Introduction

Delphi Energy & Engine of General Motors Corporation of Rochester, New York contracted Free-Col Laboratories, LTD., Meadville, Pennsylvania, to conduct groundwater monitoring well sampling and analysis for their Lexington Avenue plant.

All samples were collected and transported to the laboratory by Dick Valesky and William Slater of Free-Col Laboratories. Sampling was conducted on August 11th, 1998. Enclosed within is the report of the August 1998 sampling event.

Pre-Sampling Activities

Well Maintenance Check

Prior to the sampling event, a routine inspection of the condition of the protective casing and surface seal was performed. The protective casing was inspected for the integrity of the locking cap and the surface seal. In addition, each well was checked for any other signs of damage or inadvertent entry. Observations of any irregularities were noted in the field logbook as well as the number, date and time.

Static Water Level Measurements

The depth to groundwater was measured with an electronic depth-indicating sounder. An ORS 1068 Oil-Water Interface Probe was used for static water level measurements. Hydrocarbon phases (LNAPLS) were measured and recorded in the field book. The probe was lowered into the well until the meter indicated that product or water was reached. The probe was slowly lowered again until water was indicated. The cable was held against the side of the outer protective casing and a depth reading was taken. This procedure was followed three times or until a consistent value was obtained. The value was recorded to the nearest 0.01 foot in a field notebook. The probe was raised to the surface and together with the amount of cable that was wetted in the well, was decontaminated with a hexane wipe followed by a distilled/deionized water rinse.

Before leaving the well location, the volume of water in the well and the volume of the water required to purge three well volumes was calculated and entered into the field logbook (see Table I, Field Data).

Well Evacuation

All wells were purged using a dedicated or disposable bailer. The bailer was attached to a nylon line and the well was bailed until 3 well volumes were removed from the well or until the well was bailed dry.

Groundwater quality samples were obtained after evacuation of the well. Samples for volatile organic compounds were sampled within three hours of well evacuation if sufficient volume was present.

A nylon line was attached to a dedicated translucent teflon bailer equipped with a bottom check ball. The bailer was lowered to the middle of the open interval of the well or, if little water was in the well, to within one foot of the bottom of the well and slowly lifted to the surface. The appropriate sample vials were filled slowly to avoid sample aeration and field parameter tests were conducted. Used bailers were placed in clean plastic bags for transport to the waste treatment plant for decontamination. The disposable bailers were disposed of after each sampling event.

Field Measurements

A portion of the groundwater collected during the sampling procedure was subjected to the field tests of temperature, specific electrical conductance, and pH. Tests for field parameters were conducted after the sample vials had been filled. Groundwater for these tests was collected in a 500 mL polypropylene container.

Temperature was taken first and measured with an Orion probe and the value recorded in the field log book. The meter was decontaminated between samples with a deionized water rinse and placed in a field carrying case for transport to other sampling locations.

The specific electrical conductance was measured using a conductivity meter. The sample was placed in the meter, readings were taken and then recorded in the field log book. The meter was decontaminated between samples with a deionized water rinse and placed in a field carrying case.

The pH was measured with a pH meter that is lab calibrated to standards with pH values of 4.0, 7.0, and 10.0. The clean probe was inserted into the sample container, the reading recorded in the field log book to the nearest 0.1 pH unit and the probe rinsed with deionized water and inserted into its carrying case.

The probe was calibrated prior to sampling events. Calibration was conducted according to manufacturer's specifications.

Calibration for the pH meter and conductivity meter appear on Table III.

Equipment Decontamination

All of the sampling equipment (excluding the thermometer, pH and conductivity meters) were decontaminated between sampling events using the following procedure:

1. An initial Alconox or equivalent detergent wash.
2. Clean water rinse.
3. Methanol/hexane rinse.
4. Distilled/deionized water rinse.
5. Air dry.

Decontamination wastewaters were containerized in 55 gallon drums to be disposed through discharge through the facility Wastewater Treatment Plant.

Duplicate Samples

Duplicate samples were collected at the same time and location as field samples and collected at frequency of one per matrix/method per day. The samples will be used to assess precision including variability caused by the laboratory analysis and the sample collection procedure. Duplicates were collected in immediate succession using identical sampling techniques, sample storage, transportation, and analysis. Duplicates were evenly split from the same bailer load and equally proportioned into each receptacle for the split duplicate.

Sampling Notes

All sampling at Delphi Energy & Engine, Lexington Ave., was conducted on August 11th, 1998.

A total of 12 wells were sampled for groundwater or LNAPL presence. Eight wells were purged and sampled for groundwater. Four wells contained a floating product layer, and only the floating layer was sampled and analyzed. All other wells that were on the map at Delphi Energy & Engine were measured for static water levels and presence of LNAPL layers. These measurements are shown on Table I.

All field data, purge data, and sampling data can be found in Tables I-III, and copies of the original field logs will be furnished upon request.

