<input checked="" type="checkbox"/> Low Concentration	<input type="checkbox"/> Duplicate sample taken				
<input type="checkbox"/> High Concentration	$9.8' \text{ standing H}_2\text{O} \times 0.616 \frac{\text{liters}}{\text{ft.}} = 6.04 \frac{\ell}{\text{vol.}}$ $6.04 \frac{\ell}{\text{vol}} \times 3 \text{ vol} = 18 \ell$				
<input checked="" type="checkbox"/> Grab					
<input type="checkbox"/> Composite					
<input type="checkbox"/> Grab - Composite					
Analysis	Preservative:				
<input checked="" type="checkbox"/> TCL VOAs / <u>2-40ml vials</u>	HCl to pH<2, 4°C				
<input type="checkbox"/> TCL SVOAs	4°C				
<input type="checkbox"/> TCL Pest/PCBs	4°C				
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2				
<input type="checkbox"/> Cyanide	NaOH to pH>12				
	Samples sent to Kemron Environmental Fed Ex Airbill # 5347199701				

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C.F. Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other _____

Project Site Name NWIRP Bethpage - Site 1

Project Site Number 5253-0142/CTO 213

Source Number TB-052197-02

Source Location QA/QC

Total Well Depth: _____	Purge Data																														
Well Casing Size & Depth: _____	Volume	pH	S.C.	Temp (°C)	Color and Turbidity																										
Static Water Level: _____																															
One Casing Volume: _____																															
Start Purge (hrs): _____																															
End Purge (hrs.): _____																															
Total Purge Time (min.): _____																															
Total Amount Purged (gal.): _____																															
Monitor reading: <u>NO PID reading above background levels</u>																															
Purge Method: _____																															
Sample Method: _____																															
Depth Sampled: _____																															
Sample Date & Time: <u>5/21/97 0800</u>																															
Sampled by: <u>Stavros Patzelas</u>																															
Signature(s):	SAMPLE DATA																														
	pH	S.C.	Temp (°C)	Color and Turbidity																											
<p style="text-align: center;">Type of Sample</p> <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite	<p>Observations/Notes:</p> <input type="checkbox"/> Duplicate sample taken <p style="font-size: 1.2em;">Trip Blank poured with deionized water (cat. No. 9150-5) with Lot # A-216 from RICCA Chemical Co.</p> <p style="font-size: 1.2em;">Samples sent to Kemron Environmental Fed Ex Airbill #5347199701</p>																														
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Analysis</th> <th style="width: 50%;">Preservative:</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> TCL VOAs / 2-40ml. vials</td> <td>HCl to pH<2, 4°C</td> </tr> <tr> <td><input type="checkbox"/> TCL SVOAs</td> <td>4°C</td> </tr> <tr> <td><input type="checkbox"/> TCL Pest/PCBs</td> <td>4°C</td> </tr> <tr> <td><input type="checkbox"/> TAL Metals</td> <td>HNO₃ to pH<2</td> </tr> <tr> <td><input type="checkbox"/> Cyanide</td> <td>NaOH to pH>12</td> </tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	Analysis	Preservative:	<input checked="" type="checkbox"/> TCL VOAs / 2-40ml. vials	HCl to pH<2, 4°C	<input type="checkbox"/> TCL SVOAs	4°C	<input type="checkbox"/> TCL Pest/PCBs	4°C	<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2	<input type="checkbox"/> Cyanide	NaOH to pH>12																			
Analysis	Preservative:																														
<input checked="" type="checkbox"/> TCL VOAs / 2-40ml. vials	HCl to pH<2, 4°C																														
<input type="checkbox"/> TCL SVOAs	4°C																														
<input type="checkbox"/> TCL Pest/PCBs	4°C																														
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2																														
<input type="checkbox"/> Cyanide	NaOH to pH>12																														

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C. F. Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other - Extraction well

Project Site Name NWIRP Bethpage - Site 1
Source Number PS-EW-01

Project Site Number 5253-0142/CTO 213
Source Location EW-01

Total Well Depth: <u>63.80' TOC</u>	Purge Data				
Well Casing Size & Depth: <u>2" PVC 63.80' TOC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Static Water Level: <u>55.82' TOC</u>	X				
One Casing Volume: <u>798' ≈ 4.9L</u>					
Start Purge (hrs): <u>—</u>					
End Purge (hrs.): <u>—</u>					
Total Purge Time (min.): <u>—</u>					
Total Amount Purged (gal.): <u>3.96 ≈ 15L</u>					
Monitor reading: <u>23.6 ppm.</u>					
Purge Method: <u>2" stainless steel bailer</u>					
Sample Method: <u>2" s s bailer</u>					
Depth Sampled: <u>—</u>					
Sample Date & Time: <u>6/18/97 1555</u>	X				
Sampled by: <u>Stavros Patselas</u>					
Signature(s): 					
Type of Sample					
<input checked="" type="checkbox"/> Low Concentration					
<input type="checkbox"/> High Concentration					
<input checked="" type="checkbox"/> Grab					
<input type="checkbox"/> Composite					
<input type="checkbox"/> Grab - Composite					
Analysis					
<input checked="" type="checkbox"/> TCL VOAs / 2-40 ml. vials	X				
<input type="checkbox"/> TCL SVOAs					
<input type="checkbox"/> TCL Pest/PCBs					
<input type="checkbox"/> TAL Metals					
<input type="checkbox"/> Cyanide					
Preservative:					
<input checked="" type="checkbox"/> HCl to pH<2, 4°C					
<input type="checkbox"/> 4°C					
<input type="checkbox"/> HNO ₃ to pH<2					
<input type="checkbox"/> NaOH to pH>12					
Observations/Notes:					
<input type="checkbox"/> Duplicate sample taken					
<u>7.98' standing H₂O x 0.616 $\frac{L}{ft}$ = 4.9 $\frac{L}{vol}$</u>					
<u>4.9 $\frac{L}{vol}$ x 3 vol = 14.74</u>					
<u>Samples sent to Kemron Environmental</u>					
<u>Fed Ex Airbill # 5347199675</u>					

Revised 4/9/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C. F. Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other - Extraction well

Project Site Name NWIRP Bethpage - Site 1
Source Number PS-EW-02

Project Site Number 5253-0142/CTO 213
Source Location EW-02

Total Well Depth: <u>64.20'</u>	Purge Data																														
Well Casing Size & Depth: <u>2" PVC 64.20'</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity																										
Static Water Level: <u>56.51' TOC</u>	N.A.																														
One Casing Volume: <u>7.69'</u>																															
Start Purge (hrs): <u>—</u>																															
End Purge (hrs.): <u>—</u>																															
Total Purge Time (min.): <u>—</u>																															
Total Amount Purged (gal.): <u>3.7 ≈ 14P</u>																															
Monitor reading: <u>85.2 ppm</u>																															
Purge Method: <u>2" stainless steel bailer</u>																															
Sample Method: <u>2" s.s bailer</u>																															
Depth Sampled: <u>—</u>																															
Sample Date & Time: <u>6/18/97 1640</u>	SAMPLE DATA																														
Sampled by: <u>Stavros Patselas</u>																															
Signature(s): 	pH	S.C.	Temp (°C)	Color and Turbidity																											
Type of Sample <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite		Observations/Notes: <input checked="" type="checkbox"/> Duplicate sample taken = PS-DUP-03 at 00:00 $7.69' \text{ standing } \times 0.616 \frac{\text{gal}}{\text{ft.}} = 4.7 \frac{\text{gal}}{\text{vol}}$ $4.7 \frac{\text{gal}}{\text{vol}} \times 3 \text{ vol} = 14.2 \text{ gal}$																													
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Analysis	Preservative:																														
<input checked="" type="checkbox"/> TCL VOAs / 2-40 ml. vials	HCl to pH<2, 4°C																														
<input type="checkbox"/> TCL SVOAs	4°C																														
<input type="checkbox"/> TCL Pest/PCBs	4°C																														
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2																														
<input type="checkbox"/> Cyanide	NaOH to pH>12																														

Revised 4/9/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C. F. Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other _____

Project Site Name NWIRP Bethpage - Site 1
Source Number PS-EW-03

Project Site Number 5253-0142/CTO 213
Source Location EW-03

Total Well Depth: <u>62.9' TJC</u>	Purge Data								
Well Casing Size & Depth: <u>2" PVC 62.9' TJC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity				
Static Water Level: <u>55.62' TJC</u>	N.A.								
One Casing Volume: <u>7.28' ≈ 4.5l</u>									
Start Purge (hrs.): <u>—</u>									
End Purge (hrs.): <u>—</u>									
Total Purge Time (min.): <u>—</u>									
Total Amount Purged (gal.): <u>3.7 ≈ 14l</u>									
Monitor reading: <u>79.2 ppm</u>									
Purge Method: <u>2" stainless steel bailer</u>									
Sample Method: <u>2" s.s. bailer</u>									
Depth Sampled: <u>—</u>									
Sample Date & Time: <u>6/18/97 1650</u>	N.A.								
Sampled by: <u>Stavros Patselas</u>									
Signature(s): 									
SAMPLE DATA									
pH						S.C.	Temp (°C)	Color and Turbidity	
Observations/Notes:									
<input checked="" type="checkbox"/> Duplicate sample taken $7.28' \text{ standing } \times 0.616 \frac{l}{ft} = 4.5 \frac{l}{wl}$ $4.5 \frac{l}{wl} \times 3wl = 13.4 l$									
Samples sent to Kemron Environmental Fed Ex Airbill # 5347199675									
Type of Sample <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite									
Analysis <input checked="" type="checkbox"/> TCL VOAs / 2-40 ml. vial <input type="checkbox"/> TCL SVOAs <input type="checkbox"/> TCL Pest/PCBs <input type="checkbox"/> TAL Metals <input type="checkbox"/> Cyanide						Preservative: HCl to pH<2, 4°C 4°C 4°C HNO ₃ to pH<2 NaOH to pH>12			

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C. F. Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other - Injection well

Project Site Name NWIRP Bethpage - Site 1
Source Number PS-IW-01

Project Site Number 5253-0142/CTO 213
Source Location IW-01

Total Well Depth: <u>68.85' TUC</u>	Purge Data																												
Well Casing Size & Depth: <u>2" PVC 68.85' TUC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity																								
Static Water Level: <u>56.60' TUC</u>	N.A.																												
One Casing Volume: <u>12.25' ± 7.5l</u>																													
Start Purge (hrs): <u>—</u>																													
End Purge (hrs.): <u>—</u>																													
Total Purge Time (min.): <u>—</u>																													
Total Amount Purged (gal.): <u>5.96 23l</u>																													
Monitor reading: <u>5.2 ppm</u>																													
Purge Method: <u>2" stainless steel bailer</u>																													
Sample Method: <u>2" s.s bailer</u>																													
Depth Sampled: <u>—</u>																													
Sample Date & Time: <u>6/18/97 1700</u>	SAMPLE DATA																												
Sampled by: <u>Stavros Patselas</u>																													
Signature(s): 	pH	S.C.	Temp (°C)	Color and Turbidity																									
Type of Sample <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite	Observations/Notes: <input type="checkbox"/> Duplicate sample taken $12.25' \text{ standing } \cdot \text{H}_2\text{O} \times 0.616 \frac{\text{l}}{\text{ft}} = 7.5 \frac{\text{l}}{\text{vol}}$ $7.5 \frac{\text{l}}{\text{vol}} \times 3 \text{ vol} = 22.6 \text{ l}$																												
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Analysis	Preservative:																												
<input checked="" type="checkbox"/> TCL VOAs / 2-40 ml. vials	HCl to pH<2, 4°C																												
<input type="checkbox"/> TCL SVOAs	4°C																												
<input type="checkbox"/> TCL Pest/PCBs	4°C																												
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2																												
<input type="checkbox"/> Cyanide	NaOH to pH>12																												

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C. F. Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other _____

Project Site Name NWLRP Bethpage - Site 1
Source Number PS-mw-01

Project Site Number 5253-0142/CTO 213
Source Location mw-01

Total Well Depth: <u>66.75' TOC</u>	Purge Data				
	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Well Casing Size & Depth: <u>2" PVC 66.75' TOC</u>					
Static Water Level: <u>56.99' TOC</u>					
One Casing Volume: <u>9.76' ± 6.0 l</u>					
Start Purge (hrs.): <u>—</u>					
End Purge (hrs.): <u>—</u>					
Total Purge Time (min.): <u>—</u>					
Total Amount Purged (gal.): <u>4.8 = 18 l</u>					
Monitor reading: <u>0.0 ppm</u>					
Purge Method: <u>2" stainless steel bailer</u>					
Sample Method: <u>2" s.s. bailer</u>					
Depth Sampled: <u>—</u>					
Sample Date & Time: <u>6/18/97 1545</u>					
Sampled by: <u>Stavros Petzelus</u>					
Signature(s): 					
	SAMPLE DATA				
	pH	S.C.	Temp (°C)	Color and Turbidity	

Type of Sample

- Low Concentration
- High Concentration
- Grab
- Composite
- Grab - Composite

Analysis	Preservative:
<input checked="" type="checkbox"/> TCL VOA's / 2-40 ml. via b	HCl to pH<2, 4°C
<input type="checkbox"/> TCL SVOAs	4°C
<input type="checkbox"/> TCL Pest/PCBs	4°C
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2
<input type="checkbox"/> Cyanide	NaOH to pH>12

Observations/Notes:

- Duplicate sample taken

$9.76' \text{ standing } \times 0.616 \frac{\text{l}}{\text{feet}} = 6.0 \frac{\text{l}}{\text{vol}}$
 $6.0 \frac{\text{l}}{\text{vol}} \times 3 \text{ vol} = 18 \text{ l}$

Samples sent to Kemron Environmental
 Fed Ex Airbill # 5347199675

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C. F. Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other _____

Project Site Name NWIRP Bethpage - Site 1

Project Site Number 5253-0142/CTO 213

Source Number PS-TB061897-03

Source Location QA/QC

Total Well Depth: <u> </u>	Purge Data																
Well Casing Size & Depth: <u> </u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity												
Static Water Level: <u> </u>	N.A.																
One Casing Volume: <u> </u>																	
Start Purge (hrs): <u> </u>																	
End Purge (hrs.): <u> </u>																	
Total Purge Time (min.): <u> </u>																	
Total Amount Purged (gal.): <u> </u>																	
Monitor reading: <u> </u>																	
Purge Method: <u> </u>																	
Sample Method: <u> </u>																	
Depth Sampled: <u> </u>																	
Sample Date & Time: <u>6/18/97 1400</u>																	
Sampled by: <u>Stavros Patselas</u>																	
Signature(s): 	SAMPLE DATA																
	pH	S.C.	Temp (°C)	Color and Turbidity													
<p style="text-align: center;">Type of Sample</p> <p><input checked="" type="checkbox"/> Low Concentration</p> <p><input type="checkbox"/> High Concentration</p> <p><input checked="" type="checkbox"/> Grab</p> <p><input type="checkbox"/> Composite</p> <p><input type="checkbox"/> Grab - Composite</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Analysis</td> <td style="text-align: center;">Preservative:</td> </tr> <tr> <td><input checked="" type="checkbox"/> TCL VOAs / 2-40 ml. vials</td> <td>HCl to pH<2, 4°C</td> </tr> <tr> <td><input type="checkbox"/> TCL SVOAs</td> <td>4°C</td> </tr> <tr> <td><input type="checkbox"/> TCL Pest/PCBs</td> <td>4°C</td> </tr> <tr> <td><input type="checkbox"/> TAL Metals</td> <td>HNO₃ to pH<2</td> </tr> <tr> <td><input type="checkbox"/> Cyanide</td> <td>NaOH to pH>12</td> </tr> </table>	Analysis	Preservative:	<input checked="" type="checkbox"/> TCL VOAs / 2-40 ml. vials	HCl to pH<2, 4°C	<input type="checkbox"/> TCL SVOAs	4°C	<input type="checkbox"/> TCL Pest/PCBs	4°C	<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2	<input type="checkbox"/> Cyanide	NaOH to pH>12	<p>Observations/Notes:</p> <p><input type="checkbox"/> Duplicate sample taken</p> <p style="font-size: 1.2em; margin-top: 20px;">Trip Blank poured w/ deionized water (Cat. No. 9150-5) with Lot # A-216 from RICCA Chemical Co.</p> <p style="margin-top: 20px;">Samples sent to Kemron Environmental Fed Ex Airbill # 5347199675</p>				
Analysis	Preservative:																
<input checked="" type="checkbox"/> TCL VOAs / 2-40 ml. vials	HCl to pH<2, 4°C																
<input type="checkbox"/> TCL SVOAs	4°C																
<input type="checkbox"/> TCL Pest/PCBs	4°C																
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2																
<input type="checkbox"/> Cyanide	NaOH to pH>12																

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C.F. Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other - Extracted in well

Project Site Name NWIRP Bethpage
Source Number PS-EW-01

Project Site Number 5253-0142/CT0213
Source Location Site 1 / EW-01

Total Well Depth: <u>63.80' TOC</u>	Purge Data				
Well Casing Size & Depth: <u>2" PVC 63.80' TOC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Static Water Level: <u>57.20' TOC</u>	N.A.				
One Casing Volume: <u>6.6' ± 4.07 liters</u>					
Start Purge (hrs): <u>—</u>					
End Purge (hrs.): <u>—</u>					
Total Purge Time (min.): <u>—</u>					
Total Amount Purged (gal.): <u>3.4 = 13 l</u>					
Monitor reading: <u>0.0 ppm.</u>					
Purge Method: <u>2" disposable bailer</u>					
Sample Method: <u>2" disposable bailer</u>					
Depth Sampled:					
Sample Date & Time: <u>7/15/97 1600</u>					
Sampled by: <u>Stavros Patselas</u>					
Signature(s): 	SAMPLE DATA				
	pH	S.C.	Temp (°C)	Color and Turbidity	

Type of Sample

- Low Concentration
- High Concentration
- Grab
- Composite
- Grab - Composite

Analysis	Preservative:
<input checked="" type="checkbox"/> TCL VOA _s / 2-40ml vials	HCl to pH<2, 4°C
<input type="checkbox"/> TCL SVOA _s	4°C
<input type="checkbox"/> TCL Pest/PCBs	4°C
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2
<input type="checkbox"/> Cyanide	NaOH to pH>12

Observations/Notes:

- Duplicate sample taken

6.6' standing H₂O x 0.616 $\frac{\text{liters}}{\text{feet}}$ = 4.07 $\frac{\text{l}}{\text{vol}}$

4.07 $\frac{\text{l}}{\text{vol}}$ x 3 vol = 13 l

sent to Kemron Environmental
Fed Ex Airbill # 5081400332

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C.F. Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other - Extraction well

Project Site Name NWIRP Bethpage
Source Number PS-EW-02

Project Site Number 5253-0142/CT0213
Source Location Site 1 / EW-02

Total Well Depth: <u>64.20' TOC</u>	Purge Data				
Well Casing Size & Depth: <u>2" PVC 64.20 TOC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Static Water Level: <u>57.88' TOC</u>	N.A.				
One Casing Volume: <u>6.32' = 3.89 liters</u>					
Start Purge (hrs.): <u>—</u>					
End Purge (hrs.): <u>—</u>					
Total Purge Time (min.): <u>—</u>					
Total Amount Purged (gal.): <u>3.2 = 12L</u>					
Monitor reading: <u>13.1 ppm</u>					
Purge Method: <u>2" disposable bailer</u>					
Sample Method: <u>2" disposable bailer</u>					
Depth Sampled: <u>—</u>					
Sample Date & Time: <u>7/15/97 1610</u>	SAMPLE DATA				
Sampled by: <u>Stavros Patselas</u>	pH	S.C.	Temp (°C)	Color and Turbidity	
Signature(s): 	Observations/Notes: <input checked="" type="checkbox"/> Duplicate sample taken <u>PS-DUP-04 at 00:00</u> $6.32' \text{ standing H}_2\text{O} \times 0.616 \frac{\text{L}}{\text{ft}} = 3.89 \text{ vol}$ $3.89 \text{ vol.} \times 3 \text{ vol.} = 12 \text{ liters}$				
Type of Sample <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite		sent to Kemron Environmental Fed Ex Airbill # <u>5081400332</u>			
Analysis <input checked="" type="checkbox"/> TCL VOAs / 2-40ml. vials <input type="checkbox"/> TCL SVOAs <input type="checkbox"/> TCL Pest/PCBs <input type="checkbox"/> TAL Metals <input type="checkbox"/> Cyanide					
Preservative: <input checked="" type="checkbox"/> HCl to pH<2, 4°C <input type="checkbox"/> 4°C <input type="checkbox"/> 4°C <input type="checkbox"/> HNO ₃ to pH<2 <input type="checkbox"/> NaOH to pH>12					

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C.F. Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other - Extraction well

Project Site Name NWIRP Bethpage

Project Site Number 5253-0142/CT0213

Source Number PS-EW-03

Source Location Site 1 / EW-03

Total Well Depth: <u>62.90' TOC</u>	Purge Data				
Well Casing Size & Depth: <u>2" PVC 62.90' TOC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Static Water Level: <u>57.11' TOC</u>	N.A.				
One Casing Volume: <u>5.79' ≈ 3.57'</u>					
Start Purge (hrs.): <u>—</u>					
End Purge (hrs.): <u>—</u>					
Total Purge Time (min.): <u>—</u>					
Total Amount Purged (gal.): <u>2.9 = 11'</u>					
Monitor reading: <u>0.0 ppm</u>					
Purge Method: <u>2" disposable bailer</u>					
Sample Method: <u>2" disposable bailer</u>					
Depth Sampled:					
Sample Date & Time: <u>7/15/97 1620</u>					
Sampled by: <u>Stavros Patselas</u>					
Signature(s):	SAMPLE DATA				
	pH	S.C.	Temp (°C)	Color and Turbidity	

Type of Sample	
<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> High Concentration	
<input checked="" type="checkbox"/> Grab	
<input type="checkbox"/> Composite	
<input type="checkbox"/> Grab - Composite	
Analysis	Preservative:
<input checked="" type="checkbox"/> TCL VOCs / <u>2-40ml vials</u>	HCl to pH<2, 4°C
<input type="checkbox"/> TCL SVOCs	4°C
<input type="checkbox"/> TCL Pest/PCBs	4°C
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2
<input type="checkbox"/> Cyanide	NaOH to pH>12

Observations/Notes:
 Duplicate sample taken

5.79' Standing H₂O × 0.616 $\frac{l}{ft}$ = 3.57 $\frac{l}{vol}$

3.57 $\frac{l}{vol}$ × 3 vol = 10.7 ≈ 11 l

sent to kemron Environmental
Fed Ex Airbill # 5081400332

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental

C.F. Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other _____

Project Site Name NWIRP Bethpage

Project Site Number 5253-0142/CTO 213

Source Number PS-MW-01

Source Location Site 1 / MW-01

Total Well Depth: <u>66.75' TOC</u>	Purge Data				
Well Casing Size & Depth: <u>2" PVC 66.75' TOC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity
Static Water Level: <u>58.32' TOC</u>					
One Casing Volume: <u>8.43' ≈ 5.19 l</u>					
Start Purge (hrs): <u>—</u>					
End Purge (hrs.): <u>—</u>					
Total Purge Time (min.): <u>—</u>					
Total Amount Purged (gal.): <u>4.1 ≈ 15.5 l</u>					
Monitor reading: <u>0.0 ppm</u>					
Purge Method: <u>2" disposable bailer</u>					
Sample Method: <u>2" disposable bailer</u>					
Depth Sampled: <u>—</u>					
Sample Date & Time: <u>7/15/97 1635</u>					
Sampled by: <u>Stavros Patselas</u>					
Signature(s): 	SAMPLE DATA				
	pH	S.C.	Temp (°C)	Color and Turbidity	

Type of Sample	
<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> High Concentration	
<input checked="" type="checkbox"/> Grab	
<input type="checkbox"/> Composite	
<input type="checkbox"/> Grab - Composite	
Analysis	Preservative:
<input checked="" type="checkbox"/> TCL VOAs / 2 x 40ml vials	HCl to pH<2, 4°C
<input type="checkbox"/> TCL SVOAs	4°C
<input type="checkbox"/> TCL Pest/PCBs	4°C
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2
<input type="checkbox"/> Cyanide	NaOH to pH>12

Observations/Notes:

Duplicate sample taken

8.43' standing H₂O × 0.616 $\frac{l}{ft}$ = 5.19 $\frac{l}{vol}$

5.19 $\frac{l}{vol}$ × 3 vol = 15.5 l

Sent to Kemron Environmental
via FedEx Airbill #50814003321

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C.F. Braun Engineering Corp.