TABLE I
DELPHI ENERGY & ENGINE
FIELD DATA
11-Aug-98

LOCATION	TIME	DEPTH TO WATER (FT)	DEPTH TO BOTTOM OF WELL (FT)	WELL VOLUME (GAL)	FIELD REMARKS
SR-233	10:40	10.90	20.30	1.6	LOCK BROKEN
SR-234	11:25	14.56	17.65	0.5	
R-234	11:30	27.36	38.90	7.6	
SR-235	12:35	13.40	17.55	0.7	
SR-236	15:48	9.10	18.47	1.5	
PZ-120	15:46	5.35	11.97	1.1	
R-237	15:03	25.90	37.45	7.5	
SR-2	13:25	10.14	21.33	1.8	
R-235	12:40	31.22			LNAPL AT 30.59'
R-236	16:00	31.05			LNAPL AT 25.72'
R-238	14:45	23.72			LNAPL AT 23.17'
R-2	13:27	29.85			LNAPL AT 29.20'

TABLE ! (CONTD)
DELPHI ENERGY & ENGINE
FIELD DATA
8/11/98

LOCATION	DEPTH TO WATER (FT)	DEPTH TO LNAPL (FT)	FIELD REMARKS
SR-8	19.02		
R-8	22.83		
DR-108	93.53		
SR-132	19.68		
R-132	34.32		WELL CAP BROKEN
PZ-132	11.98	11.90	
PZ-119	8.65		
PZ-117	7.40		
PZ-139	29.41	29.11	
PZ-112	13.52	UNMEASURABLE	THIN OIL LAYER
PZ-111	14.02		
PZ-113	11.03		
PZ-115	12.59		
PZ-127	7.45		
PZ-128	7.36		
PZ-1	11.10	7.30	
PZ-121	9.52	7.95	
PZ-122	6.07	5.97	
RW-3	7.70	UNMEASURABLE	THIN OIL LAYER
PZ-114	7.83		
PZ-125	8.62		
PZ-116	9.61		
PZ-123	11.92	10.61	
RW-2	9.17	8.62	
RW-101	10.60	UNMEASURABLE	THIN OIL LAYER
PZ-118	7.10		
PZ-124	6.50	4.51	
PZ-126	14.11		
SR-11	21.15		
R-11	28.61		
DR-11	50.52		

TABLE II
DELPHI ENERGY & ENGINE
PURGE DATA
8/11/98

LOCATION	START TIME	GALLONS PURGED	END TIME	WATER LEVEL AT END (FT)	APPEARANCE
SR-233	10:45	5.0	10:55	10.85	RUSTY, VERY TURBID
SR-234	11:40	1.5	11:45	16.44	CLEAR
R-234	11:40	24	12:23	28.05	MODERATELY TURBID
SR-235	12:45	2.1	12:55	15.40	RUSTY, VERY TURBID
SR-236	16:05	4.5	16:15	17.40	VERY TURBID, SILTY
PZ-120	16:05	3.5	16:12	5.60	MODERATELY TURBID
R-237	15:10	23	15:25	26.60	VERY TURBID
SR-2	13:30	5.5	13:40	16.59	CLEAR

TABLE III
DELPHI ENERGY & ENGINE
SAMPLING DATA
11-Aug-98

LOCATION	TIME	WATER LEVEL (FT)	APPEARANCE	TEMP (C)	pH	SPECIFIC CONDUCTANCE (µMHOS)
SR-233	11:00	10.85	RUSTY	21	6.9	2000
SR-234	11:55	16.44	CLEAR	18	6.9	5600
R-234	12:25	28.05	SLIGHTLY TURBID	16	7.4	860
SR-235	13:00	15.40	CLEAR	20	7.0	10500
SR-236	16:20	17.40	CLEAR	20	7.1	5580
PZ-120	16:15	5.60	SLIGHTLY TURBID	25	6.9	4300
R-237	15:25	26.60	SLIGHTLY TURBID	17	7.1	3420
R-237 DUPLICATE	15:25	26.60	SLIGHTLY TURBID	17	7.1	3500
SR-2	13:40	16.59	CLEAR	18	6.9	4050
R-235 LNAPL	13:00					
R-235 LNAPL DUP	13:00					
R-236 LNAPL	16:30					
R-238 LNAPL	14:50					
R-2 LNAPL	13:45					

CALIBRATION DATA:

PARAMETER	ACTUAL	OBSERVED
pH	4.0	4.0
pH	7.0	7.0
pH	10.0	9.9
SPECIFIC CONDUCTANCE (µMHOS)	147	147

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FAX: Area Code 814/333-1468

ENVIRONMENTAL
OCCUPATIONAL HEALTH
FOOD SCIENCE
SPECIALISTS

DELPHI ENERGY & ENGINE
GENERAL MOTORS CORPORATION

MONITORING WELLS

SAMPLE DATES: 08/11/98

METHODS

PARAMETER	METHOD	SOURCE
Temperature (Field)	Direct	
pH (Field)	Field Meter	
Specific Conductance	Conductivity Meter	
Volatile Compounds	8260B	2
PCB	8082	2

SOURCE

2 - "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods", SW-846, Third Edition, U.S. Environmental Protection Agency. Update III, December, 1996.

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08/27/98

TO:

DELPHI ENERGY & ENGINE
ATTN: MR. RICK EISENMAN
P.O. BOX 92700
ROCHESTER NY 14606

P.O. # RPB00833

ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

PARAMETER		SAMPLE ID : SR-233	SR-234	R-234	SR-235
		08/11/98	08/11/98	08/11/98	08/11/98
	LAB ID	80812408	80812409	80812410	80812411
	DATE RECEIVED:	08/12/98	08/12/98	08/12/98	08/12/98
TEMPERATURE (FIELD)	°C	21	18	16	20
PH (FIELD)		6.9	6.9	7.4	7.0
SPEC. COND. (FIELD)	UMHOS/CM	2,000	5,600	860	10,500

Please reference the following page(s) for date and analyst.

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P.O. BOX 92700
ROCHESTER NY 14606

P.O. # RPB00833

ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

PARAMETER		SAMPLE ID :	SR-2	R-237	R-237 DUP	PZ-120
			08/11/98	08/11/98	08/11/98	08/11/98
		LAB ID	80812412	80812413	80812414	80812415
		DATE RECEIVED:	08/12/98	08/12/98	08/12/98	08/12/98
TEMPERATURE (FIELD)	°C		18	17	17	25
PH (FIELD)			6.9	7.1	7.1	6.9
SPEC. COND. (FIELD)	UMHOS/CM		4,050	3,420	3,500	4,300

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ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

SAMPLE ID : SR-236
08/11/98

LAB ID 80812416
DATE RECEIVED: 08/12/98

PARAMETER	RESULTS	UNITS	DATE AND	ANALYST
Temperature (Field)	20	DEGREES C	08/11/98	SLATER/ VALESKY
pH (FIELD)	7.1		08/11/98	SLATER/ VALESKY
Specific Conductance (Field)	5,580	UMHOS/CM	08/11/98	SLATER/ VALESKY

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ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

PARAMETER	SAMPLE ID :	SR-233	SR-234	R-234	SR-235
		08/11/98	08/11/98	08/11/98	08/11/98
	LAB ID	80812408	80812409	80812410	80812411
	DATE RECEIVED:	08/12/98	08/12/98	08/12/98	08/12/98
VOLATILE COMPOUNDS	UNITS = MG/L				
CHLOROMETHANE		<0.010	<0.010	<0.010	<0.010
BROMOMETHANE		<0.010	<0.010	<0.010	<0.010
VINYL CHLORIDE		<0.010	<0.010	0.60	<0.010
CHLOROETHANE		<0.010	<0.010	<0.010	<0.010
METHYLENE CHLORIDE		<0.005	<0.005	<0.005	<0.005
ACETONE		<0.10	<0.10	<0.10	<0.10
CARBON DISULFIDE		<0.005	<0.005	<0.005	<0.005
1,1,-DICHLOROETHENE		<0.005	<0.005	<0.005	<0.005
1,1,-DICHLOROETHANE		<0.005	<0.005	0.022	<0.005
1,2-DICHLORO***		0.014	<0.005	1.0	<0.005
CHLOROFORM		<0.005	<0.005	<0.005	<0.005
1,2-DICHLOROETHANE		<0.005	<0.005	<0.005	<0.005
2-BUTANONE		<0.10	<0.10	<0.10	<0.10
1,1,1-TRICHLOROETHA*		<0.005	<0.005	<0.005	<0.005
CARBON TETRACHLORIDE		<0.005	<0.005	<0.005	<0.005
VINYL ACETATE		<0.050	<0.050	<0.050	<0.050
BROMODICHLOROMETHANE		<0.005	<0.005	<0.005	<0.005
1,1,2,2-TETRACHLORO*		<0.005	<0.005	<0.005	<0.005
1,2-DICHLOROPROPANE		<0.005	<0.005	<0.005	<0.005
TRANS-1,3-DICHLOROP*		<0.005	<0.005	<0.005	<0.005
TRICHLOROETHENE		0.012	<0.005	<0.005	<0.005
DIBROMOCHLOROMETHANE		<0.005	<0.005	<0.005	<0.005
1,1,2-TRICHLOROETHA*		<0.005	<0.005	<0.005	<0.005
BENZENE		<0.005	<0.005	<0.005	<0.005
CIS-1,3-DICHLOROPRO*		<0.005	<0.005	<0.005	<0.005

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ANALYTICAL REPORT FORM

PARAMETER	SAMPLE ID :	SR-233	SR-234	R-234	SR-235
		08/11/98	08/11/98	08/11/98	08/11/98
	LAB ID	80812408	80812409	80812410	80812411
	DATE RECEIVED:	08/12/98	08/12/98	08/12/98	08/12/98
VOLATILE COMPOUNDS (Cont.)	**UNITS = MG/L**				
2-CHLOR* VINYL ETHER		<0.010	<0.010	<0.010	<0.010
BROMOFORM		<0.005	<0.005	<0.005	<0.005
2-HEXANONE		<0.050	<0.050	<0.050	<0.050
4-METHYL-2-PENTANONE		<0.050	<0.050	<0.050	<0.050
TETRACHLOROETHENE		<0.005	<0.005	<0.005	<0.005
TOLUENE		<0.005	<0.005	<0.005	<0.005
CHLOROBENZENE		<0.005	<0.005	<0.005	<0.005
ETHYL BENZENE		<0.005	<0.005	<0.005	<0.005
STYRENE		<0.005	<0.005	<0.005	<0.005
TOTAL XYLENES		<0.005	<0.005	<0.005	<0.005

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ANALYTICAL REPORT FORM

PARAMETER	SAMPLE ID :	SR-2	R-237	R-237 DUP
		08/11/98	08/11/98	08/11/98
	LAB ID	80812412	80812413	80812414
	DATE RECEIVED:	08/12/98	08/12/98	08/12/98
VOLATILE COMPOUNDS	UNITS = MG/L			
CHLOROMETHANE		<0.010	<0.010	<0.010
BROMOMETHANE		<0.010	<0.010	<0.010
VINYL CHLORIDE		<0.010	31	32
CHLOROETHANE		<0.010	<0.010	<0.010
METHYLENE CHLORIDE		<0.005	<0.005	<0.005
ACETONE		<0.10	<0.10	<0.10
CARBON DISULFIDE		<0.005	<0.005	<0.005
1,1,-DICHLOROETHENE		<0.005	0.095	0.096
1,1,-DICHLOROETHANE		<0.005	0.022	0.022
1,2-DICHLORO***		<0.005	13	14
CHLOROFORM		<0.005	<0.005	<0.005
1,2-DICHLOROETHANE		<0.005	<0.005	<0.005
2-BUTANONE		<0.10	<0.10	<0.10
1,1,1-TRICHLOROETHA*		<0.005	<0.005	<0.005
CARBON TETRACHLORIDE		<0.005	<0.005	<0.005
VINYL ACETATE		<0.050	<0.050	<0.050
BROMODICHLOROMETHANE		<0.005	<0.005	<0.005
1,1,2,2-TETRACHLORO*		<0.005	<0.005	<0.005
1,2-DICHLOROPROPANE		<0.005	<0.005	<0.005
TRANS-1,3-DICHLOROP*		<0.005	<0.005	<0.005
TRICHLOROETHENE		<0.005	<0.005	<0.005
DIBROMOCHLOROMETHANE		<0.005	<0.005	<0.005
1,1,2-TRICHLOROETHA*		<0.005	<0.005	<0.005
BENZENE		<0.005	<0.005	<0.005
CIS-1,3-DICHLOROPRO*		<0.005	<0.005	<0.005