- Monitoring Well Data
- Domestic Well Data
- Other - Injection well

Project Site Name NWIRP Bethpage
Source Number PS-IW-01

Project Site Number 5253-0142/CT0213
Source Location Site 1 / IW-01

Total Well Depth: <u>58.85' TOC</u>	Purge Data																
Well Casing Size & Depth: <u>2" PVC 68.85' TOC</u>	Volume	pH	S.C.	Temp (°C)	Color and Turbidity												
Static Water Level: <u>58.00' TOC</u>	N.A.																
One Casing Volume: <u>10.85' ≈ 6.68 l</u>																	
Start Purge (hrs.): <u>—</u>																	
End Purge (hrs.): <u>—</u>																	
Total Purge Time (min.): <u>—</u>																	
Total Amount Purged (gal.): <u>5.26 ≈ 20 l</u>																	
Monitor reading: <u>0.0 ppm</u>																	
Purge Method: <u>2" disposable bailer</u>																	
Sample Method: <u>2" disposable bailer</u>																	
Depth Sampled: <u>—</u>																	
Sample Date & Time: <u>7/15/97 1645</u>	SAMPLE DATA																
Sampled by: <u>Stavros Patselas</u>	pH	S.C.	Temp (°C)	Color and Turbidity													
Signature(s): 																	
Type of Sample <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite	Observations/Notes: <input type="checkbox"/> Duplicate sample taken $10.85' \text{ standing } \times 0.616 \frac{\text{l}}{\text{ft.}} = 6.68 \frac{\text{l}}{\text{vol}}$ $6.68 \frac{\text{l}}{\text{vol}} \times 3 \text{ vol} = 20 \text{ l}$																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Analysis</th> <th style="text-align: left;">Preservative:</th> </tr> <tr> <td><input checked="" type="checkbox"/> TCL VOAs / 2-40ml. vials</td> <td>HCl to pH<2, 4°C</td> </tr> <tr> <td><input type="checkbox"/> TCL SVOAs</td> <td>4°C</td> </tr> <tr> <td><input type="checkbox"/> TCL Pest/PCBs</td> <td>4°C</td> </tr> <tr> <td><input type="checkbox"/> TAL Metals</td> <td>HNO₃ to pH<2</td> </tr> <tr> <td><input type="checkbox"/> Cyanide</td> <td>NaOH to pH>12</td> </tr> </table>	Analysis	Preservative:	<input checked="" type="checkbox"/> TCL VOAs / 2-40ml. vials	HCl to pH<2, 4°C	<input type="checkbox"/> TCL SVOAs	4°C	<input type="checkbox"/> TCL Pest/PCBs	4°C	<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2	<input type="checkbox"/> Cyanide	NaOH to pH>12	<p style="text-align: center;">sent to kemron Environmental Fed Ex Airbill #5081400332</p>				
Analysis	Preservative:																
<input checked="" type="checkbox"/> TCL VOAs / 2-40ml. vials	HCl to pH<2, 4°C																
<input type="checkbox"/> TCL SVOAs	4°C																
<input type="checkbox"/> TCL Pest/PCBs	4°C																
<input type="checkbox"/> TAL Metals	HNO ₃ to pH<2																
<input type="checkbox"/> Cyanide	NaOH to pH>12																

Revised 4/5/96

GROUNDWATER SAMPLE LOG SHEET



Brown & Root Environmental
C.F. Braun Engineering Corp.

- Monitoring Well Data
 Domestic Well Data
 Other _____

Project Site Name NWIRP Bethpage

Project Site Number 5253-0142

Source Number PS-TB071597-04

Source Location QA/Q

Total Well Depth:	Purge Data				
	Volume	pH	S.C.	Temp (°C)	Color
Well Casing Size & Depth: _____	N.A.				
Static Water Level: _____					
One Casing Volume: _____					
Start Purge (hrs): _____					
End Purge (hrs.): _____					
Total Purge Time (min.): _____					
Total Amount Purged (gal.): _____					
Monitor reading: _____					
Purge Method: _____					
Sample Method: _____					
Depth Sampled: _____					
Sample Date & Time: <u>7/15/97 1400</u>					
Sampled by: <u>Stavros Patselas</u>					
Signature(s): 	SAMPLE DATA				
	pH	S.C.	Temp (°C)	Color and T	
Type of Sample <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Grab - Composite		Observations/Notes: <input type="checkbox"/> Duplicate sample taken <u>Trip Blank poured w/ de water (Cat. No. 9150-S with Lot # A-210 from RICCA Chemical Co.</u> <u>sent to Kemron Envi Fed Ex Airbill #</u>			
Analysis <input checked="" type="checkbox"/> TCL VOAs / 2-40ml vials <input type="checkbox"/> TCL SVOAs <input type="checkbox"/> TCL Pest/PCBs <input type="checkbox"/> TAL Metals <input type="checkbox"/> Cyanide	Preservative: HCl to pH<2, 4°C 4°C 4°C HNO ₃ to pH<2 NaOH to pH>12				

Revised 4/5/96



F

APPENDIX F
CHAIN OF CUSTODY FORMS

AIR TOXICS LTD.
AN ENVIRONMENTAL ANALYTICAL LABORATORY

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Nº 010502 Page 1 of 1

CHAIN-OF-CUSTODY RECORD

Contact Person D. Luyack
Company Brown & Root Environmental, Inc.
Address 661 Anderson City, N.H. 03045 State NH Zip 03045
Phone 412-921-8375 FAX 412-921-4040
Collected By: Signature [Signature]

Project info:
P.O. # _____
Project # 70283
Project Name Bechtel

Turn Around Time:
 Normal
 Rush _____ Specify _____

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum	
				Initial	Final / Receipt
01A	PS-AS01-01	4/22/97, 1840	70-14		
02A	PS-AS01-02	4/23/97, 1850	70-14		

Relinquished By: (Signature) [Signature] Date/Time 4/24/97 1300 Print Name Stavros Patsekis
Received By: (Signature) _____ Date/Time _____
Relinquished By: (Signature) _____ Date/Time _____
Received By: (Signature) Alan Cameron Date/Time 4/25/97 947

Notes:
Fed Ex Air Bill # 2992720662

Shipper Name 1111X Air Bill # 2992720662 Opened By: [Signature] Date/Time 4/25/97 947
Temp. (°C) _____ Analyzed _____ Condition Good Custody Seals Intact? Yes No None N/A
Work Order # 9704283



AIR TOXICS LTD.
AN ENVIRONMENTAL ANALYTICAL LABORATORY

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

CHAIN-OF-CUSTODY RECORD

No: **010507**

Page **1** of **1**

Contact Person: Dave Buyack
 Company: Brown & Root Environmental
 Address: 6601 Anderson Dr. City: Pittsburgh State: PA Zip: 15230
 Phone: 412-921-8375 FAX: 412-921-4040
 Collected By: Signature: [Signature]

Project info:
 P.O. # _____
 Project # CTO 213
 Project Name Bethpage

Turn Around Time:
 Normal
 Rush _____
 Specify _____

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum
				Initial Final Receipt
OIA	PS-ASO2-01	5/29/97, 1320	TO-14	
OIA	PS-ASO2-02	5/29/97, 1330	TO-14	

Relinquished By: (Signature) [Signature] Date/Time 5/29/97 1400 Print Name Stavros Patselas
 Received By: (Signature) _____ Date/Time _____
 Relinquished By: (Signature) _____ Date/Time _____
 Received By: (Signature) _____ Date/Time _____
 Relinquished By: (Signature) _____ Date/Time _____
 Received By: (Signature) _____ Date/Time _____

Notes: **Fed Ex Air Bill # 5347199690**

Shipper Name: Fed Ex Air Bill #: 5347199690 Opened By: CK Date/Time: 5/21/97 1025
 Shipper Name: Fed Ex Air Bill #: 5347199690 Opened By: CK Date/Time: 5/21/97 1025
 Quality Seals Intact? Yes No None N/A
 Work Order #: 9705219

AIR TOXICS LTD.
AN ENVIRONMENTAL ANALYTICAL LABORATORY



180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

No: 010504

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Contact Person: Dave Bryack
 Company: Brown & Root Environmental
 Address: 661 Anderson Dr. City: Pittsburgh State: PA Zip: 15230
 Phone: 412-921-8375 FAX: 412-921-4040
 Collected By: Signature [Signature]

Project Info:
 P.O. # _____
 Project # C70213
 Project Name Bethpage

Turn Around Time:
 Normal
 Rush _____
 Specify _____

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum	
				Initial	Final
01A	PS-AS03-01	6/19/97, 9:00	TO-14		
02A	PS-AS03-02	6/19/97, 9:15	TO-14		

Relinquished By: (Signature) [Signature] Date/Time 6/19/97, 0930 Print Name Stavros Petrelas
 Received By: (Signature) [Signature] Date/Time _____
 Relinquished By: (Signature) [Signature] Date/Time 6/20/97
 Received By: (Signature) [Signature] Date/Time _____

Notes: Fed Ex Air Bill # 5081400310

Shipper Name: Fed Ex Air Bill #: 5081400310
 Opened By: OK Date/Time: 6/20/97
 Condition: good Temp. (°C): Ambient
 Cusody Intact? Yes No None N/A
 Work Order #: 9700247

Lab Use Only

CHAIN-OF-CUSTODY RECORD

Contact Person Dave Brayack
 Company Brown & Root Environmental
 Address 661 Andersen Dr. City Pittsburgh State PA Zip 15230
 Phone 412-921-8375 FAX 412-921-4040
 Collected By: Signature _____

Project Info:
 P.O. # _____
 Project # CTO 213
 Project Name Bethpage

Turn Around Time:
 Normal
 Rush _____ Specify _____

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum	
				Initial	Final
01A	PS-AS04-01	7/15/97, 10:30	TO-14		
02A	PS-AS04-02	7/15/97, 10:40	TO-14		

Notes: Fed Ex Airbill # 5081400321

Relinquished By: (Signature) [Signature] Date/Time 7/15/97 10:25 Print Name Skycus Ratselas
 Received By: (Signature) _____ Date/Time _____
 Relinquished By: (Signature) [Signature] Date/Time 7/16/97 09:02
 Received By: (Signature) _____ Date/Time _____

Air Bill # 5081400321 Shipper Name Fed Exp
 Opened By: [Signature] Date/Time 7/16/97 09:02 Condition good Custody Seals Intact? Yes No None N/A
 Work Order # 9707145

Lab Use Only



CHAIN-OF-CUSTODY RECORD

Project Contact: **DAVE BRAYACK** / CF BRAUN/BROWNROOT ENV.

Turn Around Requirements:

Project No.: **5253**
 Project Name: **NWKIP BETHPAGE SVE/AS**
 Sampler (print): **FRED W RAMSER**
 Signature: *Fred W Ramser*

Sample I.D. No.	Comp	Grab	Date	Time	Protocol	
					CWA	SW846
PS-SB02-10	X	X	3-26-97	1130		
PS-SB02-40	X	X	3-26-97	1150		
PS-SB03-20	X	X	3-26-97	1300		
PS-SB03-20D	X	X	3-26-97	FUR		
PS-SB03-40	X	X	3-26-97	1320		
PS-SB03-40D	X	X	3-26-97	1320		
PS-SB04-30	X	X	3-26-97	1440		
PS-SB04-40	X	X	3-26-97	1500		

NUMBER OF SAMPLES: 1
 Hold: VOA ✓

Relinquished by: (Signature)	Date	Time	Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Received by: (Signature)
<i>Fred W Ramser</i>	3/26/97	1700	<i>Fred W Ramser</i>	3/27/97	1000	<i>[Signature]</i>			<i>[Signature]</i>

Received by: **TTRACK # 2582884485**
FED EX
 Received for Laboratory by: *[Signature]*
 Date: 3/27/97 Time: 1000
 Remarks: *2 of 3 Deleted / Sub Contact / Coblen Samp Co*

* Homogenize all composite samples prior to analysis

Subsurface Soil
CHAIN OF CUSTODY RECORD

C.F. Braun / Brown a Root
Project Manager - Drive 1364

PROJECT NO: CTO 213 / 5253-0142		SITE NAME: NWIRP Bedpage - Site 1		NO. OF COM-TAINERS	REMARKS
SAMPLERS (SIGNATURE): <i>[Signature]</i>					
STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION
0	7/15	0925		✓	PS-SB04-30
1	7/15	0925		✓	PS-SB04-30D
2	7/15	0940		✓	PS-SB04-40
3	7/15	1050		✓	PS-SB03-20
4	7/15	1110		✓	PS-SB03-40
5	7/15	1215		✓	PS-SB02-10
6	7/15	1240		✓	PS-SB02-40

54-846-092
504-402-080

Field Duplicate

RELINQUISHED BY (SIGNATURE): <i>[Signature]</i>	DATE / TIME: 7/15/07 1630	RECEIVED BY (SIGNATURE):	DATE / TIME:
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	DATE / TIME:
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE): <i>[Signature]</i>	DATE / TIME:

REMARKS: 1 cooler via Fed Ex # 5081400332

Order No. 7040 (6683)
Cohen Terry 40

CHAIN-OF-CUSTODY RECORD

Project Contact:

DAVE BRAYACK

Turn Around Requirements:

Project No.: 5253

Project Name: NWIRP BETHPAGE

Sampler (print):

Signature:

FRED W. RAMSER

NUMBER OF SAMPLES
 Hold
 VOA 40 ML VIAL

Sample I.D. No.	Grab	Com	Date	Time	Protocol														ADDITIONAL REQUIREMENTS
					CWA	SW846													
PS-EW-03	✓		4-8-97	1130	✓	✓													
PS-MW-01				1245	✓														
PS-EW-01				1315	✓														
PS-IW-01				1340	✓														
PS-EW-02				1400	✓														
PS-DVP-01			4-8-97	0000	✓														
TB-040817-1			3-20-97	1500	✓														

Relinquished by: Fred Ramsar

Date: 4/8/97

Time: 1800

Received by: FED Ex

Relinquished by: (Signature)

Date: 4/9/97

Time: 1000

Received by: (Signature)

Date: 4/9/97
 Time: 1000
 Received by: Coley Dimp 5.0519

Relinquished by: (Signature)

Date:

Time:

Received for Laboratory by: (Signature)

Date: 4/9/97

Time: 1000

Remarks: 1 COOLIEK

FED EX AB # 4595916474

*Homogenize all composite samples prior to analysis

Ground water

cf Brann/Brown loft
Project Manager: Dave Braylock

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 213 / 5253-0142		SITE NAME: NATRP Bethpage - Side 1		STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CON-TAINERS	REMARKS
SAMPLERS (SIGNATURE):											
0	7/5/00	1:40			7/5/00	1400		✓	TB-071597-04	2	Field Bored Trip Blank
1	7/5/00	1:50			7/5/00	1500		✓	PS-EW-01	2	
2	7/5/00	1:50			7/5/00	1510		✓	PS-EW-02	2	
3	7/5/00	1:52			7/5/00	1520		✓	PS-EW-03	2	
4	7/5/00	1:55			7/5/00	1535		✓	PS-MW-01	2	
5	7/5/00	1:57			7/5/00	1545		✓	PS-IW-01	2	
6	7/5/00	1:58			7/5/00	1550		✓	PS-DUP-04	2	Blind Duplicate

RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME	RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME
(Signature)	7/5/00	(Signature)	7/5/00	(Signature)	7/5/00	(Signature)	7/5/00
(Signature)		(Signature)		(Signature)		(Signature)	
(Signature)		(Signature)		(Signature)		(Signature)	

RECEIVED FOR LABORATORY BY (SIGNATURE): [Signature]
DATE / TIME: 7/5/00

REMARKS: 1 cooler via Fed Ex # 508140332

DATE / TIME: 7/5/00



G

APPENDIX G
LABORATORY DATA SHEETS

@AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 9704283

Work Order Summary

CLIENT: Mr. David Brayack
Brown & Root Environmental
661 Andersen Drive
Pittsburgh, PA 15230

BILL TO: Same

PHONE: 412-921-8375
FAX: 412-921-4040
DATE RECEIVED: 4/25/97
DATE COMPLETED: 5/7/97

P.O. #
PROJECT # C70 213 Bethpage

FRACTION #

01A
02A
03A

NAME

PS-AS01-01
PS-AS01-02
Lab Blank

TEST

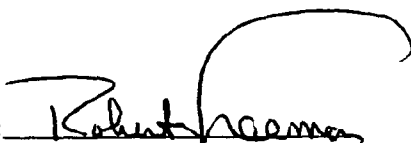
TO-14
TO-14
TO-14

RECEIPT

VAC./PRES.

Tedlar Bag
Tedlar Bag
NA

CERTIFIED BY:


Laboratory Director

DATE: 5/9/97

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630
(916) 985-1000 • (800) 985-5955 • FAX (916) 985-1020

1 of 131

AIR TOXICS LTD.

SAMPLE NAME : PS-AS01-01

ID#: 9704283-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 9704283-01A.D
Dil. Factor: 1
Date of Collection: 12/2/97
Date of Analysis: 12/2/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1700	Not Detected
Freon 114	1700	Not Detected
Chloromethane	1700	Not Detected
Vinyl Chloride	1700	Not Detected
Bromomethane	1700	Not Detected
Chloroethane	1700	Not Detected
Freon 11	1700	Not Detected
1,1-Dichloroethene	1700	Not Detected
Freon 113	1700	22000
Methylene Chloride	1700	Not Detected
1,1-Dichloroethane	1700	5200
cis-1,2-Dichloroethene	1700	20000
Chloroform	1700	Not Detected
1,1,1-Trichloroethane	1700	75000
Carbon Tetrachloride	1700	Not Detected
Benzene	1700	Not Detected
1,2-Dichloroethane	1700	Not Detected
Trichloroethene	1700	51000
1,2-Dichloropropane	1700	Not Detected
cis-1,3-Dichloropropene	1700	Not Detected
Toluene	1700	Not Detected
trans-1,3-Dichloropropene	1700	Not Detected
1,1,2-Trichloroethane	1700	Not Detected
Tetrachloroethene	1700	580000
Ethylene Dibromide	1700	Not Detected
Chlorobenzene	1700	Not Detected
Ethyl Benzene	1700	Not Detected
m,p-Xylene	1700	Not Detected
o-Xylene	1700	Not Detected
Styrene	1700	Not Detected
1,1,2,2-Tetrachloroethane	1700	Not Detected
1,3,5-Trimethylbenzene	1700	Not Detected
1,2,4-Trimethylbenzene	1700	Not Detected
1,3-Dichlorobenzene	1700	Not Detected
1,4-Dichlorobenzene	1700	Not Detected
Chlorotoluene	1700	Not Detected
1,2-Dichlorobenzene	1700	Not Detected
1,2,4-Trichlorobenzene	1700	Not Detected
Hexachlorobutadiene	1700	Not Detected
Propylene	6700	Not Detected
1,3-Butadiene	6700	Not Detected
Acetone	6700	Not Detected
Carbon Disulfide	6700	Not Detected
2-Propanol	6700	Not Detected
trans-1,2-Dichloroethene	6700	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : PS-AS01-01

ID#: 9704283-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name	3042515	Date of Collection	1/2/97
Dil. Factor	3330	Date of Analysis	1/25/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Vinyl Acetate	6700	Not Detected
Chloroprene	6700	Not Detected
2-Butanone (Methyl Ethyl Ketone)	6700	Not Detected
Hexane	6700	Not Detected
Tetrahydrofuran	6700	Not Detected
Cyclohexane	6700	Not Detected
1,4-Dioxane	6700	Not Detected
Bromodichloromethane	6700	Not Detected
4-Methyl-2-pentanone	6700	Not Detected
2-Hexanone	6700	Not Detected
Dibromochloromethane	6700	Not Detected
Bromoform	6700	Not Detected
4-Ethyltoluene	6700	Not Detected
Ethanol	6700	Not Detected
Methyl tert-Butyl Ether	6700	Not Detected
Heptane	6700	Not Detected

Container Type: Tedlar Bag

Surrogates	% Recovery	Method Limits
Octafluorotoluene	107	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME : PS-AS01-02

ID#: 9704283-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	042517	Date of Collection: 4/22/77
Det. Factor:	2.0	Date of Analysis: 4/25/77

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.0	Not Detected
Freon 114	1.0	Not Detected
Chloromethane	1.0	Not Detected
Vinyl Chloride	1.0	Not Detected
Bromomethane	1.0	Not Detected
Chloroethane	1.0	Not Detected
Freon 11	1.0	Not Detected
1,1-Dichloroethene	1.0	Not Detected
Freon 113	1.0	Not Detected
Methylene Chloride	1.0	4.2
1,1-Dichloroethane	1.0	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected
Chloroform	1.0	Not Detected
1,1,1-Trichloroethane	1.0	Not Detected
Carbon Tetrachloride	1.0	Not Detected
Benzene	1.0	Not Detected
1,2-Dichloroethane	1.0	Not Detected
Trichloroethene	1.0	Not Detected
1,2-Dichloropropane	1.0	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected
Toluene	1.0	2.2
trans-1,3-Dichloropropene	1.0	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected
Tetrachloroethene	1.0	Not Detected
Ethylene Dibromide	1.0	Not Detected
Chlorobenzene	1.0	Not Detected
Ethyl Benzene	1.0	Not Detected
m,p-Xylene	1.0	Not Detected
o-Xylene	1.0	Not Detected
Styrene	1.0	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected
1,3,5-Trimethylbenzene	1.0	Not Detected
1,2,4-Trimethylbenzene	1.0	Not Detected
1,3-Dichlorobenzene	1.0	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected
Chlorotoluene	1.0	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected
Hexachlorobutadiene	1.0	Not Detected
Propylene	4.0	Not Detected
1,3-Butadiene	4.0	Not Detected
Acetone	4.0	6.3
Carbon Disulfide	4.0	Not Detected
2-Propanol	4.0	Not Detected
trans-1,2-Dichloroethene	4.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : PS-AS01-02

ID#: 9704283-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 5042514 Date of Collection: 1/23/97
Dil. Factor: 2.00 Date of Analysis: 1/25/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Vinyl Acetate	4.0	Not Detected
Chloroprene	4.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.0	13
Hexane	4.0	Not Detected
Tetrahydrofuran	4.0	15
Cyclohexane	4.0	Not Detected
1,4-Dioxane	4.0	Not Detected
Bromodichloromethane	4.0	Not Detected
4-Methyl-2-pentanone	4.0	Not Detected
2-Hexanone	4.0	Not Detected
Dibromochloromethane	4.0	Not Detected
Bromoform	4.0	Not Detected
4-Ethyltoluene	4.0	Not Detected
Ethanol	4.0	Not Detected
Methyl tert-Butyl Ether	4.0	Not Detected
Heptane	4.0	Not Detected

Container Type: Tedlar Bag

Surrogates	% Recovery	Method Limits
Octafluorotoluene	96	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	108	70-130

AIR TOXICS LTD.

SAMPLE NAME : Lab Blank

ID#: 9704283-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name: 9704283-03A.D
Date of Collection: 11/25/97
DIL Factor: 10

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.50	Not Detected
Vinyl Chloride	0.50	Not Detected
Bromomethane	0.50	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.50	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.50	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.50	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.50	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.50	Not Detected
Trichloroethene	0.50	Not Detected
1,2-Dichloropropane	0.50	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected
Tetrachloroethene	0.50	Not Detected
Ethylene Dibromide	0.50	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected
Hexachlorobutadiene	0.50	Not Detected
Propylene	2.0	Not Detected
1,3-Butadiene	2.0	Not Detected
Acetone	2.0	Not Detected
Carbon Disulfide	2.0	Not Detected
2-Propanol	2.0	Not Detected
trans-1,2-Dichloroethene	2.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : Lab Blank

ID#: 9704283-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	092604	Date of Collection: NA
Dil. Factor:	100	Date of Analysis: 12-2-97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Vinyl Acetate	2.0	Not Detected
Chloroprene	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected
Hexane	2.0	Not Detected
Tetrahydrofuran	2.0	Not Detected
Cyclohexane	2.0	Not Detected
1,4-Dioxane	2.0	Not Detected
Bromodichloromethane	2.0	Not Detected
4-Methyl-2-pentanone	2.0	Not Detected
2-Hexanone	2.0	Not Detected
Dibromochloromethane	2.0	Not Detected
Bromoform	2.0	Not Detected
4-Ethyltoluene	2.0	Not Detected
Ethanol	2.0	Not Detected
Methyl tert-Butyl Ether	2.0	Not Detected
Heptane	2.0	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	106	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	92	70-130

@AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 9705219

Work Order Summary

CLIENT: Mr. David Brayack
Brown & Root Environmental
661 Andersen Drive
Pittsburgh, PA 15230

BILL TO: Same

PHONE: 412-921-8375
FAX: 412-921-4040
DATE RECEIVED: 5/21/97
DATE COMPLETED: 6/6/97

P.O. # NR
PROJECT # CT0 213 Bethpage

FRACTION #

NAME

TEST

**RECEIPT
VAC/PRES.**

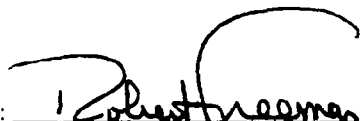
01A
02A
03A

PS-AS02-01
PS-AS02-02
Lab Blank

TO-14
TO-14
TO-14

Tedlar Bag
Tedlar Bag
NA

CERTIFIED BY:


Laboratory Director

DATE:

6/6/97

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630
(916) 985-1000 • (800) 985-5955 • FAX (916) 985-1020

AIR TOXICS LTD.