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ROCHESTER NY 14606

P.O. # RPB00833

ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

PARAMETER	SAMPLE ID :	SR-2	R-237	R-237 DUP
		08/11/98	08/11/98	08/11/98
	LAB ID	80812412	80812413	80812414
	DATE RECEIVED:	08/12/98	08/12/98	08/12/98
VOLATILE COMPOUNDS (Cont.)	**UNITS = MG/L**			
2-CHLOR* VINYL ETHER		<0.010	<0.010	<0.010
BROMOFORM		<0.005	<0.005	<0.005
2-HEXANONE		<0.050	<0.050	<0.050
4-METHYL-2-PENTANONE		<0.050	<0.050	<0.050
TETRACHLOROETHENE		<0.005	<0.005	<0.005
TOLUENE		<0.005	0.010	0.009
CHLOROBENZENE		<0.005	<0.005	<0.005
ETHYL BENZENE		<0.005	<0.005	<0.005
STYRENE		<0.005	<0.005	<0.005
TOTAL XYLENES		<0.005	0.011	0.010

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08/27/98

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ROCHESTER NY 14606

P.O. # RPB00833

ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

PARAMETER	SAMPLE ID :	PZ-120	SR-236	TRIP BLANK
		08/11/98	08/11/98	08/11/98
	LAB ID	80812415	80812416	80812422
	DATE RECEIVED:	08/12/98	08/12/98	08/12/98
VOLATILE COMPOUNDS	UNITS = MG/L			
CHLOROMETHANE		<0.010	<0.010	<0.010
BROMOMETHANE		<0.010	<0.010	<0.010
VINYL CHLORIDE		<0.010	0.18	<0.010
CHLOROETHANE		<0.010	<0.010	<0.010
METHYLENE CHLORIDE		<0.005	<0.005	<0.005
ACETONE		<0.10	<0.10	<0.10
CARBON DISULFIDE		<0.005	<0.005	<0.005
1,1,-DICHLOROETHENE		<0.005	<0.005	<0.005
1,1,-DICHLOROETHANE		<0.005	<0.005	<0.005
1,2-DICHLORO***		<0.005	0.054	<0.005
CHLOROFORM		<0.005	<0.005	<0.005
1,2-DICHLOROETHANE		<0.005	<0.005	<0.005
2-BUTANONE		<0.10	<0.10	<0.10
1,1,1-TRICHLOROETHA*		<0.005	<0.005	<0.005
CARBON TETRACHLORIDE		<0.005	<0.005	<0.005
VINYL ACETATE		<0.050	<0.050	<0.050
BROMODICHLOROMETHANE		<0.005	<0.005	<0.005
1,1,2,2-TETRACHLORO*		<0.005	<0.005	<0.005
1,2-DICHLOROPROPANE		<0.005	<0.005	<0.005
TRANS-1,3-DICHLOROP*		<0.005	<0.005	<0.005
TRICHLOROETHENE		<0.005	<0.005	<0.005
DIBROMOCHLOROMETHANE		<0.005	<0.005	<0.005
1,1,2-TRICHLOROETHA*		<0.005	<0.005	<0.005
BENZENE		0.54	1.0	<0.005
CIS-1,3-DICHLOROPRO*		<0.005	<0.005	<0.005

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FREE-COL LABORATORIES, LTD.
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PHONE: (814) 724-6242
FAX: (814) 333-1466
EMAIL: freecol@toolcity.net

08/27/98

TO:

DELPHI ENERGY & ENGINE
ATTN: MR. RICK EISENMAN
P.O. BOX 92700
ROCHESTER NY 14606

P.O. # RPB00833

ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

PARAMETER	SAMPLE ID :	PZ-120	SR-236	TRIP BLANK
		08/11/98	08/11/98	08/11/98
	LAB ID	80812415	80812416	80812422
	DATE RECEIVED:	08/12/98	08/12/98	08/12/98
VOLATILE COMPOUNDS (Cont.)	**UNITS = MG/L**			
2-CHLOR* VINYL ETHER		<0.010	<0.010	<0.010
BROMOFORM		<0.005	<0.005	<0.005
2-HEXANONE		<0.050	<0.050	<0.050
4-METHYL-2-PENTANONE		<0.050	<0.050	<0.050
TETRACHLOROETHENE		<0.005	<0.005	<0.005
TOLUENE		<0.005	<0.005	<0.005
CHLOROBENZENE		<0.005	<0.005	<0.005
ETHYL BENZENE		<0.005	<0.005	<0.005
STYRENE		<0.005	<0.005	<0.005
TOTAL XYLENES		<0.005	<0.005	<0.005

DATE AND ANALYST
08/20/98 ECKLUND

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ROCHESTER NY 14606

P.O. # RPB00833

ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

PARAMETER	SAMPLE ID :	R-235 LNAPL 08/11/98	R-235 LNAPL-DUP 08/11/98	R-2 LNAPL 08/11/98	R-238 LNAPL 08/11/98
	LAB ID	80812417	80812418	80812419	80812420
	DATE RECEIVED:	08/12/98	08/12/98	08/12/98	08/12/98
VOLATILE COMPOUNDS	UNITS = MG/KG				
CHLOROMETHANE		<10 D	<10 D	<10 D	<10 D
BROMOMETHANE		<10 D	<10 D	<10 D	<10 D
VINYL CHLORIDE		200	210	<10 D	28
CHLOROETHANE		<10 D	<10 D	<10 D	<10 D
METHYLENE CHLORIDE		<5 D	<5 D	<5 D	<5 D
ACETONE		<100 D	<100 D	<100 D	<100 D
CARBON DISULFIDE		<5 D	<5 D	<5 D	<5 D
1,1,-DICHLOROETHENE		<5 D	<5 D	<5 D	<5 D
1,1,-DICHLOROETHANE		<5 D	<5 D	<5 D	<5 D
1,2-DICHLORO***		1,100	1,200	<5 D	13
CHLOROFORM		<5 D	<5 D	<5 D	<5 D
1,2-DICHLOROETHANE		<5 D	<5 D	<5 D	<5 D
2-BUTANONE		<100 D	<100 D	<100 D	<100 D
1,1,1-TRICHLOROETHA*		<5 D	<5 D	<5 D	<5 D
CARBON TETRACHLORIDE		<5 D	<5 D	<5 D	<5 D
VINYL ACETATE		<50 D	<50 D	<50 D	<50 D
BROMODICHLOROMETHANE		<5 D	<5 D	<5 D	<5 D
1,1,2,2-TETRACHLORO*		<5 D	<5 D	<5 D	<5 D
1,2-DICHLOROPROPANE		<5 D	<5 D	<5 D	<5 D
TRANS-1,3-DICHLOROP*		<5 D	<5 D	<5 D	<5 D
TRICHLOROETHENE		<5 D	<5 D	<5 D	<5 D
DIBROMOCHLOROMETHANE		<5 D	<5 D	<5 D	<5 D
1,1,2-TRICHLOROETHA*		<5 D	<5 D	<5 D	<5 D
BENZENE		<5 D	<5 D	<5 D	<5 D
CIS-1,3-DICHLOROPRO*		<5 D	<5 D	<5 D	<5 D

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08/27/98

TO:

DELPHI ENERGY & ENGINE
ATTN: MR. RICK EISENMAN
P.O. BOX 92700
ROCHESTER NY 14606

P.O. # RPB00833

ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

PARAMETER	SAMPLE ID / LAB ID / DATE RECEIVED:	R-235 LNAPL 08/11/98 80812417 08/12/98	R-235 LNAPL-DUP 08/11/98 80812418 08/12/98	R-2 LNAPL 08/11/98 80812419 08/12/98	R-238 LNAPL 08/11/98 80812420 08/12/98
VOLATILE COMPOUNDS (Cont.)	**UNITS = MG/KG**				
2-CHLOR* VINYL ETHER		<10 D	<10 D	<10 D	<10 D
BROMOFORM		<5 D	<5 D	<5 D	<5 D
2-HEXANONE		<50 D	<50 D	<50 D	<50 D
4-METHYL-2-PENTANONE		<50 D	<50 D	<50 D	<50 D
TETRACHLOROETHENE		<5 D	<5 D	<5 D	<5 D
TOLUENE		30	28	<5 D	<5 D
CHLOROBENZENE		<5 D	<5 D	<5 D	<5 D
ETHYL BENZENE		<5 D	<5 D	<5 D	5
STYRENE		<5 D	<5 D	<5 D	<5 D
TOTAL XYLENES		7	7	<5 D	27

Please reference the following page(s) for date and analyst.

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P.O. # RPB00833

ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

SAMPLE ID : R-236
LNAPL
08/11/98
LAB ID 80812421
DATE RECEIVED: 08/12/98

PARAMETER	RESULTS	UNITS	DATE AND ANALYST
VOLATILE COMPOUNDS			
Chloromethane	<10 D	MG/KG	08/24/98 ECKLUND
Bromomethane	<10 D		
Vinyl Chloride	560		
Chloroethane	<10 D		
Methylene Chloride	<5 D		
Acetone	<100 D		
Carbon Disulfide	<5 D		
1,1-Dichloroethene	<5 D		
1,1-Dichloroethane	<5 D		
1,2-Dichloroethenes (Total)***	300		
Chloroform	<5 D		
1,2-Dichloroethane	<5 D		
2-Butanone	<100 D		
1,1,1-Trichloroethane	<5 D		
Carbon Tetrachloride	<5 D		
Vinyl Acetate	<50 D		
Bromodichloromethane	<5 D		
1,1,2,2-Tetrachloroethane	<5 D		
1,2-Dichloropropane	<5 D		
trans-1,3-Dichloropropene	<5 D		
Trichloroethene	<5 D		
Dibromochloromethane	<5 D		
1,1,2-Trichloroethane	<5 D		

***** The result supplied here is the sum of cis-1,2-dichloroethene and trans-1,2-dichloroethene.**

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ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