SAMPLE NAME : PS-AS02-01

ID#: 9705219-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1052930	Date of Collection:	5/20/97
DLI Factor:	874	Date of Analysis:	5/30/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	340	Not Detected
Freon 114	340	Not Detected
Chloromethane	340	Not Detected
Vinyl Chloride	340	Not Detected
Bromomethane	340	Not Detected
Chloroethane	340	Not Detected
Freon 11	340	Not Detected
1,1-Dichloroethene	340	410
Freon 113	340	2800
Methylene Chloride	340	Not Detected
1,1-Dichloroethane	340	2500
cis-1,2-Dichloroethene	340	2600
Chloroform	340	Not Detected
1,1,1-Trichloroethane	340	27000
Carbon Tetrachloride	340	Not Detected
Benzene	340	Not Detected
1,2-Dichloroethane	340	Not Detected
Trichloroethene	340	4600
1,2-Dichloropropane	340	Not Detected
cis-1,3-Dichloropropene	340	Not Detected
Toluene	340	Not Detected
trans-1,3-Dichloropropene	340	Not Detected
1,1,2-Trichloroethane	340	Not Detected
Tetrachloroethene	340	52000
Ethylene Dibromide	340	Not Detected
Chlorobenzene	340	Not Detected
Ethyl Benzene	340	Not Detected
m,p-Xylene	340	Not Detected
o-Xylene	340	Not Detected
Styrene	340	Not Detected
1,1,2,2-Tetrachloroethane	340	Not Detected
1,3,5-Trimethylbenzene	340	Not Detected
1,2,4-Trimethylbenzene	340	Not Detected
1,3-Dichlorobenzene	340	Not Detected
1,4-Dichlorobenzene	340	Not Detected
Chlorotoluene	340	Not Detected
1,2-Dichlorobenzene	340	Not Detected
1,2,4-Trichlorobenzene	340	Not Detected
Hexachlorobutadiene	340	Not Detected
Propylene	1300	Not Detected
1,3-Butadiene	1300	Not Detected
Acetone	1300	Not Detected
Carbon Disulfide	1300	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : PS-AS02-01

ID#: 9705219-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	052930	Date of Collection:	5/20/97
Dil. Factor:	675	Date of Analysis:	5/30/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
2-Propanol	1300	Not Detected
trans-1,2-Dichloroethene	1300	Not Detected
Vinyl Acetate	1300	Not Detected
Chloroprene	1300	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1300	Not Detected
Hexane	1300	Not Detected
Tetrahydrofuran	1300	Not Detected
Cyclohexane	1300	Not Detected
1,4-Dioxane	1300	Not Detected
Bromodichloromethane	1300	Not Detected
4-Methyl-2-pentanone	1300	Not Detected
2-Hexanone	1300	Not Detected
Dibromochloromethane	1300	Not Detected
Bromoform	1300	Not Detected
4-Ethyltoluene	1300	Not Detected
Ethanol	1300	Not Detected
Methyl tert-Butyl Ether	1300	Not Detected
Heptane	1300	Not Detected

Container Type: Tedlar Bag

Surrogates	% Recovery	Method Limits
Octafluorotoluene	104	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	96	70-130

AIR TOXICS LTD.

SAMPLE NAME : PS-AS02-02

ID#: 9705219-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1052931	Date of Collection:	5/20/97
Dil. Factor:	8.08	Date of Analysis:	5/30/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	4.0	Not Detected
Freon 114	4.0	Not Detected
Chloromethane	4.0	Not Detected
Vinyl Chloride	4.0	12
Bromomethane	4.0	Not Detected
Chloroethane	4.0	Not Detected
Freon 11	4.0	Not Detected
1,1-Dichloroethene	4.0	Not Detected
Freon 113	4.0	Not Detected
Methylene Chloride	4.0	4.6
1,1-Dichloroethane	4.0	Not Detected
cis-1,2-Dichloroethene	4.0	Not Detected
Chloroform	4.0	Not Detected
1,1,1-Trichloroethane	4.0	Not Detected
Carbon Tetrachloride	4.0	Not Detected
Benzene	4.0	Not Detected
1,2-Dichloroethane	4.0	Not Detected
Trichloroethene	4.0	Not Detected
1,2-Dichloropropane	4.0	Not Detected
cis-1,3-Dichloropropene	4.0	Not Detected
Toluene	4.0	Not Detected
trans-1,3-Dichloropropene	4.0	Not Detected
1,1,2-Trichloroethane	4.0	Not Detected
Tetrachloroethene	4.0	5.7
Ethylene Dibromide	4.0	Not Detected
Chlorobenzene	4.0	Not Detected
Ethyl Benzene	4.0	Not Detected
m,p-Xylene	4.0	Not Detected
o-Xylene	4.0	Not Detected
Styrene	4.0	Not Detected
1,1,2,2-Tetrachloroethane	4.0	Not Detected
1,3,5-Trimethylbenzene	4.0	Not Detected
1,2,4-Trimethylbenzene	4.0	Not Detected
1,3-Dichlorobenzene	4.0	Not Detected
1,4-Dichlorobenzene	4.0	Not Detected
Chlorotoluene	4.0	Not Detected
1,2-Dichlorobenzene	4.0	Not Detected
1,2,4-Trichlorobenzene	4.0	Not Detected
Hexachlorobutadiene	4.0	Not Detected
Propylene	16	Not Detected
1,3-Butadiene	16	Not Detected
Acetone	16	19
Carbon Disulfide	16	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : PS-AS02-02

ID#: 9705219-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	052031	Date of Collection: 5/20/97
Dil. Factor:	8.00	Date of Analysis: 5/30/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
2-Propanol	16	Not Detected
trans-1,2-Dichloroethene	16	Not Detected
Vinyl Acetate	16	Not Detected
Chloroprene	16	Not Detected
2-Butanone (Methyl Ethyl Ketone)	16	Not Detected
Hexane	16	Not Detected
Tetrahydrofuran	16	19
Cyclohexane	16	Not Detected
1,4-Dioxane	16	Not Detected
Bromodichloromethane	16	Not Detected
4-Methyl-2-pentanone	16	Not Detected
2-Hexanone	16	Not Detected
Dibromochloromethane	16	Not Detected
Bromoform	16	Not Detected
4-Ethyltoluene	16	Not Detected
Ethanol	16	Not Detected
Methyl tert-Butyl Ether	16	Not Detected
Heptane	16	Not Detected

Container Type: Tedlar Bag

Surrogates	% Recovery	Method Limits
Octafluorotoluene	100	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME : Lab Blank

ID#: 9705219-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1052905	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/29/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.50	Not Detected
Vinyl Chloride	0.50	Not Detected
Bromomethane	0.50	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.50	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.50	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.50	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.50	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.50	Not Detected
Trichloroethene	0.50	Not Detected
1,2-Dichloropropane	0.50	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected
Tetrachloroethene	0.50	Not Detected
Ethylene Dibromide	0.50	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected
Hexachlorobutadiene	0.50	Not Detected
Propylene	2.0	Not Detected
1,3-Butadiene	2.0	Not Detected
Acetone	2.0	Not Detected
Carbon Disulfide	2.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : Lab Blank

ID#: 9705219-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1052805	Date of Collection: NA
DI. Factor:	1.00	Date of Analysis: 5/28/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
2-Propanol	2.0	Not Detected
trans-1,2-Dichloroethene	2.0	Not Detected
Vinyl Acetate	2.0	Not Detected
Chloroprene	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected
Hexane	2.0	Not Detected
Tetrahydrofuran	2.0	Not Detected
Cyclohexane	2.0	Not Detected
1,4-Dioxane	2.0	Not Detected
Bromodichloromethane	2.0	Not Detected
4-Methyl-2-pentanone	2.0	Not Detected
2-Hexanone	2.0	Not Detected
Dibromochloromethane	2.0	Not Detected
Bromoform	2.0	Not Detected
4-Ethyltoluene	2.0	Not Detected
Ethanol	2.0	Not Detected
Methyl tert-Butyl Ether	2.0	Not Detected
Heptane	2.0	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

@AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 9706247

Work Order Summary

CLIENT: Mr. David Brayack
Brown & Root Environmental
661 Andersen Drive
Pittsburgh, PA 15230

BILL TO: Same

PHONE: 412-921-8375
FAX: 412-921-4040
DATE RECEIVED: 6/20/97
DATE COMPLETED: 7/2/97

P.O. # NR
PROJECT # CT0 213 Bethpage

FRACTION #

01A
02A
03A

NAME

PS-AS03-01
PS-AS03-02
Lab Blank

TEST

TO-14
TO-14
TO-14

RECEIPT

VAC/PRES.

Tedlar Bag
Tedlar Bag
NA

CERTIFIED BY: *David A. Fumar*

Laboratory Director

DATE: 7/3/97

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630
(916) 985-1000 • (800) 985-5955 • FAX (916) 985-1020

AIR TOXICS LTD.

SAMPLE NAME : PS-AS03-01

ID#: 9706247-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1062116	Date of Collection:	6/19/97
Dil. Factor:	250	Date of Analysis:	6/21/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	130	Not Detected
Freon 114	130	Not Detected
Chloromethane	130	Not Detected
Vinyl Chloride	130	Not Detected
Bromomethane	130	Not Detected
Chloroethane	130	Not Detected
Freon 11	130	Not Detected
1,1-Dichloroethene	130	140
Freon 113	130	1100
Methylene Chloride	130	Not Detected
1,1-Dichloroethane	130	960
cis-1,2-Dichloroethene	130	1000
Chloroform	130	Not Detected
1,1,1-Trichloroethane	130	14000
Carbon Tetrachloride	130	Not Detected
Benzene	130	Not Detected
1,2-Dichloroethane	130	Not Detected
Trichloroethene	130	3400
1,2-Dichloropropane	130	Not Detected
cis-1,3-Dichloropropene	130	Not Detected
Toluene	130	Not Detected
trans-1,3-Dichloropropene	130	Not Detected
1,1,2-Trichloroethane	130	Not Detected
Tetrachloroethene	130	23000
Ethylene Dibromide	130	Not Detected
Chlorobenzene	130	Not Detected
Ethyl Benzene	130	Not Detected
m,p-Xylene	130	Not Detected
o-Xylene	130	Not Detected
Styrene	130	Not Detected
1,1,2,2-Tetrachloroethane	130	Not Detected
1,3,5-Trimethylbenzene	130	Not Detected
1,2,4-Trimethylbenzene	130	Not Detected
1,3-Dichlorobenzene	130	Not Detected
1,4-Dichlorobenzene	130	Not Detected
Chlorotoluene	130	Not Detected
1,2-Dichlorobenzene	130	Not Detected
1,2,4-Trichlorobenzene	130	Not Detected
Hexachlorobutadiene	130	Not Detected
Propylene	500	Not Detected
1,3-Butadiene	500	Not Detected
Acetone	500	Not Detected
Carbon Disulfide	500	Not Detected
2-Propanol	500	Not Detected
trans-1,2-Dichloroethene	500	Not Detected
Vinyl Acetate	500	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : PS-AS03-01

ID#: 9706247-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1062116	Date of Collection:	6/19/97
DIL. Factor:	250	Date of Analysis:	6/21/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Chloroprene	500	Not Detected
2-Butanone (Methyl Ethyl Ketone)	500	Not Detected
Hexane	500	Not Detected
Tetrahydrofuran	500	Not Detected
Cyclohexane	500	Not Detected
1,4-Dioxane	500	Not Detected
Bromodichloromethane	500	Not Detected
4-Methyl-2-pentanone	500	Not Detected
2-Hexanone	500	Not Detected
Dibromochloromethane	500	Not Detected
Bromoform	500	Not Detected
4-Ethyltoluene	500	Not Detected
Ethanol	500	Not Detected
Methyl tert-Butyl Ether	500	Not Detected
Heptane	500	Not Detected

Container Type: Tedlar Bag

Surrogates	% Recovery	Method Limits
Octafluorotoluene	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME : PS-AS03-02

ID#: 9706247-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1062115	Date of Collection: 6/19/97
Dil. Factor:	2.00	Date of Analysis: 6/21/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.0	Not Detected
Freon 114	1.0	Not Detected
Chloromethane	1.0	Not Detected
Vinyl Chloride	1.0	1.6
Bromomethane	1.0	Not Detected
Chloroethane	1.0	24
Freon 11	1.0	Not Detected
1,1-Dichloroethene	1.0	Not Detected
Freon 113	1.0	Not Detected
Methylene Chloride	1.0	7.4
1,1-Dichloroethane	1.0	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected
Chloroform	1.0	Not Detected
1,1,1-Trichloroethane	1.0	Not Detected
Carbon Tetrachloride	1.0	Not Detected
Benzene	1.0	Not Detected
1,2-Dichloroethane	1.0	Not Detected
Trichloroethene	1.0	Not Detected
1,2-Dichloropropane	1.0	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected
Toluene	1.0	3.0
trans-1,3-Dichloropropene	1.0	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected
Tetrachloroethene	1.0	Not Detected
Ethylene Dibromide	1.0	Not Detected
Chlorobenzene	1.0	Not Detected
Ethyl Benzene	1.0	Not Detected
m,p-Xylene	1.0	Not Detected
o-Xylene	1.0	Not Detected
Styrene	1.0	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected
1,3,5-Trimethylbenzene	1.0	Not Detected
1,2,4-Trimethylbenzene	1.0	1.2
1,3-Dichlorobenzene	1.0	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected
Chlorotoluene	1.0	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected
Hexachlorobutadiene	1.0	Not Detected
Propylene	4.0	13
1,3-Butadiene	4.0	Not Detected
Acetone	4.0	5.1
Carbon Disulfide	4.0	Not Detected
2-Propanol	4.0	4.1
trans-1,2-Dichloroethene	4.0	Not Detected
Vinyl Acetate	4.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : PS-AS03-02

ID#: 9706247-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1062115	Date of Collection:	6/19/97
Dil. Factor:	2.00	Date of Analysis:	6/21/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Chloroprene	4.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.0	Not Detected
Hexane	4.0	Not Detected
Tetrahydrofuran	4.0	Not Detected
Cyclohexane	4.0	Not Detected
1,4-Dioxane	4.0	Not Detected
Bromodichloromethane	4.0	Not Detected
4-Methyl-2-pentanone	4.0	Not Detected
2-Hexanone	4.0	Not Detected
Dibromochloromethane	4.0	Not Detected
Bromoform	4.0	Not Detected
4-Ethyltoluene	4.0	Not Detected
Ethanol	4.0	Not Detected
Methyl tert-Butyl Ether	4.0	Not Detected
Heptane	4.0	Not Detected

Container Type: Tedlar Bag

Surrogates	% Recovery	Method Limits
Octafluorotoluene	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME : Lab Blank

ID#: 9706247-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1062104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/21/07

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.50	Not Detected
Vinyl Chloride	0.50	Not Detected
Bromomethane	0.50	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.50	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.50	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.50	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.50	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.50	Not Detected
Trichloroethene	0.50	Not Detected
1,2-Dichloropropane	0.50	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected
Tetrachloroethene	0.50	Not Detected
Ethylene Dibromide	0.50	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected
Hexachlorobutadiene	0.50	Not Detected
Propylene	2.0	Not Detected
1,3-Butadiene	2.0	Not Detected
Acetone	2.0	Not Detected
Carbon Disulfide	2.0	Not Detected
2-Propanol	2.0	Not Detected
trans-1,2-Dichloroethene	2.0	Not Detected
Vinyl Acetate	2.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : Lab Blank

ID#: 9706247-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1062104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/21/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Chloroprene	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected
Hexane	2.0	Not Detected
Tetrahydrofuran	2.0	Not Detected
Cyclohexane	2.0	Not Detected
1,4-Dioxane	2.0	Not Detected
Bromodichloromethane	2.0	Not Detected
4-Methyl-2-pentanone	2.0	Not Detected
2-Hexanone	2.0	Not Detected
Dibromochloromethane	2.0	Not Detected
Bromoform	2.0	Not Detected
4-Ethyltoluene	2.0	Not Detected
Ethanol	2.0	Not Detected
Methyl tert-Butyl Ether	2.0	Not Detected
Heptane	2.0	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	102	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	97	70-130

@AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 9707145

Work Order Summary

CLIENT: Mr. David Brayack
Brown & Root Environmental
661 Andersen Drive
Pittsburgh, PA 15230

BILL TO: Same

PHONE: 412-921-8375
FAX: 412-921-4040
DATE RECEIVED: 7/16/97
DATE COMPLETED: 7/23/97

P.O. # NR
PROJECT # CT0 213 Bethpage

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT</u> <u>VAC./PRES.</u>
01A	PS-AS04-01	TO-14	Tedlar Bag
02A	PS-AS04-02	TO-14	Tedlar Bag
03A	Lab Blank	TO-14	NA

CERTIFIED BY: *M. J. Frank*

Laboratory Director

DATE: 7/23/97

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630
(916) 985-1000 • (800) 985-5955 • FAX (916) 985-1020

AIR TOXICS LTD.

SAMPLE NAME : PS-AS04-01

ID#: 9707145-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071709	Date of Collection:	7/15/97
Dil. Factor:	222	Date of Analysis:	7/17/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	110	Not Detected
Freon 114	110	Not Detected
Chloromethane	110	Not Detected
Vinyl Chloride	110	Not Detected
Bromomethane	110	Not Detected
Chloroethane	110	Not Detected
Freon 11	110	Not Detected
1,1-Dichloroethene	110	250
Freon 113	110	1100
Methylene Chloride	110	Not Detected
1,1-Dichloroethane	110	2300
cis-1,2-Dichloroethene	110	1400
Chloroform	110	Not Detected
1,1,1-Trichloroethane	110	26000
Carbon Tetrachloride	110	Not Detected
Benzene	110	Not Detected
1,2-Dichloroethane	110	Not Detected
Trichloroethene	110	3800
1,2-Dichloropropane	110	Not Detected
cis-1,3-Dichloropropene	110	Not Detected
Toluene	110	Not Detected
trans-1,3-Dichloropropene	110	Not Detected
1,1,2-Trichloroethane	110	Not Detected
Tetrachloroethene	110	21000
Ethylene Dibromide	110	Not Detected
Chlorobenzene	110	Not Detected
Ethyl Benzene	110	Not Detected
m,p-Xylene	110	Not Detected
o-Xylene	110	Not Detected
Styrene	110	Not Detected
1,1,2,2-Tetrachloroethane	110	Not Detected
1,3,5-Trimethylbenzene	110	Not Detected
1,2,4-Trimethylbenzene	110	Not Detected
1,3-Dichlorobenzene	110	Not Detected
1,4-Dichlorobenzene	110	Not Detected
Chlorotoluene	110	Not Detected
1,2-Dichlorobenzene	110	Not Detected
1,2,4-Trichlorobenzene	110	Not Detected
Hexachlorobutadiene	110	Not Detected
Propylene	440	Not Detected
1,3-Butadiene	440	Not Detected
Acetone	440	Not Detected
Carbon Disulfide	440	Not Detected
2-Propanol	440	Not Detected
trans-1,2-Dichloroethene	440	Not Detected
Vinyl Acetate	440	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : PS-AS04-01

ID#: 9707145-01A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071709	Date of Collection:	7/15/97
Dil. Factor:	222	Date of Analysis:	7/17/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Chloroprene	440	Not Detected
2-Butanone (Methyl Ethyl Ketone)	440	Not Detected
Hexane	440	Not Detected
Tetrahydrofuran	440	Not Detected
Cyclohexane	440	Not Detected
1,4-Dioxane	440	Not Detected
Bromodichloromethane	440	Not Detected
4-Methyl-2-pentanone	440	Not Detected
2-Hexanone	440	Not Detected
Dibromochloromethane	440	Not Detected
Bromoform	440	Not Detected
4-Ethyltoluene	440	Not Detected
Ethanol	440	Not Detected
Methyl tert-Butyl Ether	440	Not Detected
Heptane	440	Not Detected

Container Type: Tedlar Bag

Surrogates	% Recovery	Method Limits
Octafluorotoluene	95	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME : PS-AS04-02

ID#: 9707145-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071711	Date of Collection: 7/15/97
Dil. Factor:	2.00	Date of Analysis: 7/17/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	1.0	Not Detected
Freon 114	1.0	Not Detected
Chloromethane	1.0	Not Detected
Vinyl Chloride	1.0	5.1
Bromomethane	1.0	Not Detected
Chloroethane	1.0	19
Freon 11	1.0	Not Detected
1,1-Dichloroethene	1.0	1.4
Freon 113	1.0	8.6
Methylene Chloride	1.0	11
1,1-Dichloroethane	1.0	14
cis-1,2-Dichloroethene	1.0	24
Chloroform	1.0	Not Detected
1,1,1-Trichloroethane	1.0	230
Carbon Tetrachloride	1.0	Not Detected
Benzene	1.0	Not Detected
1,2-Dichloroethane	1.0	Not Detected
Trichloroethene	1.0	50
1,2-Dichloropropane	1.0	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected
Toluene	1.0	3.5
trans-1,3-Dichloropropene	1.0	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected
Tetrachloroethene	1.0	38
Ethylene Dibromide	1.0	Not Detected
Chlorobenzene	1.0	Not Detected
Ethyl Benzene	1.0	Not Detected
m,p-Xylene	1.0	Not Detected
o-Xylene	1.0	Not Detected
Styrene	1.0	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected
1,3,5-Trimethylbenzene	1.0	Not Detected
1,2,4-Trimethylbenzene	1.0	Not Detected
1,3-Dichlorobenzene	1.0	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected
Chlorotoluene	1.0	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected
Hexachlorobutadiene	1.0	Not Detected
Propylene	4.0	Not Detected
1,3-Butadiene	4.0	Not Detected
Acetone	4.0	6.8
Carbon Disulfide	4.0	Not Detected
2-Propanol	4.0	5.3
trans-1,2-Dichloroethene	4.0	Not Detected
Vinyl Acetate	4.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : PS-AS04-02

ID#: 9707145-02A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071711	Date of Collection: 7/15/97
Dil. Factor:	2.00	Date of Analysis: 7/17/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Chloroprene	4.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.0	4.3
Hexane	4.0	Not Detected
Tetrahydrofuran	4.0	Not Detected
Cyclohexane	4.0	Not Detected
1,4-Dioxane	4.0	Not Detected
Bromodichloromethane	4.0	Not Detected
4-Methyl-2-pentanone	4.0	Not Detected
2-Hexanone	4.0	Not Detected
Dibromochloromethane	4.0	Not Detected
Bromoform	4.0	Not Detected
4-Ethyltoluene	4.0	Not Detected
Ethanol	4.0	Not Detected
Methyl tert-Butyl Ether	4.0	Not Detected
Heptane	4.0	Not Detected

Container Type: Tedlar Bag

Surrogates	% Recovery	Method Limits
Octafluorotoluene	100	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME : Lab Blank

ID#: 9707145-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/17/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	0.50	Not Detected
Freon 114	0.50	Not Detected
Chloromethane	0.50	Not Detected
Vinyl Chloride	0.50	Not Detected
Bromomethane	0.50	Not Detected
Chloroethane	0.50	Not Detected
Freon 11	0.50	Not Detected
1,1-Dichloroethene	0.50	Not Detected
Freon 113	0.50	Not Detected
Methylene Chloride	0.50	Not Detected
1,1-Dichloroethane	0.50	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected
Chloroform	0.50	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected
Carbon Tetrachloride	0.50	Not Detected
Benzene	0.50	Not Detected
1,2-Dichloroethane	0.50	Not Detected
Trichloroethene	0.50	Not Detected
1,2-Dichloropropane	0.50	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected
Toluene	0.50	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected
Tetrachloroethene	0.50	Not Detected
Ethylene Dibromide	0.50	Not Detected
Chlorobenzene	0.50	Not Detected
Ethyl Benzene	0.50	Not Detected
m,p-Xylene	0.50	Not Detected
o-Xylene	0.50	Not Detected
Styrene	0.50	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected
Chlorotoluene	0.50	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected
Hexachlorobutadiene	0.50	Not Detected
Propylene	2.0	Not Detected
1,3-Butadiene	2.0	Not Detected
Acetone	2.0	Not Detected
Carbon Disulfide	2.0	Not Detected
2-Propanol	2.0	Not Detected
trans-1,2-Dichloroethene	2.0	Not Detected
Vinyl Acetate	2.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : Lab Blank

ID#: 9707145-03A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1071704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/17/97

Compound	Det. Limit (ppbv)	Amount (ppbv)
Chloroprene	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected
Hexane	2.0	Not Detected
Tetrahydrofuran	2.0	Not Detected
Cyclohexane	2.0	Not Detected
1,4-Dioxane	2.0	Not Detected
Bromodichloromethane	2.0	Not Detected
4-Methyl-2-pentanone	2.0	Not Detected
2-Hexanone	2.0	Not Detected
Dibromochloromethane	2.0	Not Detected
Bromoform	2.0	Not Detected
4-Ethyltoluene	2.0	Not Detected
Ethanol	2.0	Not Detected
Methyl tert-Butyl Ether	2.0	Not Detected
Heptane	2.0	Not Detected

Container Type: NA

Surrogates	% Recovery	Method Limits
Octafluorotoluene	96	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

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KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750



Phone: (614) 373-4071

Brown and Root Environmental
CF Braun, Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220
Attn: Dave Brayack

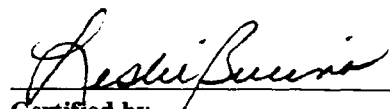
Login #: 97-03-514
Date Received: 03/27/97
Date Completed: 04/08/97
Date Reported: 04/09/97 17:00
Work ID: 5253/NWRIP BETHPAGE SVE/AS

Client Code: BRROOTENV418

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
01	PS-SB02-10	02	PS-SB02-40
03	PS-SB03-20	04	PS-SB03-40
05	PS-SB03-40D	06	PS-SB04-30
07	PS-SB04-40		

All results for soils/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the prior written approval of KEMRON.


Certified by
Leslie Bucina

KEMRON ENVIRONMENTAL SERVICES
RESULTS BY SAMPLE

This is to certify that the following samples were analyzed using good laboratory practices to show the following results.

SAMPLE ID: 01 PS-SB02-10 Collected: 03/26/97 1130 Category: Soil

TEST DESCRIPTION	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED BY	METHOD
Percent Solids	94	1	% wt.	04/03/97 SCM	D2216-90

SAMPLE ID: 02 PS-SB02-40 Collected: 03/26/97 1150 Category: Soil

TEST DESCRIPTION	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED BY	METHOD
Percent Solids	93	1	% wt.	04/03/97 SCM	D2216-90

SAMPLE ID: 03 PS-SB03-20 Collected: 03/26/97 1300 Category: Soil

TEST DESCRIPTION	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED BY	METHOD
Percent Solids	97	1	% wt.	04/03/97 SCM	D2216-90

SAMPLE ID: 04 PS-SB03-40 Collected: 03/26/97 1320 Category: Soil

TEST DESCRIPTION	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED BY	METHOD
Percent Solids	96	1	% wt.	04/03/97 SCM	D2216-90

SAMPLE ID: 05 PS-SB03-40D Collected: 03/26/97 1320 Category: Soil

TEST DESCRIPTION	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED BY	METHOD
Percent Solids	96	1	% wt.	04/03/97 SCM	D2216-90

SAMPLE ID: 06 PS-SB04-30 Collected: 03/26/97 1440 Category: Soil

TEST DESCRIPTION	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED BY	METHOD
Percent Solids	82	1	% wt.	04/03/97 SCM	D2216-90

SAMPLE ID: 07 PS-SB04-40 Collected: 03/26/97 1500 Category: Soil

TEST DESCRIPTION	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED BY	METHOD
Percent Solids	95	1	% wt.	04/03/97 SCM	D2216-90

NOTES AND DEFINITIONS:

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-SB02-10**
 Test Description: **TCL additional compounds**

Lab No: **01**

Collected: **03/26/97 1130**
 Category: **Soil**
 Method: **8260A**

Analyst: **MDA** File: **2BR15400**
 Instrument: **HPMS2** Injected: **03/27/97** Factor: **1** Units: **ug/kg**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	11
74-83-9	Bromomethane	U	11
75-01-4	Vinyl chloride	U	11
75-00-3	Chloroethane	U	11
75-09-2	Methylene chloride	U	5.3
67-64-1	Acetone	890D	11
75-15-0	Carbon disulfide	U	5.3
75-35-4	1,1-Dichloroethene	U	5.3
75-34-3	1,1-Dichloroethane	U	5.3
156-59-2	cis-1,2-Dichloroethene	U	5.3
156-60-5	trans-1,2-Dichloroethene	U	5.3
67-66-3	Chloroform	U	5.3
107-06-2	1,2-Dichloroethane	U	5.3
78-93-3	2-Butanone	U	11
74-97-5	Bromochloromethane	U	5.3
71-55-6	1,1,1-Trichloroethane	U	5.3
56-23-5	Carbon tetrachloride	U	5.3
108-05-4	Vinyl acetate	U	11
75-27-4	Bromodichloromethane	U	5.3
78-87-5	1,2-Dichloropropane	U	5.3
10061-01-5	cis-1,3-Dichloropropene	U	5.3
79-01-6	Trichloroethene	U	5.3
124-48-1	Dibromochloromethane	U	5.3
79-00-5	1,1,2-Trichloroethane	U	5.3
71-43-2	Benzene	U	5.3
10061-02-6	trans-1,3-Dichloropropene	U	5.3
75-25-2	Bromoform	U	5.3
108-10-1	4-Methyl-2-pentanone	U	11
591-78-6	2-Hexanone	U	11
127-18-4	Tetrachloroethene	80	5.3
79-34-5	1,1,2,2-Tetrachloroethane	U	5.3
106-93-4	1,2-Dibromoethane	U	5.3
108-88-3	Toluene	U	5.3
108-90-7	Chlorobenzene	U	5.3
100-41-4	Ethyl benzene	U	5.3
100-42-5	Styrene	U	5.3
1330-20-7	Xylenes, Total	U	5.3
541-73-1	1,3-Dichlorobenzene	U	5.3
106-46-7	1,4-Dichlorobenzene	U	5.3
95-50-1	1,2-Dichlorobenzene	U	5.3
96-12-8	1,2-Dibromo-3-chloropropane	U	5.3

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

SURROGATES:

Dibromofluoromethane	<u>103</u>	% Recovery (80% - 120%)
1,2-Dichloroethane-d4	<u>96</u>	% Recovery (80% - 120%)
Toluene-d8	<u>104</u>	% Recovery (81% - 117%)
p-Bromofluorobenzene	<u>106</u>	% Recovery (74% - 121%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

D = The analyte was quantified at a secondary dilution factor

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-SB02-40**
 Test Description: **TCL additional compounds**

Lab No: **02**

Collected: **03/26/97 1150**
 Category: **Soil**
 Method: **8260A**

Analyst: **MDA** File: **2BR15401**
 Instrument: **HPMS2** Injected: **03/27/97** Factor: **1** Units: **ug/kg**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	11
74-83-9	Bromomethane	U	11
75-01-4	Vinyl chloride	U	11
75-00-3	Chloroethane	U	11
75-09-2	Methylene chloride	U	5.4
67-64-1	Acetone	18000D	11
75-15-0	Carbon disulfide	U	5.4
75-35-4	1,1-Dichloroethene	U	5.4
75-34-3	1,1-Dichloroethane	U	5.4
156-59-2	cis-1,2-Dichloroethene	U	5.4
156-60-5	trans-1,2-Dichloroethene	U	5.4
67-66-3	Chloroform	U	5.4
107-06-2	1,2-Dichloroethane	U	5.4
78-93-3	2-Butanone	U	11
74-97-5	Bromochloromethane	U	5.4
71-55-6	1,1,1-Trichloroethane	U	5.4
56-23-5	Carbon tetrachloride	U	5.4
108-05-4	Vinyl acetate	U	11
75-27-4	Bromodichloromethane	U	5.4
78-87-5	1,2-Dichloropropane	U	5.4
10061-01-5	cis-1,3-Dichloropropene	U	5.4
79-01-6	Trichloroethene	U	5.4
124-48-1	Dibromochloromethane	U	5.4
79-00-5	1,1,2-Trichloroethane	U	5.4
71-43-2	Benzene	U	5.4
10061-02-6	trans-1,3-Dichloropropene	U	5.4
75-25-2	Bromoform	U	5.4
108-10-1	4-Methyl-2-pentanone	U	11
591-78-6	2-Hexanone	U	11
127-18-4	Tetrachloroethene	59	5.4
79-34-5	1,1,2,2-Tetrachloroethane	U	5.4
106-93-4	1,2-Dibromoethane	U	5.4
108-88-3	Toluene	U	5.4
108-90-7	Chlorobenzene	U	5.4
100-41-4	Ethyl benzene	U	5.4
100-42-5	Styrene	U	5.4
1330-20-7	Xylenes, Total	U	5.4
541-73-1	1,3-Dichlorobenzene	U	5.4
106-46-7	1,4-Dichlorobenzene	U	5.4
95-50-1	1,2-Dichlorobenzene	U	5.4
96-12-8	1,2-Dibromo-3-chloropropane	U	5.4

**KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE**

SURROGATES:

Dibromofluoromethane	<u>109</u> % Recovery	(80% - 120%)
1,2-Dichloroethane-d4	<u>105</u> % Recovery	(80% - 120%)
Toluene-d8	<u>110</u> % Recovery	(81% - 117%)
p-Bromofluorobenzene	<u>112</u> % Recovery	(74% - 121%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

- U = Analyzed for but not detected
- D = The analyte was quantified at a secondary dilution factor

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-SB03-20**
 Test Description: **TCL additional compounds**

Lab No: **03**

Collected: **03/26/97 1300**
 Category: **Soil**
 Method: **8260A**

Analyst: **MDA** File: **2BR15402**
 Instrument: **HPMS2** Injected: **03/27/97** Factor: **1** Units: **ug/kg**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5.2
67-64-1	Acetone	3600D	10
75-15-0	Carbon disulfide	U	5.2
75-35-4	1,1-Dichloroethene	U	5.2
75-34-3	1,1-Dichloroethane	U	5.2
156-59-2	cis-1,2-Dichloroethene	U	5.2
156-60-5	trans-1,2-Dichloroethene	U	5.2
67-66-3	Chloroform	U	5.2
107-06-2	1,2-Dichloroethane	U	5.2
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5.2
71-55-6	1,1,1-Trichloroethane	U	5.2
56-23-5	Carbon tetrachloride	U	5.2
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5.2
78-87-5	1,2-Dichloropropane	U	5.2
10061-01-5	cis-1,3-Dichloropropene	U	5.2
79-01-6	Trichloroethene	U	5.2
124-48-1	Dibromochloromethane	U	5.2
79-00-5	1,1,2-Trichloroethane	U	5.2
71-43-2	Benzene	U	5.2
10061-02-6	trans-1,3-Dichloropropene	U	5.2
75-25-2	Bromoform	U	5.2
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	47	5.2
79-34-5	1,1,2,2-Tetrachloroethane	U	5.2
106-93-4	1,2-Dibromoethane	U	5.2
108-88-3	Toluene	U	5.2
108-90-7	Chlorobenzene	U	5.2
100-41-4	Ethyl benzene	U	5.2
100-42-5	Styrene	U	5.2
1330-20-7	Xylenes, Total	U	5.2
541-73-1	1,3-Dichlorobenzene	U	5.2
106-46-7	1,4-Dichlorobenzene	U	5.2
95-50-1	1,2-Dichlorobenzene	U	5.2
96-12-8	1,2-Dibromo-3-chloropropane	U	5.2

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SURROGATES:

Dibromofluoromethane	<u>109</u>	% Recovery	(80% - 120%)
1,2-Dichloroethane-d4	<u>99</u>	% Recovery	(80% - 120%)
Toluene-d8	<u>106</u>	% Recovery	(81% - 117%)
p-Bromofluorobenzene	<u>109</u>	% Recovery	(74% - 121%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

D = The analyte was quantified at a secondary dilution factor

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
Sample Description: **PS-SB03-40**
Test Description: **TCL additional compounds**

Lab No: **04**

Collected: **03/26/97 1320**
Category: **Soil**
Method: **8260A**

Analyst: **MDA** File: **2BR15443**
Instrument: **HPMS2** Injected: **03/28/97** Factor: **1** Units: **ug/kg**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5.2
67-64-1	Acetone	47	10
75-15-0	Carbon disulfide	U	5.2
75-35-4	1,1-Dichloroethene	U	5.2
75-34-3	1,1-Dichloroethane	U	5.2
156-59-2	cis-1,2-Dichloroethene	U	5.2
156-60-5	trans-1,2-Dichloroethene	U	5.2
67-66-3	Chloroform	U	5.2
107-06-2	1,2-Dichloroethane	U	5.2
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5.2
71-55-6	1,1,1-Trichloroethane	U	5.2
56-23-5	Carbon tetrachloride	U	5.2
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5.2
78-87-5	1,2-Dichloropropane	U	5.2
10061-01-5	cis-1,3-Dichloropropene	U	5.2
79-01-6	Trichloroethene	U	5.2
124-48-1	Dibromochloromethane	U	5.2
79-00-5	1,1,2-Trichloroethane	U	5.2
71-43-2	Benzene	U	5.2
10061-02-6	trans-1,3-Dichloropropene	U	5.2
75-25-2	Bromoform	U	5.2
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	U	5.2
79-34-5	1,1,2,2-Tetrachloroethane	U	5.2
106-93-4	1,2-Dibromoethane	U	5.2
108-88-3	Toluene	U	5.2
108-90-7	Chlorobenzene	U	5.2
100-41-4	Ethyl benzene	U	5.2
100-42-5	Styrene	U	5.2
1330-20-7	Xylenes, Total	U	5.2
541-73-1	1,3-Dichlorobenzene	U	5.2
106-46-7	1,4-Dichlorobenzene	U	5.2
95-50-1	1,2-Dichlorobenzene	U	5.2
96-12-8	1,2-Dibromo-3-chloropropane	U	5.2

SURROGATES:

Dibromofluoromethane	<u>100</u> % Recovery	(80% - 120%)
1,2-Dichloroethane-d4	<u>97</u> % Recovery	(80% - 120%)
Toluene-d8	<u>101</u> % Recovery	(81% - 117%)
p-Bromofluorobenzene	<u>106</u> % Recovery	(74% - 121%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

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KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-SB03-40D**
 Test Description: **TCL additional compounds**

Lab No: **05**

Collected: **03/26/97 1320**
 Category: **Soil**
 Method: **8260A**

Analyst: **MDA** File: **2BR15442**
 Instrument: **HPMS2** Injected: **03/28/97** Factor: **1** Units: **ug/kg**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5.2
67-64-1	Acetone	60	10
75-15-0	Carbon disulfide	U	5.2
75-35-4	1,1-Dichloroethene	U	5.2
75-34-3	1,1-Dichloroethane	U	5.2
156-59-2	cis-1,2-Dichloroethene	U	5.2
156-60-5	trans-1,2-Dichloroethene	U	5.2
67-66-3	Chloroform	U	5.2
107-06-2	1,2-Dichloroethane	U	5.2
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5.2
71-55-6	1,1,1-Trichloroethane	U	5.2
56-23-5	Carbon tetrachloride	U	5.2
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5.2
78-87-5	1,2-Dichloropropane	U	5.2
10061-01-5	cis-1,3-Dichloropropene	U	5.2
79-01-6	Trichloroethene	U	5.2
124-48-1	Dibromochloromethane	U	5.2
79-00-5	1,1,2-Trichloroethane	U	5.2
71-43-2	Benzene	U	5.2
10061-02-6	trans-1,3-Dichloropropene	U	5.2
75-25-2	Bromoform	U	5.2
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	U	5.2
79-34-5	1,1,2,2-Tetrachloroethane	U	5.2
106-93-4	1,2-Dibromoethane	U	5.2
108-88-3	Toluene	U	5.2
108-90-7	Chlorobenzene	U	5.2
100-41-4	Ethyl benzene	U	5.2
100-42-5	Styrene	U	5.2
1330-20-7	Xylenes, Total	U	5.2
541-73-1	1,3-Dichlorobenzene	U	5.2
106-46-7	1,4-Dichlorobenzene	U	5.2
95-50-1	1,2-Dichlorobenzene	U	5.2
96-12-8	1,2-Dibromo-3-chloropropane	U	5.2

SURROGATES:

Dibromofluoromethane	<u>108</u>	‡ Recovery	(80‡ - 120‡)
1,2-Dichloroethane-d4	<u>111</u>	‡ Recovery	(80‡ - 120‡)
Toluene-d8	<u>106</u>	‡ Recovery	(81‡ - 117‡)
p-Bromofluorobenzene	<u>109</u>	‡ Recovery	(74‡ - 121‡)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

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KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: 826-BRE2
 Sample Description: PS-SB04-30
 Test Description: TCL additional compounds

Lab No: 06

Collected: 03/26/97 1440
 Category: Soil
 Method: 8260A

Analyst: MDA
 Instrument: HPMS2
 Injected: 03/27/97
 File: 2BR15405
 Factor: 1
 Units: ug/kg

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	12
74-83-9	Bromomethane	U	12
75-01-4	Vinyl chloride	U	12
75-00-3	Chloroethane	U	12
75-09-2	Methylene chloride	U	6.1
67-64-1	Acetone	48	12
75-15-0	Carbon disulfide	U	6.1
75-35-4	1,1-Dichloroethene	U	6.1
75-34-3	1,1-Dichloroethane	17	6.1
156-59-2	cis-1,2-Dichloroethene	150	6.1
156-60-5	trans-1,2-Dichloroethene	U	6.1
67-66-3	Chloroform	U	6.1
107-06-2	1,2-Dichloroethane	U	6.1
78-93-3	2-Butanone	U	12
74-97-5	Bromochloromethane	U	6.1
71-55-6	1,1,1-Trichloroethane	50	6.1
56-23-5	Carbon tetrachloride	U	6.1
108-05-4	Vinyl acetate	U	12
75-27-4	Bromodichloromethane	U	6.1
78-87-5	1,2-Dichloropropane	U	6.1
10061-01-5	cis-1,3-Dichloropropene	U	6.1
79-01-6	Trichloroethene	120	6.1
124-48-1	Dibromochloromethane	U	6.1
79-00-5	1,1,2-Trichloroethane	U	6.1
71-43-2	Benzene	U	6.1
10061-02-6	trans-1,3-Dichloropropene	U	6.1
75-25-2	Bromoform	U	6.1
108-10-1	4-Methyl-2-pentanone	U	12
591-78-6	2-Hexanone	U	12
127-18-4	Tetrachloroethene	170D	6.1
79-34-5	1,1,2,2-Tetrachloroethane	U	6.1
106-93-4	1,2-Dibromoethane	U	6.1
108-88-3	Toluene	U	6.1
108-90-7	Chlorobenzene	U	6.1
100-41-4	Ethyl benzene	U	6.1
100-42-5	Styrene	U	6.1
1330-20-7	Xylenes, Total	U	6.1
541-73-1	1,3-Dichlorobenzene	U	6.1
106-46-7	1,4-Dichlorobenzene	U	6.1
95-50-1	1,2-Dichlorobenzene	U	6.1
96-12-8	1,2-Dibromo-3-chloropropane	U	6.1

SURROGATES:

Dibromofluoromethane	<u>105</u>	% Recovery	(80% - 120%)
1,2-Dichloroethane-d4	<u>96</u>	% Recovery	(80% - 120%)
Toluene-d8	<u>100</u>	% Recovery	(81% - 117%)
p-Bromofluorobenzene	<u>104</u>	% Recovery	(74% - 121%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

D = The analyte was quantified at a secondary dilution factor

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-SB04-40**
 Test Description: **TCL additional compounds**

Lab No: 07

Collected: **03/26/97 1500**
 Category: **Soil**
 Method: **8260A**

Analyst: **MDA** File: **2BR15406**
 Instrument: **HPMS2** Injected: **03/27/97** Factor: **1** Units: **ug/kg**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	11
74-83-9	Bromomethane	U	11
75-01-4	Vinyl chloride	U	11
75-00-3	Chloroethane	U	11
75-09-2	Methylene chloride	U	5.3
67-64-1	Acetone	U	11
75-15-0	Carbon disulfide	U	5.3
75-35-4	1,1-Dichloroethene	U	5.3
75-34-3	1,1-Dichloroethane	U	5.3
156-59-2	cis-1,2-Dichloroethene	U	5.3
156-60-5	trans-1,2-Dichloroethene	U	5.3
67-66-3	Chloroform	U	5.3
107-06-2	1,2-Dichloroethane	U	5.3
78-93-3	2-Butanone	U	11
74-97-5	Bromochloromethane	U	5.3
71-55-6	1,1,1-Trichloroethane	U	5.3
56-23-5	Carbon tetrachloride	U	5.3
108-05-4	Vinyl acetate	U	11
75-27-4	Bromodichloromethane	U	5.3
78-87-5	1,2-Dichloropropane	U	5.3
10061-01-5	cis-1,3-Dichloropropene	U	5.3
79-01-6	Trichloroethene	U	5.3
124-48-1	Dibromochloromethane	U	5.3
79-00-5	1,1,2-Trichloroethane	U	5.3
71-43-2	Benzene	U	5.3
10061-02-6	trans-1,3-Dichloropropene	U	5.3
75-25-2	Bromoform	U	5.3
108-10-1	4-Methyl-2-pentanone	U	11
591-78-6	2-Hexanone	U	11
127-18-4	Tetrachloroethene	U	5.3
79-34-5	1,1,2,2-Tetrachloroethane	U	5.3
106-93-4	1,2-Dibromoethane	U	5.3
108-88-3	Toluene	U	5.3
108-90-7	Chlorobenzene	U	5.3
100-41-4	Ethyl benzene	U	5.3
100-42-5	Styrene	U	5.3
1330-20-7	Xylenes, Total	U	5.3
541-73-1	1,3-Dichlorobenzene	U	5.3
106-46-7	1,4-Dichlorobenzene	U	5.3
95-50-1	1,2-Dichlorobenzene	U	5.3
96-12-8	1,2-Dibromo-3-chloropropane	U	5.3

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

SURROGATES:

Dibromofluoromethane	<u>110</u>	‡ Recovery	(80‡ - 120‡)
1,2-Dichloroethane-d4	<u>101</u>	‡ Recovery	(80‡ - 120‡)
Toluene-d8	<u>109</u>	‡ Recovery	(81‡ - 117‡)
p-Bromofluorobenzene	<u>111</u>	‡ Recovery	(74‡ - 121‡)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

Order #97-03-514
April 9, 1997 13:53

**KEMRON ENVIRONMENTAL SERVICES
REPORT COMMENTS**

The matrix spike/matrix spike duplicate (MS/MSD) analyzed 3/27/97 yielded recoveries for several analytes outside advisory limits. This was caused by sample matrix interference confirmed by reanalysis. All MS/MSD outliers were acceptable in the laboratory control sample.

KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750
Phone: (614) 373-4071

Brown and Root Environmental
CF Braun, Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220
Attention: Dave Brayack

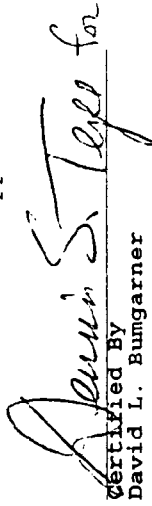
Login #: L9707328
Report Date: 07/29/97
Work ID: CTO213/5253-0142/NWIRP BETHPAC
Date Received: 07/16/97

PO Number:
Account Number: BRROOTENV418

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9707328-01	PS-SB04-30	L9707328-02	PS-SB04-30D
L9707328-03	PS-SB04-40	L9707328-04	PS-SB03-20
L9707328-05	PS-SB03-40	L9707328-06	PS-SB02-10
L9707328-07	PS-SB02-40		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. The report shall not be reproduced, except in full, without the written approval of KEMRON.