SAMPLE ID : R-236
LNAPL
08/11/98
LAB ID 80812421
DATE RECEIVED: 08/12/98

PARAMETER	RESULTS	UNITS	DATE AND ANALYST
VOLATILE COMPOUNDS Continued			
Benzene	<5 D	MG/KG	08/24/98 ECKLUND
cis-1,3-Dichloropropene	<5 D		
2-Chloroethylvinyl ether	<10 D		
Bromoform	<5 D		
2-Hexanone	<50 D		
4-Methyl-2-pentanone	<50 D		
Tetrachloroethene	<5 D		
Toluene	22		
Chlorobenzene	<5 D		
Ethylbenzene	<5 D		
Styrene	<5 D		
Total Xylenes	<5 D		

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ROCHESTER NY 14606

P.O. # RPB00833

ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

PARAMETER	SAMPLE ID :	SR-233	SR-234	R-234	SR-235
		08/11/98	08/11/98	08/11/98	08/11/98
	LAB ID	80812408	80812409	80812410	80812411
	DATE RECEIVED:	08/12/98	08/12/98	08/12/98	08/12/98
PCB	UNITS = MG/L				
PCB-1242		<0.001	<0.001	<0.001	<0.001
PCB-1254		<0.001	<0.001	<0.001	<0.001
PCB-1221		<0.001	<0.001	<0.001	<0.001
PCB-1232		<0.001	<0.001	<0.001	<0.001
PCB-1248		<0.001	<0.001	<0.001	<0.001
PCB-1260		<0.001	<0.001	<0.001	<0.001
PCB-1016		<0.001	<0.001	<0.001	<0.001
PCB-1262		<0.001	<0.001	<0.001	<0.001

Please reference the following page(s) for date and analyst.

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08/27/98

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ROCHESTER NY 14606

P.O. # RPB00833

ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

PARAMETER	SAMPLE ID :	SR-2	R-237	R-237 DUP	PZ-120
		08/11/98	08/11/98	08/11/98	08/11/98
	LAB ID	80812412	80812413	80812414	80812415
	DATE RECEIVED:	08/12/98	08/12/98	08/12/98	08/12/98
PCB	UNITS = MG/L				
PCB-1242		<0.001	<0.001	<0.001	<0.001
PCB-1254		<0.001	<0.001	<0.001	<0.001
PCB-1221		<0.001	<0.001	<0.001	<0.001
PCB-1232		<0.001	<0.001	<0.001	<0.001
PCB-1248		<0.001	<0.001	<0.001	<0.001
PCB-1260		<0.001	<0.001	<0.001	<0.001
PCB-1016		<0.001	<0.001	<0.001	<0.001
PCB-1262		<0.001	<0.001	<0.001	<0.001

Please reference the following page(s) for date and analyst.

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P.O. # RPB00833

ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

SAMPLE ID : SR-236
08/11/98

LAB ID 80812416
DATE RECEIVED: 08/12/98

PARAMETER	RESULTS	UNITS	DATE AND ANALYST
PCB			
PCB-1242	<0.001	MG/L	08/17/98 WILLIAMS/
PCB-1254	<0.001		HENRY
PCB-1221	<0.001		
PCB-1232	<0.001		
PCB-1248	<0.001		
PCB-1260	<0.001		
PCB-1016	<0.001		
PCB-1262	<0.001		

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08/27/98

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ROCHESTER NY 14606

P.O. # RPB00833

ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

PARAMETER	SAMPLE ID / LAB ID / DATE RECEIVED:	R-235 LNAPL 08/11/98 80812417 08/12/98	R-235 LNAPL-DUP 08/11/98 80812418 08/12/98	R-2 LNAPL 08/11/98 80812419 08/12/98	R-238 LNAPL 08/11/98 80812420 08/12/98
PCB	UNITS = MG/KG				
PCB IN OIL-1221		<2 D	<2 D	<2 D	<4 D
PCB IN OIL-1232		<2 D	<2 D	<2 D	<4 D
PCB IN OIL-1248		<2 D	<2 D	120	<4 D
PCB IN OIL-1260		<2 D	<2 D	<2 D	<4 D
PCB IN OIL-1016		<2 D	<2 D	<2 D	<4 D
PCB IN OIL-1242		<2 D	<2 D	<2 D	<4 D
PCB IN OIL-1254		<2 D	<2 D	<2 D	<4 D
PCB IN OIL-1262		<2 D	<2 D	<2 D	<4 D

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P.O. # RPB00833

ACCOUNT NO. 01267

ANALYTICAL REPORT FORM

SAMPLE ID : R-236
LNAPL
08/11/98
LAB ID 80812421
DATE RECEIVED: 08/12/98

PARAMETER	RESULTS	UNITS	DATE AND ANALYST
PCB			
PCB in oil-1221	<2 D	MG/KG	08/17/98 HENRY/
PCB in oil-1232	<2 D		WILLIAMS
PCB in oil-1248	<2 D		
PCB in oil-1260	<2 D		
PCB in oil-1016	<2 D		
PCB in oil-1242	<2 D		
PCB in oil-1254	<2 D		
PCB in oil-1262	<2 D		

John R Paraska
QUALITY ASSURANCE SUPERVISOR

pc: Mr. Tom Wells, H & A

KEY: <=LESS THAN >=GREATER THAN w.f.=WILL FOLLOW

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ENVIRONMENTAL
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CODE KEYS FOR ANALYTICAL REPORT FORMS

Results expressed as MG/KG or % are calculated on a received weight basis, with two exceptions: % volatile solids and % fixed solids (% ash) are expressed on a dry weight basis.

CODE B: This analyte was detected in the associated blank as well as in the sample. It indicates possible/probable contamination. The data user may subtract the blank value at his/her discretion.

CODE D: Detection limit change due to a dilution.

CODE R: The percent recovery on the spiked sample associated with this sample was not within the acceptance limits of 75% - 125%.