Certified By
David L. Bumgarner

XX

LogIn #L9707328
 July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9707328-01
 Client Sample ID: PS-SB04-30
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG

Matrix: Soil
 Collected: 07/15/97 925

% Solid: 88
 COC Info: N/A

ANALYTE	UNITS	RESULT	QUALIFIER	RDL	ANALYST	ANALYSIS DATE	METHOD	DIL TYPE
Percent Solids.....	% wt.	88		1.0	CLH	07/24/97	D2216-90	N/A

Login #L9707328
July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707328-01
Client Sample ID: PS-SB04-30
Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
Matrix: Soil

Dil. Type: N/A
COC Info: N/A
Date Collected: 07/15/97
Sample Weight: N/A
Extract Volume: N/A
% Solid: 88

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 07/22/97

Instrument: HPMS2
Analyst: MDA
Lab File ID: 2BR18259

Method: 8260A
Run ID: R29301

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/kg		ND		11
74-83-9	Bromomethane	ug/kg		ND		11
75-01-4	Vinyl chloride	ug/kg		ND		11
75-00-3	Chloroethane	ug/kg		ND		11
75-09-2	Methylene chloride	ug/kg		ND		5.7
67-64-1	Acetone	ug/kg		ND		11
75-15-0	Carbon disulfide	ug/kg		ND		5.7
75-35-4	1,1-Dichloroethane	ug/kg		ND		5.7
75-34-3	1,1-Dichloroethane	ug/kg		ND		5.7
156-59-2	cis-1,2-Dichloroethane	ug/kg		ND		5.7
156-60-5	trans-1,2-Dichloroethane	ug/kg		ND		5.7
67-66-3	Chloroform	ug/kg		ND		5.7
107-06-2	1,2-Dichloroethane	ug/kg		ND		5.7
78-93-3	2-Butanone	ug/kg		ND		11
74-97-5	Bromochloromethane	ug/kg		ND		5.7
71-55-6	1,1,1-Trichloroethane	ug/kg		ND		5.7
56-23-5	Carbon tetrachloride	ug/kg		ND		5.7
108-05-4	Vinyl acetate	ug/kg		ND		11
75-27-4	Bromodichloromethane	ug/kg		ND		5.7
78-87-5	1,2-Dichloropropane	ug/kg		ND		5.7
10061-01-5	cis-1,3-Dichloropropane	ug/kg		ND		5.7
79-01-6	Trichloroethene	ug/kg		ND		5.7
124-48-1	Dibromochloromethane	ug/kg		ND		5.7
79-00-5	1,1,2-Trichloroethane	ug/kg		ND		5.7
71-43-2	Benzene	ug/kg		ND		5.7
10061-02-6	trans-1,3-Dichloropropene	ug/kg		ND		5.7
75-25-2	Bromoform	ug/kg		ND		5.7
108-10-1	4-Methyl-2-pentanone	ug/kg		ND		11
591-78-6	2-Hexanone	ug/kg		ND		11
127-18-4	Tetrachloroethene	ug/kg		ND		5.7
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg		ND		5.7
106-93-4	1,2-Dibromoethane	ug/kg		ND		5.7
108-88-3	Toluene	ug/kg		ND		5.7
108-90-7	Chlorobenzene	ug/kg		ND		5.7
100-41-4	Ethyl benzene	ug/kg		ND		5.7
100-42-5	Styrene	ug/kg		ND		5.7
1330-20-7	Xylenes, Total	ug/kg		ND		5.7
541-73-1	1,3-Dichlorobenzene	ug/kg		ND		5.7
106-46-7	1,4-Dichlorobenzene	ug/kg		ND		5.7

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Login #L9707328
 July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707328-01
 Client Sample ID: PS-SB04-30
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Soil

Dil. Type: N/A
 COC Info: N/A

Date Collected: 07/15/97

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/22/97

Instrument: HPMS2
 Analyst: MDA
 Lab File ID: 2BR18259

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: 88
 Method: 8260A
 Run ID: R29301

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/kg		ND		5.7 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/kg		ND		5.7 1
	SURROGATES- In Percent Recovery:					
	Dibromofluoromethane		94.1	(80 - 120%)		
	1,2-Dichloroethane-d4		87.2	(80 - 120%)		
	Toluene-d8		96.4	(81 - 117%)		
	p-Bromofluorobenzene		103	(74 - 121%)		

Login #L9707328
July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9707328-02
Client Sample ID: PS-SB04-30D
Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG

Matrix: Soil
Collected: 07/15/97 925

% Solid: 89
COC Info: N/A

ANALYTE	UNITS	RESULT	QUALIFIER	RDL	ANALYST	ANALYSIS DATE	METHOD	DIL TYPE
Percent Solids.....	% wt.	89		1.0	CLH	07/24/97	D2216-90	N/A

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LogIn #L9707328
 July 29, 1997 01:53 PM

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707328-02
 Client Sample ID: PS-SB04-30D
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Soil

Dil. Type: N/A
 COC Info: N/A

Date Collected: 07/15/97

Sample Weight: N/A
 Extract Volume: N/A

Instrument: HPMS2
 Analyst: MDA
 Lab File ID: 2BR18275

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/22/97

% Solid: 89

Method: 8260A
 Run ID: R29312

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/kg		ND		11
74-83-9	Bromomethane	ug/kg		ND		11
75-01-4	Vinyl chloride	ug/kg		ND		11
75-00-3	Chloroethane	ug/kg		ND		11
75-09-2	Methylene chloride	ug/kg		ND		5.6
67-64-1	Acetone	ug/kg		ND		11
75-15-0	Carbon disulfide	ug/kg		ND		5.6
75-35-4	1,1-Dichloroethene	ug/kg		ND		5.6
75-34-3	1,1-Dichloroethane	ug/kg		ND		5.6
156-59-2	cis-1,2-Dichloroethene	ug/kg		ND		5.6
156-60-5	trans-1,2-Dichloroethene	ug/kg		ND		5.6
67-66-3	Chloroform	ug/kg		ND		5.6
107-06-2	1,2-Dichloroethane	ug/kg		ND		11
78-93-3	2-Butanone	ug/kg		ND		5.6
74-97-5	Bromochloromethane	ug/kg		ND		5.6
71-55-6	1,1,1-Trichloroethane	ug/kg		ND		5.6
56-23-5	Carbon tetrachloride	ug/kg		ND		5.6
108-05-4	Vinyl acetate	ug/kg		ND		11
75-27-4	Bromodichloromethane	ug/kg		ND		5.6
78-87-5	1,2-Dichloropropane	ug/kg		ND		5.6
10061-01-5	cis-1,3-Dichloropropene	ug/kg		ND		5.6
79-01-6	Trichloroethene	ug/kg		ND		5.6
124-48-1	Dibromochloromethane	ug/kg		ND		5.6
79-00-5	1,1,2-Trichloroethane	ug/kg		ND		5.6
71-43-2	Benzene	ug/kg		ND		5.6
10061-02-6	trans-1,3-Dichloropropene	ug/kg		ND		5.6
75-25-2	Bromoform	ug/kg		ND		11
108-10-1	4-Methyl-2-pentanone	ug/kg		ND		11
591-78-6	2-Hexanone	ug/kg		ND		5.6
127-18-4	Tetrachloroethene	ug/kg		ND		5.6
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg		ND		5.6
106-93-4	1,2-Dibromoethane	ug/kg		ND		5.6
108-88-3	Toluene	ug/kg		ND		5.6
108-90-7	Chlorobenzene	ug/kg		ND		5.6
100-41-4	Ethyl benzene	ug/kg		ND		5.6
100-42-5	Styrene	ug/kg		ND		5.6
1330-20-7	Xylenes, Total	ug/kg		ND		5.6
541-73-1	1,3-Dichlorobenzene	ug/kg		ND		5.6
106-46-7	1,4-Dichlorobenzene	ug/kg		ND		5.6

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LogIn #L9707328
July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707328-02
Client Sample ID: PS-SB04-30D
Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
Matrix: Soil
Dil. Type: N/A
COC Info: N/A
Date Collected: 07/15/97
Instrument: HPMS2
Analyst: MDA
Lab File ID: 2BR18275
Sample Weight: N/A
Extract Volume: N/A
% Solid: 89
Method: 8260A
Run ID: R29312

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 07/22/97

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/kg		ND		5.6 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/kg		ND		5.6 1
	SURROGATES- In Percent Recovery:					
	Dibromofluoromethane	107		(80 - 120%)		
	1,2-Dichloroethane-d4	103		(80 - 120%)		
	Toluene-d8	98.3		(81 - 117%)		
	p-Bromofluorobenzene	106		(74 - 121%)		

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Login #L9707328
July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9707328-03
Client Sample ID: PS-SB04-40
Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG

Matrix: Soil
Collected: 07/15/97 940

% Solid: 96
COC Info: N/A

ANALYTE	UNITS	RESULT	QUALIFIER	RDL	ANALYST	ANALYSIS DATE	METHOD	DIL TYPE
Percent Solids.....	% wt.	96		1.0	CLH	07/24/97	D2216-90	N/A

2

Login #L9707328
 July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707328-03
 Client Sample ID: PS-SB04-40
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Soil

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97
 Instrument: HPMS2
 Analyst: MDA
 Lab File ID: 2BR18276

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: 96
 Method: 8260A
 Run ID: R29312

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/22/97

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/kg		ND		10
74-83-9	Bromomethane	ug/kg		ND		10
75-01-4	Vinyl chloride	ug/kg		ND		10
75-00-3	Chloroethane	ug/kg		ND		10
75-09-2	Methylene chloride	ug/kg		ND		5.2
67-64-1	Acetone	ug/kg		ND		10
75-15-0	Carbon disulfide	ug/kg		ND		5.2
75-35-4	1,1-Dichloroethane	ug/kg		ND		5.2
75-34-3	1,1-Dichloroethane	ug/kg		ND		5.2
156-59-2	cis-1,2-Dichloroethene	ug/kg		ND		5.2
156-60-5	trans-1,2-Dichloroethene	ug/kg		ND		5.2
67-66-3	Chloroform	ug/kg		ND		5.2
107-06-2	1,2-Dichloroethane	ug/kg		ND		5.2
78-93-3	2-Butanone	ug/kg		ND		10
74-97-5	Bromochloromethane	ug/kg		ND		5.2
71-55-6	1,1,1-Trichloroethane	ug/kg		ND		5.2
56-23-5	Carbon tetrachloride	ug/kg		ND		5.2
108-05-4	Vinyl acetate	ug/kg		ND		10
75-27-4	Bromodichloromethane	ug/kg		ND		5.2
78-87-5	1,2-Dichloropropane	ug/kg		ND		5.2
10061-01-5	cis-1,3-Dichloropropene	ug/kg		ND		5.2
79-01-6	Trichloroethene	ug/kg		ND		5.2
124-48-1	Dibromochloromethane	ug/kg		ND		5.2
79-00-5	1,1,2-Trichloroethane	ug/kg		ND		5.2
71-43-2	Benzene	ug/kg		ND		5.2
10061-02-6	trans-1,3-Dichloropropene	ug/kg		ND		5.2
75-25-2	Bromoform	ug/kg		ND		5.2
108-10-1	4-Methyl-2-pentanone	ug/kg		ND		10
591-78-6	2-Hexanone	ug/kg		ND		10
127-18-4	Tetrachloroethene	ug/kg		ND		5.2
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg		ND		5.2
106-93-4	1,2-Dibromoethane	ug/kg		ND		5.2
108-88-3	Toluene	ug/kg		ND		5.2
108-90-7	Chlorobenzene	ug/kg		ND		5.2
100-41-4	Ethyl benzene	ug/kg		ND		5.2
100-42-5	Styrene	ug/kg		ND		5.2
1330-20-7	Xylenes, Total	ug/kg		ND		5.2
541-73-1	1,3-Dichlorobenzene	ug/kg		ND		5.2
106-46-7	1,4-Dichlorobenzene	ug/kg		ND		5.2

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Login #L9707328
 July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707328-03
 Client Sample ID: PS-SB04-40
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Soil

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/22/97

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97
 Instrument: HPMS2
 Analyst: MDA
 Lab File ID: 2BR18276

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: 96
 Method: 8260A
 Run ID: R29312

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/kg		ND		5.2 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/kg		ND		5.2 1
	SURROGATES- In Percent Recovery:					
	Dibromofluoromethane	104	(80 - 120%)			
	1,2-Dichloroethane-d4	101	(80 - 120%)			
	Toluene-d8	99.8	(81 - 117%)			
	p-Bromofluorobenzene	106	(74 - 121%)			

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Log in #L9707328
July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9707328-04
Client Sample ID: PS-SB03-20
Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG

Matrix: Soil
Collected: 07/15/97 1050

% Solid: 98
COC Info: N/A

ANALYTE	UNITS	RESULT	QUALIFIER	RDL	ANALYST	ANALYSIS DATE	METHOD	DIL TYPE
Percent Solids.....	% wt.	98		1.0	CLH	07/24/97	D2216-90	N/A

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Login #L9707328
 July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BREZ - TCL additional compounds

Lab Sample ID: L9707328-04
 Client Sample ID: PS-SB03-20
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Soil

Dil. Type: N/A
 COC Info: N/A

Date Collected: 07/15/97

Sample Weight: N/A
 Extract Volume: N/A

Instrument: HPMS2
 Analyst: MDA
 Lab File ID: 2BRI8277

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/22/97

% Solid: 98

Method: 8260A
 Run ID: R29312

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/kg		ND	10	1
74-83-9	Bromomethane	ug/kg		ND	10	1
75-01-4	Vinyl chloride	ug/kg		ND	10	1
75-00-3	Chloroethane	ug/kg		ND	10	1
75-09-2	Methylene chloride	ug/kg		ND	5.1	1
67-64-1	Acetone	ug/kg		ND	10	1
75-15-0	Carbon disulfide	ug/kg		ND	5.1	1
75-35-4	1,1-Dichloroethene	ug/kg		ND	5.1	1
75-34-3	1,1-Dichloroethane	ug/kg		ND	5.1	1
156-59-2	cis-1,2-Dichloroethene	ug/kg		ND	5.1	1
156-60-5	trans-1,2-Dichloroethene	ug/kg		ND	5.1	1
67-66-3	Chloroform	ug/kg		ND	5.1	1
107-06-2	1,2-Dichloroethane	ug/kg		ND	10	1
78-93-3	2-Butanone	ug/kg		ND	5.1	1
74-97-5	Bromochloromethane	ug/kg		ND	5.1	1
71-55-6	1,1,1-Trichloroethane	ug/kg		ND	5.1	1
56-23-5	Carbon tetrachloride	ug/kg		ND	5.1	1
108-05-4	Vinyl acetate	ug/kg		ND	10	1
75-27-4	Bromodichloromethane	ug/kg		ND	5.1	1
78-87-5	1,2-Dichloropropane	ug/kg		ND	5.1	1
79-01-6	cis-1,3-Dichloropropene	ug/kg		ND	5.1	1
10061-01-5	Trichloroethene	ug/kg		ND	5.1	1
124-48-1	Dibromochloromethane	ug/kg		ND	5.1	1
79-00-5	1,1,2-Trichloroethane	ug/kg		ND	5.1	1
71-43-2	Benzene	ug/kg		ND	5.1	1
10061-02-6	trans-1,3-Dichloropropene	ug/kg		ND	5.1	1
75-25-2	Bromoform	ug/kg		ND	10	1
108-10-1	4-Methyl-2-pentanone	ug/kg		ND	10	1
591-78-6	2-Hexanone	ug/kg		ND	5.1	1
127-18-4	Tetrachloroethene	ug/kg		ND	5.1	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg	160	ND	5.1	1
106-93-4	1,2-Dibromoethane	ug/kg		ND	5.1	1
108-88-3	Toluene	ug/kg		ND	5.1	1
108-90-7	Chlorobenzene	ug/kg		ND	5.1	1
100-41-4	Ethyl benzene	ug/kg		ND	5.1	1
100-42-5	Styrene	ug/kg		ND	5.1	1
1330-20-7	Xylenes, Total	ug/kg		ND	5.1	1
541-73-1	1,3-Dichlorobenzene	ug/kg		ND	5.1	1
106-46-7	1,4-Dichlorobenzene	ug/kg		ND	5.1	1

Login #L9707328
 July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707328-04
 Client Sample ID: PS-SB03-20
 Site/Work ID: CT0213/5253-0142/NWIRP BETHPAG
 Matrix: Soil

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/22/97

Instrument: HPMS2
 Analyst: MDA
 Lab File ID: 2BR18277

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: 98

Method: 8260A
 Run ID: R29312

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/kg		ND		5:1 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/kg		ND		5:1 1
	SURROGATES - In Percent Recovery:					
	Dibromofluoromethane	110	(80 - 120%)			
	1,2-Dichloroethane-d4	104	(80 - 120%)			
	Toluene-d8	112	(81 - 117%)			
	p-Bromofluorobenzene	145	(74 - 121%)			
			* ,RE			

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Login #L9707328
 July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9707328-05
 Client Sample ID: PS-SB03-40
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG

Matrix: Soil
 Collected: 07/15/97 1110

% Solid: 80
 COC Info: N/A

ANALYTE	UNITS	RESULT	QUALIFIER	RDL	ANALYST	ANALYSIS DATE	METHOD	DIL TYPE
Percent Solids.....	% wt.	80		1.0	CLH	07/24/97	D2216-90	N/A

Login #L9707328
 July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707328-05
 Client Sample ID: PS-SB03-40
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Soil

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97
 Instrument: FINN3
 Analyst: MBJ
 Lab File ID: 3BT47400

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: 80
 Method: 8260A
 Run ID: R29309

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/25/97

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/kg		ND	1600	125
74-83-9	Bromomethane	ug/kg		ND	1600	125
75-01-4	Vinyl chloride	ug/kg		ND	1600	125
75-00-3	Chloroethane	ug/kg		ND	1600	125
75-09-2	Methylene chloride	ug/kg		ND	780	125
67-64-1	Acetone	ug/kg		ND	1600	125
75-15-0	Carbon disulfide	ug/kg		ND	780	125
75-35-4	1,1-Dichloroethene	ug/kg		ND	780	125
75-34-3	1,1-Dichloroethane	ug/kg		ND	780	125
156-59-2	cis-1,2-Dichloroethene	ug/kg		ND	780	125
156-60-5	trans-1,2-Dichloroethene	ug/kg		ND	780	125
67-66-3	Chloroform	ug/kg		ND	780	125
107-06-2	1,2-Dichloroethane	ug/kg		ND	1600	125
78-93-3	2-Butanone	ug/kg		ND	780	125
74-97-5	Bromochloromethane	ug/kg		ND	780	125
71-55-6	1,1,1-Trichloroethane	ug/kg		ND	780	125
56-23-5	Carbon tetrachloride	ug/kg		ND	780	125
108-05-4	Vinyl acetate	ug/kg		ND	1600	125
75-27-4	Bromodichloromethane	ug/kg		ND	780	125
78-87-5	1,2-Dichloropropane	ug/kg		ND	780	125
10061-01-5	cis-1,3-Dichloropropene	ug/kg		ND	780	125
79-01-6	Trichloroethene	ug/kg		ND	780	125
124-48-1	Dibromochloromethane	ug/kg		ND	780	125
79-00-5	1,1,2-Trichloroethane	ug/kg		ND	780	125
71-43-2	Benzene	ug/kg		ND	780	125
10061-02-6	trans-1,3-Dichloropropene	ug/kg		ND	780	125
75-25-2	Bromoform	ug/kg		ND	1600	125
108-10-1	4-Methyl-2-pentanone	ug/kg		ND	1600	125
591-78-6	2-Hexanone	ug/kg		ND	780	125
127-18-4	Tetrachloroethene	ug/kg	660000	D	780	125
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg		ND	780	125
106-93-4	1,2-Dibromoethane	ug/kg		ND	780	125
108-88-3	Toluene	ug/kg		ND	780	125
108-90-7	Chlorobenzene	ug/kg		ND	780	125
100-41-4	Ethyl benzene	ug/kg		ND	780	125
100-42-5	Styrene	ug/kg		ND	780	125
1330-20-7	Xylenes, Total	ug/kg		ND	780	125
541-73-1	1,3-Dichlorobenzene	ug/kg		ND	780	125
106-46-7	1,4-Dichlorobenzene	ug/kg		ND	780	125

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Login #L9707328
 July 29, 1997 01:53 pm

KERRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707328-05
 Client Sample ID: PS-SB03-40
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Soil

Dil. Type: N/A
 COC Info: N/A

Date Collected: 07/15/97

Instrument: FINN3
 Analyst: MBJ
 Lab File ID: 3BT47400

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: 80

Method: 8260A
 Run ID: R29309

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/25/97

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/kg		ND	780	125
96-12-8	1,2-Dibromo-3-chloropropane	ug/kg		ND	780	125
SURROGATES- In Percent Recovery:						
	Dibromofluoromethane	103	(80 - 120%)			
	1,2-Dichloroethane-d4	93.5	(80 - 120%)			
	Toluene-d8	114	(81 - 117%)			
	p-Bromofluorobenzene	99.9	(74 - 121%)			

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Log in #L9707328
July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9707328-06
Client Sample ID: PS-SB02-10
Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG

Matrix: Soil
Collected: 07/15/97 1215

% Solid: 94
COC Info: N/A

ANALYTE	UNITS	RESULT	QUALIFIER	RDL	ANALYST	ANALYSIS DATE	METHOD	DIL. TYPE
Percent Solids.....	% wt.	94		1.0	CLH	07/24/97	D2216-90	N/A

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LogIn #L9707328
 July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707328-06
 Client Sample ID: PS-SB02-10
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Soil

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/22/97

Instrument: HPMS2
 Analyst: MDA
 Lab File ID: 2BR18278

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: 94
 Method: 8260A
 Run ID: R29312

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/kg		ND		11
74-83-9	Bromomethane	ug/kg		ND		11
75-01-4	Vinyl chloride	ug/kg		ND		11
75-00-3	Chloroethane	ug/kg		ND		5.3
75-09-2	Methylene chloride	ug/kg		ND		11
67-64-1	Acetone	ug/kg		ND		5.3
75-15-0	Carbon disulfide	ug/kg		ND		5.3
75-35-4	1,1-Dichloroethane	ug/kg		ND		5.3
75-34-3	1,1-Dichloroethane	ug/kg		ND		5.3
156-59-2	cis-1,2-Dichloroethane	ug/kg		ND		5.3
156-60-5	trans-1,2-Dichloroethane	ug/kg		ND		5.3
67-66-3	Chloroform	ug/kg		ND		5.3
107-06-2	1,2-Dichloroethane	ug/kg		ND		11
78-93-3	2-Butanone	ug/kg		ND		5.3
74-97-5	Bromochloromethane	ug/kg		ND		5.3
71-55-6	1,1,1-Trichloroethane	ug/kg		ND		5.3
56-23-5	Carbon tetrachloride	ug/kg		ND		5.3
108-05-4	Vinyl acetate	ug/kg		ND		11
75-27-4	Bromodichloromethane	ug/kg		ND		5.3
78-87-5	1,2-Dichloropropane	ug/kg		ND		5.3
10061-01-5	Cis-1,3-Dichloropropene	ug/kg		ND		5.3
79-01-6	Trichloroethene	ug/kg		ND		5.3
124-48-1	Dibromochloromethane	ug/kg		ND		5.3
79-00-5	1,1,2-Trichloroethane	ug/kg		ND		5.3
71-43-2	Benzene	ug/kg		ND		5.3
10061-02-6	trans-1,3-Dichloropropene	ug/kg		ND		5.3
75-25-2	Bromoform	ug/kg		ND		11
108-10-1	4-Methyl-2-pentanone	ug/kg		ND		11
591-78-6	2-Hexanone	ug/kg		ND		5.3
127-18-4	Tetrachloroethene	ug/kg		ND		5.3
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg		ND		5.3
106-93-4	1,2-Dibromoethane	ug/kg		ND		5.3
108-88-3	Toluene	ug/kg		ND		5.3
108-90-7	Chlorobenzene	ug/kg		ND		5.3
100-41-4	Ethyl benzene	ug/kg		ND		5.3
100-42-5	Styrene	ug/kg		ND		5.3
1330-20-7	Xylenes, Total	ug/kg		ND		5.3
541-73-1	1,3-Dichlorobenzene	ug/kg		ND		5.3
106-46-7	1,4-Dichlorobenzene	ug/kg		ND		5.3

Login #L9707328
 July 29, 1997 01:53 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707328-06
 Client Sample ID: PS-SP02-10
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Soil

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97

Instrument: HPMS2
 Analyst: MDA
 Lab File ID: 2BR18278

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/22/97

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: 94
 Method: 8260A
 Run ID: R29312

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/kg		ND		5.3 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/kg		ND		5.3 1
	SURROGATES- In Percent Recovery:					
	Dibromofluoromethane	96.3		(80 - 120%)		
	1,2-Dichloroethane-d4	90.2		(80 - 120%)		
	Toluene-d8	93.0		(81 - 117%)		
	p-Bromofluorobenzene	102		(74 - 121%)		

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KEMRON ENVIRONMENTAL SERVICES

Login #L9707328
July 29, 1997 01:53 pm

Lab Sample ID: L9707328-07
Client Sample ID: PS-SB02-40
Site/Work ID: CT0213/5253-0142/NWIRP BETHPAG
Matrix: Soil
Collected: 07/15/97 1240
% Solid: 93
COC Info: N/A

ANALYTE	UNITS	RESULT	QUALIFIER	RDL	ANALYST	ANALYSIS DATE	METHOD	DIL TYPE
Percent Solids.....	% wt.	93		1.0	CLH	07/24/97	D2216-90	N/A

Login #L9707328
 July 29, 1997 04:52 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707328-07
 Client Sample ID: PS-SB02-40
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Soil

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97
 Sample Weight: N/A
 Extract Volume: N/A
 % Solid: 93

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/23/97

Instrument: HPMS2
 Analyst: MDA
 Lab File ID: 2BR18279
 Method: 8260A
 Run ID: R29312

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/kg		ND		11
74-83-9	Bromomethane	ug/kg		ND		11
75-01-4	Vinyl chloride	ug/kg		ND		11
75-00-3	Chloroethane	ug/kg		ND		11
75-09-2	Methylene chloride	ug/kg		ND		5.4
67-64-1	Acetone	ug/kg		ND		11
75-15-0	Carbon disulfide	ug/kg		ND		5.4
75-35-4	1,1-Dichloroethene	ug/kg		ND		5.4
75-34-3	1,1-Dichloroethane	ug/kg		ND		5.4
156-59-2	cis-1,2-Dichloroethene	ug/kg		ND		5.4
156-60-5	trans-1,2-Dichloroethene	ug/kg		ND		5.4
67-66-3	Chloroform	ug/kg		ND		5.4
107-06-2	1,2-Dichloroethane	ug/kg		ND		11
78-93-3	2-Butanone	ug/kg		ND		5.4
74-97-5	Bromochloromethane	ug/kg		ND		5.4
71-55-6	1,1,1-Trichloroethane	ug/kg		ND		5.4
56-23-5	Carbon tetrachloride	ug/kg		ND		5.4
108-05-4	Vinyl acetate	ug/kg		ND		11
75-27-4	Bromodichloromethane	ug/kg		ND		5.4
78-87-5	1,2-Dichloropropane	ug/kg		ND		5.4
10061-01-5	cis-1,3-Dichloropropene	ug/kg		ND		5.4
79-01-6	Trichloroethene	ug/kg		ND		5.4
124-48-1	Dibromochloromethane	ug/kg		ND		5.4
79-00-5	1,1,2-Trichloroethane	ug/kg		ND		5.4
71-43-2	Benzene	ug/kg		ND		5.4
10061-02-6	trans-1,3-Dichloropropene	ug/kg		ND		5.4
75-25-2	Bromoform	ug/kg		ND		11
108-10-1	4-Methyl-2-pentanone	ug/kg		ND		11
591-78-6	2-Hexanone	ug/kg		ND		5.4
127-18-4	Tetrachloroethene	ug/kg		ND		5.4
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg		ND		5.4
106-93-4	1,2-Dibromoethane	ug/kg		ND		5.4
108-88-3	Toluene	ug/kg		ND		5.4
108-90-7	Chlorobenzene	ug/kg		ND		5.4
100-41-4	Ethyl benzene	ug/kg		ND		5.4
100-42-5	Styrene	ug/kg		ND		5.4
1330-20-7	Xylenes, Total	ug/kg		ND		5.4
541-73-1	1,3-Dichlorobenzene	ug/kg		ND		5.4
106-46-7	1,4-Dichlorobenzene	ug/kg		ND		5.4

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Log in #L9707328
 July 29, 1997 04:52 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707328-07
 Client Sample ID: PS-SB02-40
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Soil
 Date Collected: 07/15/97
 Dil. Type: N/A
 COC Info: N/A
 Sample Weight: N/A
 Extract Volume: N/A
 % Solid: 93
 Method: 8260A
 Run ID: R29312

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/23/97

Instrument: HPMS2
 Analyst: MDA
 Lab File ID: 2BR18279

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/kg		ND		5.4 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/kg		ND		5.4 1
SURROGATES - In Percent Recovery:						
	Dibromofluoromethane		93.1	(80 - 120%)		
	1,2-Dichloroethane		96.3	(80 - 120%)		
	Toluene-d8		97.8	(81 - 117%)		
	p-Bromofluorobenzene		103	(74 - 121%)		

Order #97-07-328
July 29, 1997 17:02

**KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE**

Sample L9707328-04 (Client ID: P5-SB03-20) had sample matrix interference on internal standards and surrogate recoveries.

The soil laboratory control sample analyzed 7/25/97 yielded recoveries for the following analytes outside advisory limits:

- 1,1-dichloroethane
- C-1-2-dichloroethene
- chloroform
- benzene

Matrix spike/matrix spike duplicate (MS/MSD) analytes performed 7/25/97 yielded recoveries for 1,2-dibromo-3-chloropropane outside advisory limits.

Sample results obtained 7/25/97 were used solely to confirm sample matrix interference,

KEMRON Environmental Services, Inc.
LIST OF VALID DATA QUALIFIERS (qual)
April 23, 1997

Qualifier	Description
(A)	See the report narrative
(B)	See the report narrative
(C)	See the report narrative
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met
N	Tentatively Identified Compound (TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.

KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750



Phone: (614) 373-4071

Brown and Root Environmental
CF Braun, Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220
Attn: Dave Brayack

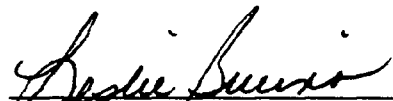
Login #: 97-04-189
Date Received: 04/09/97
Date Completed: 04/21/97
Date Reported: 04/21/97 15:35
Work ID: 5253/NWIRP BETHPAGE

Client Code: BRROOTENV418

SAMPLE IDENTIFICATION

<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	PS-EW-03	02	PS-MW-01
03	PS-EW-01	04	PS-IW-01
05	PS-EW-02	06	PS-DUP-01
07	TB-040897-1		

All results for soils/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the prior written approval of KEMRON.


Certified by
Leslie Bucina

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-EW-03**
 Test Description: **TCL additional compounds**

Lab No: **01**

Collected: **04/08/97 1130**
 Category: **Water**
 Method: **8260A**

Analyst: **SLT** File: **2BR15985**
 Instrument: **HPMS2** Injected: **04/18/97** Factor: **1** Units: **ug/L**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5
67-64-1	Acetone	U	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	U	5
75-34-3	1,1-Dichloroethane	49	5
156-59-2	cis-1,2-Dichloroethene	240D	5
156-60-5	trans-1,2-Dichloroethene	U	5
67-66-3	Chloroform	U	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	200D	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	380D	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	1400D	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

SURROGATES:

Dibromofluoromethane	<u>99</u> † Recovery (86% - 118%)
1,2-Dichloroethane-d4	<u>96</u> † Recovery (80% - 120%)
Toluene-d8	<u>94</u> † Recovery (88% - 110%)
p-Bromofluorobenzene	<u>94</u> † Recovery (86% - 115%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

D = The analyte was quantified at a secondary dilution factor

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-MW-01**
 Test Description: **TCL additional compounds**

Lab No: 02

Collected: **04/08/97 1245**
 Category: **Water**
 Method: **8260A**

Analyst: **SLT** File: **2BR15986**
 Instrument: **HPMS2** Injected: **04/18/97** Factor: **1** Units: **ug/L**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5
67-64-1	Acetone	U	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	6	5
75-34-3	1,1-Dichloroethane	110	5
156-59-2	cis-1,2-Dichloroethene	500D	5
156-60-5	trans-1,2-Dichloroethene	U	5
67-66-3	Chloroform	U	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	390D	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	630D	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	2800D	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

SURROGATES:

Dibromofluoromethane	<u>95</u> % Recovery (86% - 118%)
1,2-Dichloroethane-d4	<u>90</u> % Recovery (80% - 120%)
Toluene-d8	<u>90</u> % Recovery (88% - 110%)
p-Bromofluorobenzene	<u>90</u> % Recovery (86% - 115%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

D = The analyte was quantified at a secondary dilution factor

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-EW-01**
 Test Description: **TCL additional compounds**

Lab No: 03

Collected: **04/08/97 1315**
 Category: **Water**
 Method: **8260A**

Analyst: SLT
 Instrument: HPMS2
 Injected: 04/18/97
 File: 2BR15987
 Factor: 1
 Units: ug/L

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5
67-64-1	Acetone	U	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	U	5
75-34-3	1,1-Dichloroethane	80	5
156-59-2	cis-1,2-Dichloroethene	380D	5
156-60-5	trans-1,2-Dichloroethene	U	5
67-66-3	Chloroform	U	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	220D	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	370D	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	1600D	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

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SURROGATES:

Dibromofluoromethane	<u>106</u>	% Recovery	(86% - 118%)
1,2-Dichloroethane-d4	<u>103</u>	% Recovery	(80% - 120%)
Toluene-d8	<u>100</u>	% Recovery	(88% - 110%)
p-Bromofluorobenzene	<u>101</u>	% Recovery	(86% - 115%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

D = The analyte was quantified at a secondary dilution factor

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-IW-01**
 Test Description: **TCL additional compounds**

Lab No: **04**

Collected: **04/08/97 1340**
 Category: **Water**
 Method: **8260A**

Analyst: **SLT** File: **2BR15988**
 Instrument: **HPMS2** Injected: **04/18/97** Factor: **1** Units: **ug/L**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5
67-64-1	Acetone	560D	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	U	5
75-34-3	1,1-Dichloroethane	U	5
156-59-2	cis-1,2-Dichloroethene	U	5
156-60-5	trans-1,2-Dichloroethene	U	5
67-66-3	Chloroform	U	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	1700D	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	7	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	U	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	19	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

SURROGATES:

Dibromofluoromethane	<u>101</u> % Recovery (86% - 118%)
1,2-Dichloroethane-d4	<u>97</u> % Recovery (80% - 120%)
Toluene-d8	<u>95</u> % Recovery (88% - 110%)
p-Bromofluorobenzene	<u>98</u> % Recovery (86% - 115%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

D = The analyte was quantified at a secondary dilution factor

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-EW-02**
 Test Description: **TCL additional compounds**

Lab No: **05**

Collected: **04/08/97 1400**
 Category: **Water**
 Method: **8260A**

Analyst: **SLT** File: **2BR15995**
 Instrument: **HPMS2** Injected: **04/18/97** Factor: **1** Units: **ug/L**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5
67-64-1	Acetone	U	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	11	5
75-34-3	1,1-Dichloroethane	170	5
156-59-2	cis-1,2-Dichloroethene	840D	5
156-60-5	trans-1,2-Dichloroethene	6	5
67-66-3	Chloroform	5	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	1200D	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	1500D	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	11000D	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

SURROGATES:

Dibromofluoromethane	<u>100</u>	% Recovery	(86% - 118%)
1,2-Dichloroethane-d4	<u>98</u>	% Recovery	(80% - 120%)
Toluene-d8	<u>96</u>	% Recovery	(88% - 110%)
p-Bromofluorobenzene	<u>103</u>	% Recovery	(86% - 115%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

D = The analyte was quantified at a secondary dilution factor

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KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-DUP-01**
 Test Description: **TCL additional compounds**

Lab No: **06**

Collected: **04/08/97**
 Category: **Water**
 Method: **8260A**

Analyst: **SLT** File: **2BR15996**
 Instrument: **HPMS2** Injected: **04/18/97** Factor: **1** Units: **ug/L**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5
67-64-1	Acetone	U	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	9	5
75-34-3	1,1-Dichloroethane	150	5
156-59-2	cis-1,2-Dichloroethene	720D	5
156-60-5	trans-1,2-Dichloroethene	6	5
67-66-3	Chloroform	5	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	1000D	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	1300D	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	9000D	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

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SURROGATES:

Dibromofluoromethane	<u>91</u> % Recovery	(86% - 118%)
1,2-Dichloroethane-d4	<u>92</u> % Recovery	(80% - 120%)
Toluene-d8	<u>88</u> % Recovery	(88% - 110%)
p-Bromofluorobenzene	<u>96</u> % Recovery	(86% - 115%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

D = The analyte was quantified at a secondary dilution factor

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **TB-040897-1**
 Test Description: **TCL additional compounds**

Lab No: **07**

Collected: **04/08/97**
 Category: **Water**
 Method: **8260A**

Analyst: **SLT** File: **2BR16030**
 Instrument: **HPMS2** Injected: **04/19/97** Factor: **1** Units: **ug/L**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5
67-64-1	Acetone	U	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	U	5
75-34-3	1,1-Dichloroethane	U	5
156-59-2	cis-1,2-Dichloroethene	U	5
156-60-5	trans-1,2-Dichloroethene	U	5
67-66-3	Chloroform	U	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	U	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	U	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	U	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

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SURROGATES:

Dibromofluoromethane	<u>105</u>	‡ Recovery	(86‡ - 118‡)
1,2-Dichloroethane-d4	<u>104</u>	‡ Recovery	(80‡ - 120‡)
Toluene-d8	<u>100</u>	‡ Recovery	(88‡ - 110‡)
p-Bromofluorobenzene	<u>104</u>	‡ Recovery	(86‡ - 115‡)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

Order #97-04-189
April 22, 1997 16:05

**KEMRON ENVIRONMENTAL SERVICES
REPORT COMMENTS**

Volatile M8260A:

No technical difficulties were experienced with this analytical batch.

KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750



Phone: (614) 373-4071

Brown and Root Environmental
CF Braun, Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220
Attn: Dave Brayack

Login #: 97-05-351
Date Received: 05/22/97
Date Completed: 06/02/97
Date Reported: 06/02/97 15:28
Work ID: CT0213/5253-0142/NWIRP BETHPA

Client Code: BRROOTENV418

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
01	PS-TB052197-02	02	PS-IW-01
03	PS-MW-01	04	PS-EW-01
05	PS-EW-03	06	PS-EW-02
07	PS-DUP-02		

All results for soils/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the prior written approval of KEMRON.

Certified by
David L. Bumgarner

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Order #97-05-351
June 3, 1997 15:01

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

TCL Volatile Analysis:

Sample PS-EW-02 (Kemron ID 97-05-351-06) yielded a result for methylene chloride slightly below the nominal reporting limit.

Sample PS-DUP-02 (Kemron ID 97-05-351-07) was reanalyzed at a 50x dilution due to surrogate recoveries above acceptance limits and to quantitate results within the instrument calibration range.

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
Sample Description: **PS-TB052197-02**
Test Description: **TCL additional compounds**

Lab No: **01**

Collected: **05/21/97 930**
Category: **Water**
Method: **8260A**

Analyst: **SLT** File: **1BR21504**
Instrument: **HPMS1** Injected: **05/27/97** Factor: **1** Units: **ug/L**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5
67-64-1	Acetone	U	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	U	5
75-34-3	1,1-Dichloroethane	U	5
156-59-2	cis-1,2-Dichloroethene	U	5
156-60-5	trans-1,2-Dichloroethene	U	5
67-66-3	Chloroform	U	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	U	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	U	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	U	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

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KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

SURROGATES:

Dibromofluoromethane	<u>94.5</u>	% Recovery	(86% - 118%)
1,2-Dichloroethane-d4	<u>86.9</u>	% Recovery	(80% - 120%)
Toluene-d8	<u>102</u>	% Recovery	(88% - 110%)
p-Bromofluorobenzene	<u>103</u>	% Recovery	(86% - 115%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-IW-01**
 Test Description: **TCL additional compounds**

Lab No: **02**

Collected: **05/21/97 815**
 Category: **Water**
 Method: **8260A**

Analyst: **SLT** File: **1BR21507**
 Instrument: **HPMS1** Injected: **05/27/97** Factor: **1** Units: **ug/L**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5
67-64-1	Acetone	U	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	U	5
75-34-3	1,1-Dichloroethane	U	5
156-59-2	cis-1,2-Dichloroethene	U	5
156-60-5	trans-1,2-Dichloroethene	U	5
67-66-3	Chloroform	U	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	8	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	U	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	15	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

SURROGATES:

Dibromofluoromethane	<u>102</u>	% Recovery	(86% - 118%)
1,2-Dichloroethane-d4	<u>102</u>	% Recovery	(80% - 120%)
Toluene-d8	<u>103</u>	% Recovery	(88% - 110%)
p-Bromofluorobenzene	<u>107</u>	% Recovery	(86% - 115%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-MW-01**
 Test Description: **TCL additional compounds**

Lab No: **03**

Collected: **05/21/97 840**
 Category: **Water**
 Method: **8260A**

Analyst: **SLT** File: **1BR21509**
 Instrument: **HPMS1** Injected: **05/27/97** Factor: **1** Units: **ug/L**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5
67-64-1	Acetone	U	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	U	5
75-34-3	1,1-Dichloroethane	36	5
156-59-2	cis-1,2-Dichloroethene	110	5
156-60-5	trans-1,2-Dichloroethene	U	5
67-66-3	Chloroform	U	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	94	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	160	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	710D	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

SURROGATES:

Dibromofluoromethane	<u>107</u>	% Recovery	(86% - 118%)
1,2-Dichloroethane-d4	<u>105</u>	% Recovery	(80% - 120%)
Toluene-d8	<u>107</u>	% Recovery	(88% - 110%)
p-Bromofluorobenzene	<u>112</u>	% Recovery	(86% - 115%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

D = The analyte was quantified at a secondary dilution factor

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-EW-01**
 Test Description: **TCL additional compounds**

Lab No: **04**

Collected: **05/21/97 845**
 Category: **Water**
 Method: **8260A**

Analyst: **SLT** File: **1BR21515**
 Instrument: **HPMS1** Injected: **05/27/97** Factor: **1** Units: **ug/L**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5
67-64-1	Acetone	U	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	U	5
75-34-3	1,1-Dichloroethane	U	5
156-59-2	cis-1,2-Dichloroethene	15	5
156-60-5	trans-1,2-Dichloroethene	U	5
67-66-3	Chloroform	U	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	5	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	9	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	27	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

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KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

SURROGATES:

Dibromofluoromethane	<u>91.9</u>	% Recovery	(86% - 118%)
1,2-Dichloroethane-d4	<u>92.1</u>	% Recovery	(80% - 120%)
Toluene-d8	<u>92.4</u>	% Recovery	(88% - 110%)
p-Bromofluorobenzene	<u>95.5</u>	% Recovery	(86% - 115%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

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KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-EW-03**
 Test Description: **TCL additional compounds**

Lab No: **05**

Collected: **05/21/97 910**
 Category: **Water**
 Method: **8260A**

Analyst: **SLT** File: **1BR21511**
 Instrument: **HPMS1** Injected: **05/27/97** Factor: **1** Units: **ug/L**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5
67-64-1	Acetone	83	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	U	5
75-34-3	1,1-Dichloroethane	51	5
156-59-2	cis-1,2-Dichloroethene	160	5
156-60-5	trans-1,2-Dichloroethene	U	5
67-66-3	Chloroform	U	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	170	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	230D	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	920D	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

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KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

SURROGATES:

Dibromofluoromethane	<u>105</u> % Recovery (86% - 118%)
1,2-Dichloroethane-d4	<u>104</u> % Recovery (80% - 120%)
Toluene-d8	<u>108</u> % Recovery (88% - 110%)
p-Bromofluorobenzene	<u>111</u> % Recovery (86% - 115%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

U = Analyzed for but not detected

D = The analyte was quantified at a secondary dilution factor

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-EW-02**
 Test Description: **TCL additional compounds**

Lab No: **06**

Collected: **05/21/97 910**
 Category: **Water**
 Method: **8260A**

Analyst: **SLT** File: **1BR21512**
 Instrument: **HPMS1** Injected: **05/27/97** Factor: **1** Units: **ug/L**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	U	5
67-64-1	Acetone	U	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	12	5
75-34-3	1,1-Dichloroethane	160	5
156-59-2	cis-1,2-Dichloroethene	340D	5
156-60-5	trans-1,2-Dichloroethene	U	5
67-66-3	Chloroform	U	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	770D	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	580D	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	4500D	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

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KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

SURROGATES:

Dibromofluoromethane	<u>98.7</u>	% Recovery	(86% - 118%)
1,2-Dichloroethane-d4	<u>98.7</u>	% Recovery	(80% - 120%)
Toluene-d8	<u>102</u>	% Recovery	(88% - 110%)
p-Bromofluorobenzene	<u>105</u>	% Recovery	(86% - 115%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

- U = Analyzed for but not detected
- D = The analyte was quantified at a secondary dilution factor

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: **826-BRE2**
 Sample Description: **PS-DUP-02**
 Test Description: **TCL additional compounds**

Lab No: **07**

Collected: **05/21/97**
 Category: **Water**
 Method: **8260A**

Analyst: **SLT** File: **1BR21513**
 Instrument: **HPMS1** Injected: **05/27/97** Factor: **1** Units: **ug/L**

CAS#	COMPOUND	RESULT	REPORTING LIMIT
74-87-3	Chloromethane	U	10
74-83-9	Bromomethane	U	10
75-01-4	Vinyl chloride	U	10
75-00-3	Chloroethane	U	10
75-09-2	Methylene chloride	5.4	5
67-64-1	Acetone	U	10
75-15-0	Carbon disulfide	U	5
75-35-4	1,1-Dichloroethene	14	5
75-34-3	1,1-Dichloroethane	180	5
156-59-2	cis-1,2-Dichloroethene	330D	5
156-60-5	trans-1,2-Dichloroethene	U	5
67-66-3	Chloroform	U	5
107-06-2	1,2-Dichloroethane	U	5
78-93-3	2-Butanone	U	10
74-97-5	Bromochloromethane	U	5
71-55-6	1,1,1-Trichloroethane	680D	5
56-23-5	Carbon tetrachloride	U	5
108-05-4	Vinyl acetate	U	10
75-27-4	Bromodichloromethane	U	5
78-87-5	1,2-Dichloropropane	U	5
10061-01-5	cis-1,3-Dichloropropene	U	5
79-01-6	Trichloroethene	550D	5
124-48-1	Dibromochloromethane	U	5
79-00-5	1,1,2-Trichloroethane	U	5
71-43-2	Benzene	U	5
10061-02-6	trans-1,3-Dichloropropene	U	5
75-25-2	Bromoform	U	5
108-10-1	4-Methyl-2-pentanone	U	10
591-78-6	2-Hexanone	U	10
127-18-4	Tetrachloroethene	4000D	5
79-34-5	1,1,2,2-Tetrachloroethane	U	5
106-93-4	1,2-Dibromoethane	U	5
108-88-3	Toluene	U	5
108-90-7	Chlorobenzene	U	5
100-41-4	Ethyl benzene	U	5
100-42-5	Styrene	U	5
1330-20-7	Xylenes, Total	U	5
541-73-1	1,3-Dichlorobenzene	U	5
106-46-7	1,4-Dichlorobenzene	U	5
95-50-1	1,2-Dichlorobenzene	U	5
96-12-8	1,2-Dibromo-3-chloropropane	U	5

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KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

SURROGATES:

Dibromofluoromethane	<u>109</u>	% Recovery	(86% - 118%)
1,2-Dichloroethane-d4	<u>110</u>	% Recovery	(80% - 120%)
Toluene-d8	<u>112RE</u>	% Recovery	(88% - 110%)
p-Bromofluorobenzene	<u>118RE</u>	% Recovery	(86% - 115%)

NOTES AND DEFINITIONS FOR THIS SAMPLE:

- U = Analyzed for but not detected
- D = The analyte was quantified at a secondary dilution factor
- RE = Reanalysis confirms sample matrix interference

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KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750
Phone: (614) 373-4071

Brown and Root Environmental
CF Braun, Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220
Attention: Dave Brayack

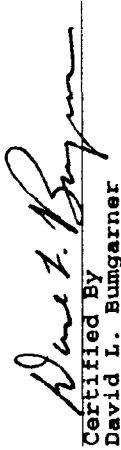
Login #: L9706427
Report Date: 07/02/97
Work ID: CTO 213/5253-0142/NWIRP BETHPA
Date Received: 06/19/97

PO Number:
Account Number: BRROOTENV418

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9706427-01	PS-TB061897-03	L9706427-02	PS-MW-01
L9706427-03	PS-EW-01	L9706427-04	PS-EW-02
L9706427-05	PS-EW-03	L9706427-06	PS-IW-01
L9706427-07	PS-DUP-03		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. The report shall not be reproduced, except in full, without the written approval of KEMRON.