CODE S: This result was obtained by Method of Standard Additions.

CODE NA: Not Applicable

CODE ND: Not Detectable

PRC: Preparation Reference Control

VOID: The sample plus spike concentration exceeded the linear range of the standard curve.

CODE Q: Values for parameters quantified in this sample have been adjusted for recoveries of the analytical matrix spike. The adjustments have been based on the matrix recoveries from this sample. Adjusted values are not given where sample values were less than the detection limit or where spike recoveries are equal to 100%.

WF: Will Follow

CODE J: This result is an estimated value. It indicates that the compound meets the mass spectral data identification criteria. The result is less than the quantitation limit but greater than zero.

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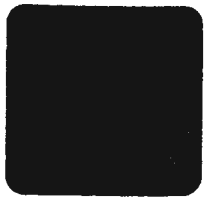

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Unabbreviated Listing of Hazardous Substance List Compounds

VOLATILE COMPOUNDS

Chloromethane

Bromomethane

Vinyl Chloride

Chloroethane

Methylene Chloride

Acetone

Carbon Disulfide

1,1-Dichloroethene

1,1-Dichloroethane

1,2-Dichloroethylenes (Total)***

Chloroform

1,2-Dichloroethane

2-Butanone

1,1,1-Trichloroethane

Carbon Tetrachloride

Vinyl Acetate

Ethyl Benzene

Styrene

Total Xylenes

Bromodichloromethane

1,1,2,2-Tetrachloroethane

1,2-Dichloropropane

trans-1,3-Dichloropropene

Trichloroethene

Dibromochloromethane

1,1,2-Trichloroethane

Benzene

cis-1,3-Dichloropropene

2-Chloroethyl Vinyl Ether

Bromoform

2-Hexanone

4-Methyl-2-pentanone

Tetrachloroethene

Toluene

Chlorobenzene

***The result supplied here is the sum of cis-1,2-dichloroethene and trans-1,2-dichloroethene.

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QUALITY CONTROL INFORMATION

Free-Col Laboratories analyzes control samples at specified frequencies during the analyses for the purpose of evaluating and documenting the precision and accuracy of the results. The attached quality control data, prepared at the time of analysis, reflect the results obtained for the various types of controls from the batch of samples described as follows:

Delphi Energy & Engine Sample Identification	Free-Col ID
SR-233 08/11/98	80812408
SR-234 08/11/98	80812409
R-234 08/11/98	80812410
SR-235 08/11/98	80812411
SR-2 08/11/98	80812412
R-237 08/11/98	80812413
R-237 DUP 08/11/98	80812414
PZ-120 08/11/98	80812415
SR-236 08/11/98	80812416
R-235 LNAPL 08/11/98	80812417
R-235 LNAPL-DUP 08/11/98	80812418
R-2 LNAPL 08/11/98	80812419
R-238 LNAPL 08/11/98	80812420
R-236 LNAPL 08/11/98	80812421
TRIP BLANK 08/11/98	80812422

Special Notes:

1. The results on the analytical report may be given as mg/kg and related control value results may be given on the quality control data sheet as mg/L. The reason for this difference is that many control values are expressed in terms of the final concentration of the solvent or acid extract of a solid waste or oil sample.

Free-Col Laboratories, LTD.
Surrogate Spike Information
Method 8260

Date: 8/20/98 Analyst Ecklund

Units: % Recovery

Type: W = Low/Medium Water
S = Low/Medium Soil/Sediment

	Dibromofluoromethane	Toluene-d_8	4-Bromofluoro-benzene
Limits:			
Water	86-118	88-110	86-115
Soil/Sediment	80-128	81-117	74-121

Type (S/W)	Free-Col I.D.			
	808-12-408	104	101	99
	808-12-409	100	98	98
	808-12-410	108	94	96
	808-12-411	95	97	92
	808-12-412	110	105	105
	808-12-413	105	96	99
	808-12-414	93	93	90
	808-12-415	106	104	106
	808-12-416	104	103	103
	808-12-422	106	102	100

FREE-COL LABORATORIES, INC.
VOA BLANK INFORMATION
(CLP - CALIBRATION BLANK LIMITS)

Date 8/20/98 Analyst Ecklund

Samples associated with this blank:

Parameter	Blank Value
Units = ug/L	
Chloromethane	<10
Bromomethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	<5
Acrolein	—
Acrylonitrile	—
1,1-Dichloroethene	<5
1,1-Dichloroethane	
trans-1,2-Dichloroethene	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	
trans-1,3-Dichloropropene	
Trichloroethene	
Benzene	
Dibromochloromethane	
1,1,2-Trichloroethane	
cis-1,3-Dichloropropene	
2-Chloroethyl vinyl ether	<10
Bromoform	<5
Tetrachloroethene	
1,1,2,2-Tetrachloroethane	
Toluene	
Chlorobenzene	
Ethyl benzene	
1,3-Dichlorobenzene	
1,2-Dichlorobenzene	
1,4-Dichlorobenzene	
Xylene	
2-Butanone - MEK	<100
4-Methyl-2-pentanone	<50
Acetone	<100
Syrene	<5

FREE-COL LABORATORIES, INC.
VOA BLANK INFORMATION
(CLP - CALIBRATION BLANK LIMITS)

Date 8/20/98 Analyst Eckelund

Samples associated with this blank:

Parameter	Blank Value
Units = ug/L	
Carbon Disulfide	<5
Vinyl Acetate	<50
2-Hexanone - MBK	<50
Dichlorofluoromethane	
1,1,1,2-Tetrachloroethane	
Trichlorofluoromethane	
1,2,3-Trichloropropane	
3-Chloro-1-propene	
1,2-Dibrmomethane	
cis,1,2-Dichloroethene	<5