Certified By
David L. Bumgarner

Login #L9706427
 July 2, 1997 01:54 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9706427-01
 Client Sample ID: PS-TB061897-03
 Site/Work ID: CTO 213/5253-0142/NWIRP BETHPA
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 06/18/97

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A
 Instrument: FINN3
 Analyst: MBJ
 Lab File ID: 3BT47110

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 06/25/97

Method: 8260A
 Run ID: R27061

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND		10
74-83-9	Bromomethane	ug/L		ND		10
75-01-4	Vinyl chloride	ug/L		ND		10
75-00-3	Chloroethane	ug/L		ND		10
75-09-2	Methylene chloride	ug/L		ND		5.0
67-64-1	Acetone	ug/L	26			10
75-15-0	Carbon disulfide	ug/L		ND		5.0
75-35-4	1,1-Dichloroethane	ug/L		ND		5.0
75-34-3	1,1-Dichloroethane	ug/L		ND		5.0
156-59-2	cis-1,2-Dichloroethene	ug/L		ND		5.0
156-60-5	trans-1,2-Dichloroethene	ug/L		ND		5.0
67-66-3	Chloroform	ug/L		ND		5.0
107-06-2	1,2-Dichloroethane	ug/L		ND		10
78-93-3	2-Butanone	ug/L		ND		5.0
74-97-5	Bromochloromethane	ug/L		ND		5.0
71-55-6	1,1,1-Trichloroethane	ug/L		ND		5.0
56-23-5	Carbon tetrachloride	ug/L		ND		5.0
108-05-4	Vinyl acetate	ug/L		ND		10
75-27-4	Bromodichloromethane	ug/L		ND		5.0
78-87-5	1,2-Dichloropropane	ug/L		ND		5.0
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND		5.0
79-01-6	Trichloroethene	ug/L		ND		5.0
124-48-1	Dibromochloromethane	ug/L		ND		5.0
79-00-5	1,1,2-Trichloroethane	ug/L		ND		5.0
71-43-2	Benzene	ug/L		ND		5.0
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND		5.0
75-25-2	Bromoform	ug/L		ND		10
108-10-1	4-Methyl-2-pentanone	ug/L		ND		10
591-78-6	2-Hexanone	ug/L		ND		5.0
127-18-4	Tetrachloroethene	ug/L		ND		5.0
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	6.2			5.0
106-93-4	1,2-Dibromoethane	ug/L		ND		5.0
108 88-3	Toluene	ug/L		ND		5.0
108 90-7	Chlorobenzene	ug/L		ND		5.0
100-41-4	Ethyl benzene	ug/L		ND		5.0
100-42-5	Styrene	ug/L		ND		5.0
1330-20-7	Xylenes, Total	ug/L		ND		5.0
541-73-1	1,3-Dichlorobenzene	ug/L		ND		5.0
106-46-7	1,4-Dichlorobenzene	ug/L		ND		5.0

Login #L9706427
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KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9706427-01
Client Sample ID: PS-TB061897-03
Site/Work ID: CIO 213/5253-0142/NWIRP BETHPA
Matrix: Water
Dil. Type: N/A
COC Info: N/A
Date Collected: 06/18/97
Instrument: FINN3
Analyst: MBJ
Lab File ID: 3BT47110
Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A
Method: 8260A
Run ID: R27061

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/L		ND		5.0 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		ND		5.0 1
SURROGATES - In Percent Recovery:						
	Dibromofluoromethane	113		(86 - 118%)		
	1,2-Dichloroethane-d4	113		(80 - 120%)		
	Toluene-d8	106		(88 - 110%)		
	p-Bromofluorobenzene	104		(86 - 115%)		

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Login #L9706427
 July 2, 1997 01:54 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9706427-02
 Client Sample ID: PS-MW-01
 Site/Work ID: CTO 213/5253-0142/NWIRP BETHPA
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 06/18/97
 Instrument: FINN3
 Analyst: MBJ
 Lab File ID: 3BT47113

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 06/25/97

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A
 Method: 8260A
 Run ID: R27061

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
156-59-2	cis-1,2-Dichloroethene	ug/L	6.7	ND	5.0	1
156-60-5	trans-1,2-Dichloroethene	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	10	1
78-93-3	2-Butanone	ug/L		ND	5.0	1
74-97-5	Bromochloromethane	ug/L		ND	5.0	1
1,1,1-Trichloroethane		ug/L	6.2	ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
108-05-4	Vinyl acetate	ug/L		ND	10	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L	17	ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	10	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	5.0	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-tetrachloroethane	ug/L		ND	5.0	1
106-93-4	1,2-Dibromoethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1
541-73-1	1,3-Dichlorobenzene	ug/L		ND	5.0	1
106-46-7	1,4-Dichlorobenzene	ug/L		ND	5.0	1

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Log in #L9706427
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KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9706427-02
 Client Sample ID: PS-MW-01
 Site/Work ID: CTO 213/5253-0142/NWIRP BETHPA
 Matrix: Water

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 06/25/97

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 06/18/97
 Instrument: FINN3
 Analyst: MBJ
 Lab File ID: 3BT47113

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A

Method: 8260A
 Run ID: R27061

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/L		ND		5.0 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		ND		5.0 1
	SURROGATES- In Percent Recovery:					
	Dibromofluoromethane	109		(86 - 118%)		
	1,2-Dichloroethane	109		(80 - 120%)		
	Toluene-d8	99.3		(88 - 110%)		
	p-Bromofluorobenzene	104		(86 - 115%)		

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Login #L9706427
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KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9706427-03
 Client Sample ID: PS-EW-01
 Site/Work ID: CTO 213/5253-0142/NWIRP BETHPA
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 06/18/97
 Instrument: FINN3
 Analyst: MBJ
 Lab File ID: 3BT47114

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 06/25/97

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND		10
74-83-9	Bromomethane	ug/L		ND		10
75-01-4	Vinyl chloride	ug/L		ND		10
75-00-3	Chloroethane	ug/L		ND		5.0
75-09-2	Methylene chloride	ug/L		ND		10
67-64-1	Acetone	ug/L		ND		5.0
75-15-0	Carbon disulfide	ug/L		ND		5.0
75-35-4	1,1-Dichloroethane	ug/L		ND		5.0
75-34-3	1,1-Dichloroethane	ug/L	15			5.0
156-59-2	cis-1,2-Dichloroethane	ug/L	15			5.0
156-60-5	trans-1,2-Dichloroethane	ug/L		ND		5.0
67-66-3	Chloroform	ug/L		ND		5.0
107-06-2	1,2-Dichloroethane	ug/L		ND		10
78-93-3	2-Butanone	ug/L		ND		5.0
74-97-5	Bromochloromethane	ug/L		ND		5.0
71-55-6	1,1,1-Trichloroethane	ug/L	50			5.0
56-23-5	Carbon tetrachloride	ug/L		ND		5.0
108-05-4	Vinyl acetate	ug/L		ND		5.0
75-27-4	Bromodichloromethane	ug/L		ND		5.0
78-87-5	1,2-Dichloropropane	ug/L		ND		5.0
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND		5.0
79-01-6	Trichloroethene	ug/L	18			5.0
124-48-1	Dibromochloromethane	ug/L		ND		5.0
79-00-5	1,1,2-Trichloroethane	ug/L		ND		5.0
71-43-2	Benzene	ug/L		ND		5.0
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND		5.0
75-25-2	Bromoform	ug/L		ND		10
108-10-1	4-Methyl-2-pentanone	ug/L		ND		10
591-78-6	2-Hexanone	ug/L		ND		5.0
127-18-4	Tetrachloroethene	ug/L		ND		5.0
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	71			5.0
106-93-4	1,2-Dibromoethane	ug/L		ND		5.0
108-88-3	Toluene	ug/L		ND		5.0
108-90-7	Chlorobenzene	ug/L		ND		5.0
100-41-4	Ethyl benzene	ug/L		ND		5.0
100-42-5	Styrene	ug/L		ND		5.0
1330-20-7	Xylenes, total	ug/L		ND		5.0
541-73-1	1,3-Dichlorobenzene	ug/L		ND		5.0
106-46-7	1,4-Dichlorobenzene	ug/L		ND		5.0

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LogIn #L9706427
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KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9706427-03
Client Sample ID: PS-EW-01
Site/Work ID: CTO 213/5253-0142/NWIRP BETHPA
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 06/18/97

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 06/25/97

Instrument: FINN3
Analyst: MBJ
Lab File ID: 3BT47114

Method: 8260A
Run ID: R27061

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/L		ND		5.0 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		ND		5.0 1
	SURROGATES- In Percent Recovery:					
	Dibromofluoromethane	104	(86	- 118%)		
	1,2-Dichloroethane-d4	108	(80	- 120%)		
	Toluene-d8	106	(88	- 110%)		
	p-Bromofluorobenzene	99.3	(86	- 115%)		

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Login #L9706427
 July 2, 1997 01:54 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRH2 - TCL additional compounds

Lab Sample ID: L9706427-04
 Client Sample ID: PS-EW-02
 Site/Work ID: CTO 213/5253-0142/NWIRP BETHPA
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 06/18/97

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 06/25/97

Instrument: FINN3
 Analyst: MBJ
 Lab File ID: 3BT47111

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND	100	10
74-83-9	Bromomethane	ug/L		ND	100	10
75-01-4	Vinyl chloride	ug/L		ND	100	10
75-00-3	Chloroethane	ug/L		ND	100	10
75-09-2	Methylene chloride	ug/L		ND	100	10
67-64-1	Acetone	ug/L		ND	100	10
75-15-0	Carbon disulfide	ug/L		ND	50	10
75-35-4	1,1-Dichloroethene	ug/L		ND	50	10
75-34-3	1,1-Dichloroethane	ug/L		ND	50	10
156-59-2	cis-1,2-Dichloroethene	ug/L	91	ND	50	10
156-60-5	trans-1,2-Dichloroethene	ug/L	190	ND	50	10
67-66-3	Chloroform	ug/L		ND	50	10
107-06-2	1,2-Dichloroethane	ug/L		ND	100	10
78-93-3	2-Butanone	ug/L		ND	50	10
74-97-5	Bromochloromethane	ug/L		ND	50	10
71-55-6	1,1,1-Trichloroethane	ug/L		ND	50	10
56-23-5	Carbon tetrachloride	ug/L	410	ND	50	10
108-05-4	Vinyl acetate	ug/L		ND	100	10
75-27-4	Bromodichloromethane	ug/L		ND	50	10
78-87-5	1,2-Dichloropropane	ug/L		ND	50	10
10061-01-5	cis-1,3-Dichloropropene	ug/L	270	ND	50	10
79-01-6	Trichloroethene	ug/L		ND	50	10
124-48-1	Dibromochloromethane	ug/L		ND	50	10
79-00-5	1,1,2-Trichloroethane	ug/L		ND	50	10
71-43-2	Benzene	ug/L		ND	50	10
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	50	10
75-25-2	Bromoform	ug/L		ND	50	10
108-10-1	4-Methyl-2-pentanone	ug/L		ND	50	10
591-78-6	2-Hexanone	ug/L		ND	100	10
127-18-4	Tetrachloroethene	ug/L		ND	100	10
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	50	10
106-93-4	1,2-Dibromoethane	ug/L	2200	D	50	10
108-88-3	Toluene	ug/L		ND	50	10
108-90-7	Chlorobenzene	ug/L		ND	50	10
100-41-4	Ethyl benzene	ug/L		ND	50	10
100-42-5	Styrene	ug/L		ND	50	10
1330-20-7	Xylenes, Total	ug/L		ND	50	10
541-73-1	1,3-Dichlorobenzene	ug/L		ND	50	10
106-46-7	1,4-Dichlorobenzene	ug/L		ND	50	10

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KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9706427-04
Client Sample ID: PS-EW-02
Site/Work ID: CTO 213/5253-0142/NWIRP BETHPA
Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 06/25/97

Dil. Type: N/A
COC Info: N/A
Date Collected: 06/18/97
Instrument: FINN3
Analyst: MBJ
Lab File ID: 3BT47111

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A
Method: 8260A
Run ID: R27061

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/L		ND	50	10
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		ND	50	10
SURROGATES- In Percent Recovery:						
	Dibromofluoromethane	120	* , RA	(86 - 118%)		
	1,2-Dichloroethane	113		(80 - 120%)		
	Toluene-d8	117	* , RA	(88 - 110%)		
	p-Bromofluorobenzene	104		(86 - 115%)		

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Login #L9706427
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KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9706427-05
 Client Sample ID: PS-EW-03
 Site/Work ID: CTO 213/5253-0142/NWIRP BETHPA
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 06/18/97

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 06/25/97

Instrument: FINN3
 Analyst: MBJ
 Lab File ID: N/A

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A
 Method: 8260A
 Run ID: R27061

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND	100	10
74-83-9	Bromomethane	ug/L		ND	100	10
75-01-4	Vinyl chloride	ug/L		ND	100	10
75-00-3	Chloroethane	ug/L		ND	100	10
75-09-2	Methylene chloride	ug/L		ND	50	10
67-64-1	Acetone	ug/L		ND	100	10
75-15-0	Carbon disulfide	ug/L		ND	50	10
75-35-4	1,1-Dichloroethene	ug/L		ND	50	10
75-34-3	1,1-Dichloroethane	ug/L	46	J	50	10
156-59-2	cis-1,2-Dichloroethene	ug/L	160		50	10
156-60-5	trans-1,2-Dichloroethene	ug/L		ND	50	10
67-66-3	Chloroform	ug/L		ND	50	10
107-06-2	1,2-Dichloroethane	ug/L		ND	100	10
78-93-3	2-Butanone	ug/L		ND	50	10
74-97-5	Bromochloromethane	ug/L		ND	50	10
71-55-6	1,1,1-Trichloroethane	ug/L	250		50	10
56-23-5	Carbon tetrachloride	ug/L		ND	100	10
108-05-4	Vinyl acetate	ug/L		ND	50	10
75-27-4	Bromodichloromethane	ug/L		ND	50	10
78-87-5	1,2-Dichloropropane	ug/L		ND	50	10
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	50	10
79-01-6	Trichloroethene	ug/L	320		50	10
124-48-1	Dibromochloromethane	ug/L		ND	50	10
79-00-5	1,1,2-Trichloroethane	ug/L		ND	50	10
71-43-2	Benzene	ug/L		ND	50	10
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	100	10
75-25-2	Bromoform	ug/L		ND	100	10
108-10-1	4-Methyl-2-pentanone	ug/L		ND	50	10
591-78-6	2-Hexanone	ug/L		ND	50	10
127-18-4	Tetrachloroethene	ug/L	1800		50	10
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	50	10
106-93-4	1,2-Dibromethane	ug/L		ND	50	10
108-88-3	Toluene	ug/L		ND	50	10
108-90-7	Chlorobenzene	ug/L		ND	50	10
100-41-4	Ethyl benzene	ug/L		ND	50	10
100-42-5	Styrene	ug/L		ND	50	10
1330-20-7	Xylenes, Total	ug/L		ND	50	10
541-73-1	1,3-Dichlorobenzene	ug/L		ND	50	10
106-46-7	1,4-Dichlorobenzene	ug/L		ND	50	10

LogIn #L9706427
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KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9706427-05
Client Sample ID: PS-EW-03
Site/Work ID: CTO 213/5253-0142/NWIRP BETHPA
Matrix: Water
Dil. Type: N/A
COC Info: N/A
Date Collected: 06/18/97
Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A
TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 06/25/97
Instrument: FINN3
Analyst: MBJ
Lab File ID: N/A
Method: 8260A
Run ID: R27061

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/L		ND	50	10
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		ND	50	10
SURROGATES- In Percent Recovery:						
	Dibromofluoromethane	111		(86 - 118%)		
	1,2-Dichloroethane-d4	108		(80 - 120%)		
	Toluene-d8	110		(88 - 110%)		
	p-Bromofluorobenzene	103		(85 - 115%)		

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 July 2, 1997 01:54 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9706427-06
 Client Sample ID: PS-IW-01
 Site/Work ID: CTO 213/5253-0142/NWIRP BETHPA
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A

Date Collected: 06/18/97

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 06/26/97

Sample Weight: N/A
 Extract Volume: N/A

& Solid: N/A

Instrument: FINN3
 Analyst: MBJ
 Lab File ID: 3BT47115

Method: 8260A
 Run ID: R27370

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND		10
74-83-9	Bromomethane	ug/L		ND		10
75-01-4	Vinyl chloride	ug/L		ND		10
75-00-3	Chloroethane	ug/L		ND		10
75-09-2	Methylene chloride	ug/L		ND		5.0
67-64-1	Acetone	ug/L		ND		10
75-15-0	Carbon disulfide	ug/L		ND		5.0
75-35-4	1,1-Dichloroethane	ug/L		ND		5.0
75-34-3	1,1-Dichloroethane	ug/L		ND		5.0
156-59-2	cis-1,2-Dichloroethane	ug/L		ND		5.0
156-60-5	trans-1,2-Dichloroethane	ug/L		ND		5.0
67-66-3	Chloroform	ug/L		ND		5.0
107-06-2	1,2-Dichloroethane	ug/L		ND		5.0
78-93-3	2-Butanone	ug/L		ND		10
74-97-5	Bromochloromethane	ug/L		ND		5.0
71-55-6	1,1,1-Trichloroethane	ug/L		ND		5.0
56-23-5	Carbon tetrachloride	ug/L		ND		5.0
108-05-4	Vinyl acetate	ug/L		ND		10
75-27-4	Bromodichloromethane	ug/L		ND		5.0
78-87-5	1,2-Dichloropropane	ug/L		ND		5.0
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND		5.0
79-01-6	Trichloroethene	ug/L		ND		5.0
124-48-1	Dibromochloromethane	ug/L		ND		5.0
79-00-5	1,1,2-Trichloroethane	ug/L		ND		5.0
71-43-2	Benzene	ug/L		ND		5.0
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND		5.0
75-25-2	Bromoform	ug/L		ND		10
108-10-1	4-Methyl-2-pentanone	ug/L		ND		10
591-78-6	2-Hexanone	ug/L		ND		5.0
127-18-4	Tetrachloroethene	ug/L		J		5.0
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND		5.0
106-93-4	1,2-Dibromoethane	ug/L		ND		5.0
108-88-3	Toluene	ug/L		ND		5.0
108-90-7	Chlorobenzene	ug/L		ND		5.0
100-41-4	Ethyl benzene	ug/L		ND		5.0
100-42-5	Styrene	ug/L		ND		5.0
1330-20-7	Xylenes, Total	ug/L		ND		5.0
541-73-1	1,3-Dichlorobenzene	ug/L		ND		5.0
106-46-7	1,4-Dichlorobenzene	ug/L		ND		5.0

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4.4

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LogIn #L9706427
 July 2, 1997 01:54 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9706427-06
 Client Sample ID: PS-IW-01
 Site/Work ID: CTO 213/5253-0142/NWIRP BETHPA
 Matrix: Water
 Dil. Type: N/A
 COC Info: N/A
 Date Collected: 06/18/97
 Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 06/26/97
 Instrument: FINN3
 Analyst: MEJ
 Lab File ID: 3BT47115
 Method: 8260A
 Run ID: R27370

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/L		ND		5.0 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		ND		5.0 1
	SURROGATES - In Percent Recovery:					
	Dibromofluoromethane	100	(86 - 118%)			
	1,2-Dichloroethane-d4	107	(80 - 120%)			
	Toluene-d8	100	(88 - 110%)			
	p-Bromofluorobenzene	106	(86 - 115%)			

Login #L9706427
July 2, 1997 01:54 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9706427-07
Client Sample ID: PS-DUP-03
Site/Work ID: CTO 213/5253-0142/NWIRP BETHPA
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

Date Collected: 06/18/97
Instrument: FINN3
Analyst: MBJ
Lab File ID: 3BT47116

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 06/26/97

Method: 8260A
Run ID: R27370

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND	100	10
74-83-9	Bromomethane	ug/L		ND	100	10
75-01-4	Vinyl chloride	ug/L		ND	100	10
75-00-3	Chloroethane	ug/L		ND	100	10
75-09-2	Methylene chloride	ug/L		ND	50	10
67-64-1	Acetone	ug/L		ND	100	10
75-15-0	Carbon disulfide	ug/L		ND	50	10
75-35-4	1,1-Dichloroethene	ug/L		ND	50	10
75-34-3	1,1-Dichloroethane	ug/L	74		50	10
156-59-2	cis-1,2-Dichloroethene	ug/L	140		50	10
156-60-5	trans-1,2-Dichloroethene	ug/L		ND	50	10
67-66-3	Chloroform	ug/L		ND	50	10
107-06-2	1,2-Dichloroethane	ug/L		ND	100	10
78-93-3	2-Butanone	ug/L		ND	50	10
74-97-5	Bromochloromethane	ug/L		ND	50	10
71-55-6	1,1,1-Trichloroethane	ug/L	340		50	10
56-23-5	Carbon tetrachloride	ug/L		ND	50	10
108-05-4	Vinyl acetate	ug/L		ND	100	10
75-27-4	Bromodichloromethane	ug/L		ND	50	10
78-87-5	1,2-Dichloropropane	ug/L		ND	50	10
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	50	10
79-01-6	Trichloroethene	ug/L		ND	50	10
124-48-1	Dibromochloromethane	ug/L	220		50	10
79-00-5	1,1,2-Trichloroethane	ug/L		ND	50	10
71-43-2	Benzene	ug/L		ND	50	10
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	50	10
75-25-2	Bromoform	ug/L		ND	100	10
108-10-1	4-Methyl-2-pentanone	ug/L		ND	50	10
591-78-6	2-Hexanone	ug/L		ND	100	10
127-18-4	Tetrachloroethene	ug/L		ND	50	10
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	1700		50	10
106-93-4	1,2-Dibromoethane	ug/L		ND	50	10
108-88-3	Toluene	ug/L		ND	50	10
108-90-7	Chlorobenzene	ug/L		ND	50	10
100-41-4	Ethyl benzene	ug/L		ND	50	10
100-42-5	Styrene	ug/L		ND	50	10
1330-20-7	Xylenes, Total	ug/L		ND	50	10
541-73-1	1,3-Dichlorobenzene	ug/L		ND	50	10
106-46-7	1,4-Dichlorobenzene	ug/L		ND	50	10

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Login #L9706427
 July 2, 1997 01:54 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9706427-07
 Client Sample ID: PS-DUP-03
 Site/Work ID: CTO 213/5253-0142/NWIRP BETHPA
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 06/18/97

Sample Weight: N/A
 Extract Volume: N/A

% Solid: N/A

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 06/26/97

Instrument: FINN3
 Analyst: MBJ
 Lab File ID: 3BT47116

Method: 8260A
 Run ID: R27370

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/L		ND	50	10
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		ND	50	10
	SURROGATES - In Percent Recovery:					
	Dibromofluoromethane	103	(86 - 118%)			
	1,2-Dichloroethane-d4	100	(80 - 120%)			
	Toluene-d8	105	(88 - 110%)			
	p-Bromofluorobenzene	102	(86 - 115%)			

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KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750
Phone: (614) 373-4071

Brown and Root Environmental
CF Braun, Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220
Attention: Dave Brayack

Login #: L9707329
Report Date: 07/29/97
Work ID: CTO213/5253-0142/NWIRP BETHPAG
Date Received: 07/16/97

PO Number:
Account Number: BRROOTENV418

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9707329-01	TB-071597-04	L9707329-02	PS-EW-01
L9707329-03	PS-EW-02	L9707329-04	PS-EW-03
L9707329-05	PS-MW-01	L9707329-06	PS-IW-01
L9707329-07	PS-DUP-04		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. The report shall not be reproduced, except in full, without the written approval of KEMRON.

David L. Bumgarner
Certified By
David L. Bumgarner



LogIn #L9707329
 July 29, 1997 01:51 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 626-BRE2 - TCL additional compounds

Lab Sample ID: L9707329-01
 Client Sample ID: TB-071597-04
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A
 Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A

Date Collected: 07/15/97

Method: 8260A
 Run ID: R29318

Instrument: HPMS1
 Analyst: SLT
 Lab File ID: LBR22652

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/21/97

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND		10
74-83-9	Bromomethane	ug/L		ND		10
75-01-4	Vinyl chloride	ug/L		ND		10
75-00-3	Chloroethane	ug/L		ND		10
75-09-2	Methylene chloride	ug/L		ND		5.0
67-64-1	Acetone	ug/L		ND		10
75-15-0	Carbon disulfide	ug/L		ND		5.0
75-35-4	1,1-Dichloroethene	ug/L		ND		5.0
75-34-3	1,1-Dichloroethane	ug/L		ND		5.0
156-59-2	cis-1,2-Dichloroethene	ug/L		ND		5.0
156-60-5	trans-1,2-Dichloroethene	ug/L		ND		5.0
67-66-3	Chloroform	ug/L		ND		5.0
107-06-2	1,2-Dichloroethane	ug/L		ND		10
78-93-3	2-Butanone	ug/L		ND		5.0
74-97-5	Bromochloromethane	ug/L		ND		5.0
71-55-6	1,1,1-Trichloroethane	ug/L		ND		5.0
56-23-5	Carbon tetrachloride	ug/L		ND		5.0
108-05-4	Vinyl acetate	ug/L		ND		10
75-27-4	Bromodichloromethane	ug/L		ND		5.0
78-87-5	1,2-Dichloropropane	ug/L		ND		5.0
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND		5.0
79-01-6	Trichloroethene	ug/L		ND		5.0
124-48-1	Dibromochloromethane	ug/L		ND		5.0
79-00-5	1,1,2-Trichloroethane	ug/L		ND		5.0
71-43-2	Benzene	ug/L		ND		5.0
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND		5.0
75-25-2	Bromoform	ug/L		ND		5.0
108-10-1	4-Methyl-2-pentanone	ug/L		ND		10
591-78-6	2-Hexanone	ug/L		ND		10
127-18-4	Tetrachloroethene	ug/L		ND		5.0
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND		5.0
106-93-4	1,2-Dibromoethane	ug/L		ND		5.0
108-88-3	Toluene	ug/L		ND		5.0
108-90-7	Chlorobenzene	ug/L		ND		5.0
100-41-4	Ethyl benzene	ug/L		ND		5.0
100-42-5	Styrene	ug/L		ND		5.0
1330-20-7	Xylenes, Total	ug/L		ND		5.0
541-73-1	1,3-Dichlorobenzene	ug/L		ND		5.0
106-46-7	1,4-Dichlorobenzene	ug/L		ND		5.0

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Login #L9707329
 July 29, 1997 01:51 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707329-01
 Client Sample ID: TB-071597-04
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Water
 Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97
 Instrument: HPMS1
 Analyst: SLT
 Lab File ID: 1BR22652
 Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A
 Method: 8260A
 Run ID: R29318

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/L		ND		5.0 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		ND		5.0 1
	SURROGATES- In Percent Recovery:					
	Dibromofluoromethane		92.8	(86 - 118%)		
	1,2-Dichloroethane-d4		90.9	(80 - 120%)		
	Toluene-d8		98.0	(88 - 110%)		
	p-Bromofluorobenzene		96.9	(86 - 115%)		

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Login #L9707329
 July 29, 1997 05:06 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707329-02
 Client Sample ID: PS-EW-01
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/21/97

Instrument: HPMS1
 Analyst: SLT
 Lab File ID: 1BR22653

Method: 8260A
 Run ID: R29318

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND		10
74-83-9	Bromomethane	ug/L		ND		10
75-01-4	Vinyl chloride	ug/L		ND		10
75-00-3	Chloroethane	ug/L		ND		10
75-09-2	Methylene chloride	ug/L		ND		5.0
67-64-1	Acetone	ug/L		ND		10
75-15-0	Carbon disulfide	ug/L		ND		5.0
75-35-4	1,1-Dichloroethene	ug/L		ND		5.0
75-34-3	1,1-Dichloroethane	ug/L		ND		5.0
156-59-2	cis-1,2-Dichloroethene	ug/L	7.0	ND		5.0
156-60-5	trans-1,2-Dichloroethene	ug/L	10	ND		5.0
67-66-3	Chloroform	ug/L		ND		5.0
107-06-2	1,2-Dichloroethane	ug/L		ND		5.0
78-93-3	2-Butanone	ug/L		ND		10
74-97-5	Bromochloromethane	ug/L		ND		5.0
71-55-6	1,1,1-Trichloroethane	ug/L	12	ND		5.0
56-23-5	Carbon tetrachloride	ug/L		ND		5.0
108-05-4	Vinyl acetate	ug/L		ND		10
75-27-4	Bromodichloromethane	ug/L		ND		5.0
78-87-5	1,2-Dichloropropane	ug/L		ND		5.0
10061-01-5	cis-1,3-Dichloropropene	ug/L	12	ND		5.0
79-01-6	Trichloroethene	ug/L		ND		5.0
124-48-1	Dibromochloromethane	ug/L		ND		5.0
79-00-5	1,1,2-Trichloroethane	ug/L		ND		5.0
71-43-2	Benzene	ug/L		ND		5.0
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND		5.0
75-25-2	Bromoform	ug/L		ND		5.0
108-10-1	4-Methyl-2-pentanone	ug/L		ND		10
591-78-6	2-Hexanone	ug/L		ND		10
127-18-4	Tetrachloroethene	ug/L		ND		5.0
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	27	ND		5.0
106-93-4	1,2-Dibromoethane	ug/L		ND		5.0
108-88-3	Toluene	ug/L		ND		5.0
108-90-7	Chlorobenzene	ug/L		ND		5.0
100-41-4	Ethyl benzene	ug/L		ND		5.0
100-42-5	Styrene	ug/L		ND		5.0
1330-20-7	Xylenes, Total	ug/L		ND		5.0
541-73-1	1,3-Dichlorobenzene	ug/L		ND		5.0
106-46-7	1,4-Dichlorobenzene	ug/L		ND		5.0

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Login #L97073329
 July 29, 1997 01:51 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L97073329-02
 Client Sample ID: PS-EW-01
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Water
 Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97
 Instrument: HPMS1
 Analyst: SLT
 Lab File ID: LBR226653
 Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A
 Method: 8260A
 Run ID: R29318

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/21/97

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/L		ND		5.0 l
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		ND		5.0 l
	SURROGATES- In Percent Recovery:					
	Dibromofluoromethane	102	(86 - 118%)			
	1,2-Dichloroethane-d4	107	(80 - 120%)			
	Toluene-d8	101	(88 - 110%)			
	p-Bromofluorobenzene	99.0	(86 - 115%)			

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LogIn #L9707329
 July 29, 1997 01:51 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707329-03
 Client Sample ID: FS-EW-02
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97
 Instrument: HPMS1
 Analyst: SLT
 Lab File ID: LBR22656

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A
 Method: 8260A
 Run ID: R29318

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/21/97

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND		1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethane	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		D	5.0	1
156-59-2	cis-1,2-Dichloroethane	ug/L		ND	5.0	1
156-60-5	trans-1,2-Dichloroethane	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
74-97-5	Bromochloromethane	ug/L		ND	5.0	1
71-55-6	1,1,1-Trichloroethane	ug/L		D	5.0	1
56-23-5	Carbon tetrachloride	ug/L	1200	ND	5.0	1
108-05-4	Vinyl acetate	ug/L		ND	10	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L	140	ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		D	5.0	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
106-93-4	1,2-Dibromoethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1
541-73-1	1,3-Dichlorobenzene	ug/L		ND	5.0	1
106-46-7	1,4-Dichlorobenzene	ug/L		ND	5.0	1

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KEMRON ENVIRONMENTAL SERVICES

Login #L9707329
 July 29, 1997 01:51 pm

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707329-03
 Client Sample ID: PS-EW-02
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Water
 Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97
 Instrument: HPMS1
 Analyst: SLT
 Lab File ID: IBR22656
 Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A
 Method: 8260A
 Run ID: R29318

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/L		ND		5.0 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		ND		5.0 1
SURROGATES- In Percent Recovery:						
	Dibromofluoromethane	104		(86 - 118%)		
	1,2-Dichloroethane-d4	110		(80 - 120%)		
	Toluene-d8	108		(88 - 110%)		
	p-Bromofluorobenzene	107		(86 - 115%)		

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Login #L9707329
 July 29, 1997 05:06 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707329-04
 Client Sample ID: PS-EW-03
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/21/97

Instrument: HPMS1
 Analyst: SLT
 Lab File ID: 1BR22657

Method: 8260A
 Run ID: R29318

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND		10
74-83-9	Bromomethane	ug/L		ND		10
75-01-4	Vinyl chloride	ug/L		ND		10
75-00-3	Chloroethane	ug/L		ND		10
75-09-2	Methylene chloride	ug/L		ND		5.0
67-64-1	Acetone	ug/L		ND		10
75-15-0	Carbon disulfide	ug/L		ND		5.0
75-35-4	1,1-Dichloroethane	ug/L		ND		5.0
75-34-3	1,1-Dichloroethane	ug/L		ND		5.0
156-59-2	cis-1,2-Dichloroethane	ug/L	57			5.0
156-60-5	trans-1,2-Dichloroethane	ug/L	130			5.0
67-66-3	Chloroform	ug/L		ND		5.0
107-06-2	1,2-Dichloroethane	ug/L		ND		5.0
78-93-3	2-Butanone	ug/L		ND		10
74-97-5	Bromochloromethane	ug/L		ND		5.0
71-55-6	1,1,1-Trichloroethane	ug/L		D		5.0
56-23-5	Carbon tetrachloride	ug/L	210			5.0
108-05-4	Vinyl acetate	ug/L		ND		10
75-27-4	Bromodichloromethane	ug/L		ND		5.0
78-87-5	1,2-Dichloropropane	ug/L		ND		5.0
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND		5.0
79-01-6	Trichloroethene	ug/L		ND		5.0
124-48-1	Dibromochloromethane	ug/L		ND		5.0
79-00-5	1,1,2-Trichloroethane	ug/L		ND		5.0
71-43-2	Benzene	ug/L		ND		5.0
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND		5.0
75-25-2	Bromoform	ug/L		ND		5.0
108-10-1	4-Methyl-2-pentanone	ug/L		ND		5.0
591-78-6	2-Hexanone	ug/L		ND		10
127-18-4	Tetrachloroethene	ug/L		ND		10
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND		5.0
106-93-4	1,2-Dibromoethane	ug/L		ND		5.0
108-88-3	Toluene	ug/L		ND		5.0
108-90-7	Chlorobenzene	ug/L		ND		5.0
100-41-4	Ethyl benzene	ug/L		ND		5.0
100-42-5	Styrene	ug/L		ND		5.0
130-20-7	Xylenes, Total	ug/L		ND		5.0
541-73-1	1,3-Dichlorobenzene	ug/L		ND		5.0
106-46-7	1,4-Dichlorobenzene	ug/L		ND		5.0

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Login #L9707329
 July 29, 1997 05:06 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707329-04
 Client Sample ID: PS-EW-03
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Water
 Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97
 Instrument: HPMS1
 Analyst: SLT
 Lab File ID: 1BR22657
 Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A
 Method: 8260A
 Run ID: R29318

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/L		ND		5.0 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		ND		5.0 1
SURROGATES- In Percent Recovery:						
	Dibromofluoromethane	113	(86 - 118%)			
	1,2-Dichloroethane	121	(80 - 120%)			
	Toluene-d8	118	(88 - 110%)			
	p-Bromofluorobenzene	114	(86 - 115%)			

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Login #L9707329
 July 29, 1997 01:51 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707329-05
 Client Sample ID: PS-MW-01
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A
 Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A

Date Collected: 07/15/97
 Instrument: HPMS1
 Analyst: SLT
 Lab File ID: 1BR22658

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/21/97

Method: 8260A
 Run ID: R29318

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND		10
74-83-9	Bromomethane	ug/L		ND		10
75-01-4	Vinyl chloride	ug/L		ND		10
75-00-3	Chloroethane	ug/L		ND		10
75-09-2	Methylene chloride	ug/L		ND		5.0
67-64-1	Acetone	ug/L		ND		10
75-15-0	Carbon disulfide	ug/L		ND		5.0
75-35-4	1,1-Dichloroethene	ug/L		ND		5.0
75-34-3	1,1-Dichloroethane	ug/L	60			5.0
156-59-2	cis-1,2-Dichloroethene	ug/L	77			5.0
156-60-5	trans-1,2-Dichloroethene	ug/L		ND		5.0
67-66-3	Chloroform	ug/L		ND		5.0
107-06-2	1,2-Dichloroethane	ug/L		ND		10
78-93-3	2-Butanone	ug/L		ND		5.0
74-97-5	Bromochloromethane	ug/L		ND		5.0
71-55-6	1,1,1-Trichloroethane	ug/L	120			5.0
56-23-5	Carbon tetrachloride	ug/L		ND		5.0
108-05-4	Vinyl acetate	ug/L		ND		10
75-27-4	Bromodichloromethane	ug/L		ND		5.0
78-87-5	1,2-Dichloropropane	ug/L		ND		5.0
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND		5.0
79-01-6	Trichloroethene	ug/L	47			5.0
124-48-1	Dibromochloromethane	ug/L		ND		5.0
79-00-5	1,1,2-Trichloroethane	ug/L		ND		5.0
71-43-2	Benzene	ug/L		ND		5.0
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND		5.0
75-25-2	Bromoform	ug/L		ND		10
108-10-1	4-Methyl-2-pentanone	ug/L		ND		10
591-78-6	2-Hexanone	ug/L		ND		5.0
127-18-4	Tetrachloroethene	ug/L	170			5.0
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND		5.0
106-93-4	1,2-Dibromoethane	ug/L		ND		5.0
108-88-3	Toluene	ug/L		ND		5.0
108-90-7	Chlorobenzene	ug/L		ND		5.0
100-41-4	Ethyl benzene	ug/L		ND		5.0
100-42-5	Styrene	ug/L		ND		5.0
1330-20-7	Xylenes, Total	ug/L		ND		5.0
541-73-1	1,3-Dichlorobenzene	ug/L		ND		5.0
106-46-7	1,4-Dichlorobenzene	ug/L		ND		5.0

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Loggin #19707329
 July 29, 1997 01:51 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707329-05
 Client Sample ID: PS-MW-01
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Water

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/21/97

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97

Instrument: HPMS1
 Analyst: SLT
 Lab File ID: 1BR22658

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A
 Method: 8260A
 Run ID: R29318

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/L		ND		5.0 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		ND		5.0 1
	SURROGATES - In Percent Recovery:					
	Dibromofluoromethane	103	(86 - 118%)			
	1,2-Dichloroethane-d4	109	(80 - 120%)			
	Toluene-d8	103	(88 - 110%)			
	p-Bromofluorobenzene	100	(86 - 115%)			

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Login #L9707329
 July 29, 1997 05:06 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707329-06
 Client Sample ID: PS-IW-01
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/22/97

Instrument: HPMS1
 Analyst: SLT
 Lab File ID: 1BR22679

Method: 8260A
 Run ID: R29320

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND		10
74-83-9	Bromomethane	ug/L		ND		10
75-01-4	Vinyl chloride	ug/L		ND		10
75-00-3	Chloroethane	ug/L		ND		10
75-09-2	Methylene chloride	ug/L		ND		5.0
67-64-1	Acetone	ug/L		ND		10
75-15-0	Carbon disulfide	ug/L		ND		5.0
75-35-4	1,1-Dichloroethane	ug/L		ND		5.0
75-34-3	1,1-Dichloroethane	ug/L		ND		5.0
156-59-2	cis-1,2-Dichloroethene	ug/L		ND		5.0
156-60-5	trans-1,2-Dichloroethene	ug/L		ND		5.0
67-66-3	Chloroform	ug/L		ND		5.0
107-06-2	1,2-Dichloroethane	ug/L		ND		5.0
78-93-3	2-Butanone	ug/L		ND		10
74-97-5	Bromochloromethane	ug/L		ND		5.0
71-55-6	1,1,1-Trichloroethane	ug/L		ND		5.0
56-23-5	Carbon tetrachloride	ug/L		ND		5.0
108-05-4	Vinyl acetate	ug/L		ND		10
75-27-4	Bromodichloromethane	ug/L		ND		5.0
78-87-5	1,2-Dichloropropane	ug/L		ND		5.0
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND		5.0
79-01-6	Trichloroethene	ug/L		ND		5.0
124-48-1	Dibromochloromethane	ug/L		ND		5.0
79-00-5	1,1,2-Trichloroethane	ug/L		ND		5.0
71-43-2	Benzene	ug/L		ND		5.0
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND		5.0
75-25-2	Bromoform	ug/L		ND		10
108-10-1	4-Methyl-2-pentanone	ug/L		ND		10
591-78-6	2-Hexanone	ug/L		ND		5.0
127-18-4	Tetrachloroethene	ug/L		ND		5.0
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	9.6			5.0
106-93-4	1,2-Dibromoethane	ug/L		ND		5.0
108-88-3	Toluene	ug/L		ND		5.0
108-90-7	Chlorobenzene	ug/L		ND		5.0
100-41-4	Ethyl benzene	ug/L		ND		5.0
100-42-5	Styrene	ug/L		ND		5.0
1330-20-7	Xylenes, Total	ug/L		ND		5.0
541-73-1	1,3-Dichlorobenzene	ug/L		ND		5.0
106-46-7	1,4-Dichlorobenzene	ug/L		ND		5.0

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LogIn #L9707329
 July 29, 1997 05:06 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707329-06
 Client Sample ID: PS-IW-01
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Water
 Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97
 Instrument: HPMS1
 Analyst: SLT
 Lab File ID: 1BR22679
 Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A
 Method: 8260A
 Run ID: R29320

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene.....	ug/L		ND		5.0 1
96-12-8	1,2-Dibromo-3-chloropropane.....	ug/L		ND		5.0 1
	SURROGATES- In Percent Recovery:					
	Dibromofluoromethane.....	101	(86 - 118%)			
	1,2-Dichloroethane-d4.....	105	(80 - 120%)			
	Toluene-d8.....	110	(88 - 110%)			
	p-Bromofluorobenzene.....	106	(86 - 115%)			

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LogIn #L9707329
 July 29, 1997 01:51 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707329-07
 Client Sample ID: PS-DUP-04
 Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG
 Matrix: Water

Dil. Type: N/A
 COC Info: N/A
 Date Collected: 07/15/97
 Instrument: HPMS1
 Analyst: SLT
 Lab File ID: 1BR22664

Sample Weight: N/A
 Extract Volume: N/A
 % Solid: N/A
 Method: 8260A
 Run ID: R29318

TCLP Extract Date: N/A
 Extract Date: N/A
 Analysis Date: 07/21/97

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
74-87-3	Chloromethane	ug/L		ND		10
74-83-9	Bromomethane	ug/L		ND		10
75-01-4	Vinyl chloride	ug/L		ND		10
75-00-3	Chloroethane	ug/L		ND		10
75-09-2	Methylene chloride	ug/L		ND		5.0
67-64-1	Acetone	ug/L		ND		10
75-15-0	Carbon disulfide	ug/L		ND		5.0
75-35-4	1,1-Dichloroethene	ug/L		ND		5.0
75-34-3	1,1-Dichloroethane	ug/L		ND		5.0
156-59-2	cis-1,2-Dichloroethene	ug/L		D		5.0
156-60-5	trans-1,2-Dichloroethene	ug/L		D		5.0
67-66-3	Chloroform	ug/L		ND		5.0
107-06-2	1,2-Dichloroethane	ug/L		ND		5.0
78-93-3	2-Butanone	ug/L		ND		10
74-97-5	Bromochloromethane	ug/L		ND		5.0
71-55-6	1,1,1-Trichloroethane	ug/L		D		5.0
56-23-5	Carbon tetrachloride	ug/L		ND		5.0
108-05-4	Vinyl acetate	ug/L		ND		10
75-27-4	Bromodichloromethane	ug/L		ND		5.0
78-87-5	1,2-Dichloropropane	ug/L		ND		5.0
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND		5.0
79-01-6	Trichloroethene	ug/L		ND		5.0
124-48-1	Dibromochloromethane	ug/L		ND		5.0
79-00-5	1,1,2-Trichloroethane	ug/L		ND		5.0
71-43-2	Benzene	ug/L		ND		5.0
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND		5.0
75-25-2	Bromoform	ug/L		ND		5.0
108-10-1	4-Methyl-2-pentanone	ug/L		ND		10
591-78-6	2-Hexanone	ug/L		ND		10
127-18-4	Tetrachloroethene	ug/L		D		5.0
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND		5.0
106-93-4	1,2-Dibromoethane	ug/L		ND		5.0
108-88-3	Toluene	ug/L		ND		5.0
108-90-7	Chlorobenzene	ug/L		ND		5.0
100-41-4	Ethyl benzene	ug/L		ND		5.0
100-42-5	Styrene	ug/L		ND		5.0
1330-20-7	Xylenes, Total	ug/L		ND		5.0
541-73-1	1,3-Dichlorobenzene	ug/L		ND		5.0
106-46-7	1,4-Dichlorobenzene	ug/L		ND		5.0

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LogIn #L9707329
July 29, 1997 01:51 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-BRE2 - TCL additional compounds

Lab Sample ID: L9707329-07 Dil. Type: N/A Sample Weight: N/A
Client Sample ID: PS-DUP-04 COC Info: N/A Extract Volume: N/A
Site/Work ID: CTO213/5253-0142/NWIRP BETHPAG Date Collected: 07/15/97 % Solid: N/A
Matrix: Water
TCLP Extract Date: N/A Instrument: HPMS1 Method: 8260A
Extract Date: N/A Analyst: SLT Run ID: R29318
Analysis Date: 07/21/97 Lab File ID: 1BR22664

CAS #	Compound	Units	Result	Qualifiers	RDL	Dilution
95-50-1	1,2-Dichlorobenzene	ug/L		ND		5.0 1
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		ND		5.0 1
	SURROGATES - In Percent Recovery:					
	Dibromofluoromethane	103		(86 - 118%)		
	1,2-Dichloroethane-d4	109		(80 - 120%)		
	Toluene-d8	105		(88 - 110%)		
	p-Bromofluorobenzene	103		(86 - 115%)		

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H

APPENDIX H
VOC LOADING CALCULATIONS

CALCULATION WORKSHEET

Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT		JOB NUMBER	
SUBJECT <u>System Operation Up to 7/30/97</u>			
BASED ON		DRAWING NUMBER	
BY	CHECKED BY	APPROVED BY	DATE <u>8/26/97</u>

<u>System Operation</u>			
4/16/97	1500 1800	Start and balance extraction shut down	
4/17/97	0810 1200	Balance extraction shut down	
4/18/97	0810 1230	Balance extraction Start injection Shut down	
4/21	1035 1845	Radius of Influence (ROI) 01 shut down	
4/22	0835 1830	ROI EW-01 shut down	
4/23	0825 1715 1855	ROI EW-05 Balance extraction shut down	Air Sample 1 week after start-up
4/24	0835 1815	ROI EW-02 shut down	
4/25	0800 1120	ROI EW-01 shut down	
4/28	1150	ROI EW-04 Run overnight at 20cfm	
4/29	1130 1445 1613 2005	shut down ROI IW-01 Restart IW-01 Start & balance extraction — overnight	1607 shut down 2005 shut down

CALCULATION WORKSHEET

Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT		JOB NUMBER	
SUBJECT			
BASED ON		DRAWING NUMBER	
BY	CHECKED BY	APPROVED BY	DATE

4/30 0750 Shut down extraction
 1020 Start ROI IW-01
 1315 Shut down In
 1530 Start ROI IW-01/EW-02 (3.0)
 1824 In shut down
 Ex overnight balanced

5/1 0753 Ex shut down
 0955 Start ROI IW01/EW02 (2.0)
 1730 In shut down
 Ex balance

5/2 0805 Turn on In (10 cfm)
 EX still balanced

5/7 Ex and In on since 5/2 (5 days)

5/12 Blowers off cause of building rewiring
 - blower off since 5/7 or 5 days
 1450 Start Ex and In
 Total Ex = 114 cfm

5/15 Both blowers on
 - normal check list

5/20 Both blowers on
 Normal check list
 Air samples
 1405 Shut down system
 System off overnight

5/21 Start In for ROI IW-01
 1445 Restart In 1530 start & balance ex

CALCULATION WORKSHEET

Order No. 19118 (01-91)

PAGE _____ OF _____

CLIENT		JOB NUMBER	
SUBJECT			
BASED ON		DRAWING NUMBER	
BY	CHECKED BY	APPROVED BY	DATE

5/29 Normal operation ✓ list

6/5 Normal operation ✓ list

6/12 Normal operation ✓ list

6/18 Blowers are off
 - thunderstorm on 6/12 afternoon
 - probably off 6 days Air samples

1925 Start system

6/19 Normal operation ✓ list

6/24 normal operation ✓ list

7/2/97 - both blowers off
 - A. Taormina reports of electrical storm on 6/26
 blowers off for 6 days

Start up the system

7/11/97 normal operation ✓ list

7/15/97 Normal operation ✓ list
 System Shutdown Air samples

7/24/97 Start up system
 System off for 9 days

CALCULATION WORKSHEET

Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT		JOB NUMBER	
SUBJECT			
BASED ON		DRAWING NUMBER	
BY	CHECKED BY	APPROVED BY	DATE

7/30 System is off
∴ Assume power outage occurred in heavy
rains/thunderstorm after leaving site on 7/24
- system down 6 days:

1020 Restart system
1520 Extraction flow = 166

8/20 Carbon units ✓ list
Ex flow = 175

CALCULATION WORKSHEET

Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT NAVY		JOB NUMBER S253	
SUBJECT lbs. of VOC's Removed			
BASED ON Field measurements		DRAWING NUMBER	
BY SGP	CHECKED BY	APPROVED BY	DATE 9/3/97

VOC's removed between 4/23/97 and 5/2/97
based on pid readings

9 days
Avg. PID reading = 1102 ppm
Avg. Flowrate = 116.7 cfm

$$\text{VOC removed/day} = 62 \text{ lbs/day} \times 9 \text{ days}$$

$$\text{Total} = 558 \text{ lbs.}$$

between 5/2/97 and 5/7/97

5 days
Avg. estimated PID reading = 798.5 ppm
Avg Flowrate = 113.4 cfm

$$\text{VOC removed per day} = 43 \text{ lbs/day} \times 5 \text{ days}$$

$$\text{Total} = 215 \text{ lbs}$$

between 5/7/ and 5/12/97
system down

between 5/12/97 + 5/15

3 days
Avg. estimated PID reading = 243 ppm
Avg. Flowrate = 111

$$\text{VOC removed/day} = 13 \text{ /day} \times 3$$

$$\text{Total} = 39 \text{ lbs VOC removed}$$

CALCULATION WORKSHEET

Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT NAVY		JOB NUMBER 5253	
SUBJECT lbs. of VOC's Removed			
BASED ON Field Measurements		DRAWING NUMBER	
BY SOP	CHECKED BY	APPROVED BY	DATE 9/3/97

between 5/15/97 & 5/20

5 days

Avg. PID reading = 155 ppm

Avg. flowrate = 108

VOC removed/day = 8 lbs/day

Total = 40 lbs

between

CALCULATION WORKSHEET

Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT		JOB NUMBER	
SUBJECT			
BASED ON		DRAWING NUMBER	
BY	CHECKED BY	APPROVED BY	DATE

VOC's removed between 6/19/97 and 7/15/97
based on fixed lab results

$$26 \text{ day} - 6 \text{ days} = 20 \text{ days}$$

due to
power surges

lab results avg. = 49.7 ppm-V
avg. MW of contaminants = 130.18
avg. measured flow rate = 133 cfm

$$\text{VOC's removed per day} = 3.15 \text{ lbs/day}$$

$$\text{Total VOC's removed over period} = 63 \text{ lbs}$$

Total VOC's removed
between 4/23/97 and 7/15/97
is 671 lbs

Sample Date	Measured Extraction		PRE CARBON Treatment Units		POST CARBON Treatment Units	
	Calculated Extraction Flow Rate*	Flow Rate**	PID readings (ppm)	Fixed-Base Lab Results (ppm-v)	PID Readings (ppm)	Fixed-Base Lab Results (ppm-v)
4/23/97	120	23	1,106	753.2	0	0.04
5/2/97	113.4	104	1,097	-	0	-
5/7/97	113.4	104	***	-	***	-
5/12/97 ¹	-	114	***	-	***	-
5/15/97	113.4	108	185	-	0	-
5/20/97	106.8	108	125	91.9	0	0.061
5/29/97	169	152	62	-	0	-
6/5/97	173.5	170	58	-	3.8	-
6/12/97	164.7	170	51	-	0	-
6/19/97 ²	163.6	166	68	43.6	0	0.0594
6/24/97	166.9	166	59.7	-	0	-
7/2/97 ³	169	158	60.2	-	0	-
7/11/97	161.4	166	53.9	-	0	-
7/15/97	187.7	175	48.3	55.85	0	0.421
7/24/97 ⁴	-	175	52.9	-	0	-
7/30/97 ⁵	-	166	***	-	***	-
8/20/97	175	175	***	-	***	-
9/5/97 ⁶	-	-	82.3	-	22	-
9/17/97 ⁷	155	166	41.5	-	0	-

* - Sum of flow rates from each extraction line prior to extraction blower.

** - Measured flow rate after extraction blower and prior to carbon treatment units.

*** - No photo-ionization detector (PID) readings were taken.

- 1 - Extraction blower was off for approximately 5 days because of building rewiring.
- 2 - Extraction blower was off for approximately 6 days due to power surge caused by thunderstorm.
- 3 - Extraction blower was off for approximately 6 days due to power surge caused by thunderstorm.
- 4 - Extraction blower was off for 9 days due to end of system operations.
- 5 - Extraction blower was off for approximately 6 days due to power surge caused by thunderstorm.
- 6 - Vapors measured with portable flame ionization detector (FID).
- 7 - AS/SVE system is turned off.

Days from System Startup	VOC Concentration (mg/m ³)	VOC Removed (lbs.)
0	4002.1	0
27	488.4	509.56
57	231.7	658.26
83	296.8	760.88
142	312.96	888.35