Limits in effect as of June 2, 1997

FREE-COL LABORATORIES, LTD.
VOA SPIKED CONTROL INFORMATION
(CLP - ANALYTICAL SPIKED SAMPLE LIMITS)

Date 8/20/98 Analyst Ecklund

Samples associated with this spiked control:

Sample used as spiked control: 808-12-409

PARAMETER	SPIKE ADDED UG/L	SPIKED RESULT UG/L	SAMPLE RESULT UG/L	ACCEPT. LIMITS % REC.	ASSYD % REC.	FILE
Chloromethane	20	21	<10	31-187	105	520
Bromomethane	20	21	<10	34-207	105	519
Vinyl chloride	20	23	<10	26-183	115	528
Chloroethane	20	21	<10	55-168	105	507
Methylene chloride	20	22	<5	63-151	110	521
Acrolein	62	—	—	23-183	—	500
Acrylonitrile	58	—	—	52-186	—	501
1,1-Dichloroethene	20	21	<5	52-159	105	513
1,1-Dichloroethane	20	22		73-144	110	511
trans-1,2-Dichloroethene	20	21		64-151	105	514
Chloroform	20	23		68-142	115	509
1,2-Dichloroethane	20	22		54-155	110	512
1,1,1-Trichloroethane	20	22		59-158	110	525
Carbon tetrachloride	20	19		39-147	95	504
Bromodichloromethane	20	22		47-148	110	510
1,2-Dichloropropane	20	22		67-144	110	515
trans-1,3-Dichloropropene	20	20		56-141	100	517
Trichloroethene	20	22		64-130	110	527
Benzene	20	21		71-142	105	502
Dibromochloromethane	20	16		29-155	80	506
1,1,2-Trichloroethane	20	20		61-146	100	526
cis-1,3-Dichloropropene	20	20		46-149	100	516
2-Chloroethyl vinyl ether	20	20	<10	7-183	100	508
Bromoform	20	17	<5	10-149	85	503
Tetrachloroethene	20	17		50-160	85	523
1,1,2,2-Tetrachloroethane	20	21		44-163	105	522
Toluene	20	22		73-130	110	524
Chlorobenzene	20	22		72-131	110	505
Ethyl benzene	20	20		62-139	100	518
1,3-Dichlorobenzene	26	27		60-161	104	530
1,2-Dichlorobenzene	26	28		45-157	104	529
1,4-Dichlorobenzene	20	22		36-174	110	531
Diethyl Benzene	44	—	—	71-137	—	533
Ethyl Ether	35	—	—	62-160	—	532
Xylenes	44	46	<5	72-130	104	534
MEK	20	16	<10	63-179	80	536

FREE-COL LABORATORIES, INC.
VOA BLANK INFORMATION
(CLP - CALIBRATION BLANK LIMITS)

Date 8/24/98 Analyst Ecklund

Samples associated with this blank:

Parameter	Blank Value
Units = ug/L	
Chloromethane	<5
Bromomethane	↓
Vinyl chloride	↓
Chloroethane	↓
Methylene chloride	<2
Acrolein	—
Acrylonitrile	—
1,1-Dichloroethene	<2
1,1-Dichloroethane	↓
trans-1,2-Dichloroethene	↓
Chloroform	↓
1,2-Dichloroethane	↓
1,1,1-Trichloroethane	↓
Carbon tetrachloride	↓
Bromodichloromethane	↓
1,2-Dichloropropane	↓
trans-1,3-Dichloropropene	↓
Trichloroethene	↓
Benzene	↓
Dibromochloromethane	↓
1,1,2-Trichloroethane	↓
cis-1,3-Dichloropropene	↓
2-Chloroethyl vinyl ether	<5
Bromoform	<2
Tetrachloroethene	↓
1,1,2,2-Tetrachloroethane	↓
Toluene	↓
Chlorobenzene	↓
Ethyl benzene	↓
1,3-Dichlorobenzene	↓
1,2-Dichlorobenzene	↓
1,4-Dichlorobenzene	↓
Xylene	↓
2-Butanone - MEK	<10
4-Methyl-2-pentanone	<10
Acetone	<10
Syrene	<2

FREE-COL LABORATORIES, INC.
VOA BLANK INFORMATION
(CLP - CALIBRATION BLANK LIMITS)

Date 8/24/98 Analyst Ecklund

Samples associated with this blank:

Parameter	Blank Value
Units = ug/L	
Carbon Disulfide	<2
Vinyl Acetate	<10
2-Hexanone - MBK	<10
Dichlorofluoromethane	
1,1,1,2-Tetrachloroethane	
Trichlorofluoromethane	
1,2,3-Trichloropropane	
3-Chloro-1-propene	
1,2-Dibrmomethane	
cis,1,2-Dichloroethene	<2

Limits in effect as of June 2, 1997

FREE-COL LABORATORIES, LTD.
VOA REPEAT CONTROL INFORMATION
(CLP - DUPLICATE SAMPLE LIMITS)

Date 8/24/98 Analyst Ecklund

Samples associated with this repeat control:

Sample used as repeat control: 808-22-008

AD = Absolute Difference RPD = Relative Percent Difference

Parameter	Samp. Value	Repeat Value	Accept AD	Accept RPD	Assayd AD/RPD	File
Units = ug/L						
Chloromethane	<5	<5				820
Bromomethane						819
Vinyl chloride				27		828
Chloroethane						807
Methylene chloride	<2	<2		17		821
Acrolein	-	-				800
Acrylonitrile	-	-				801
1,1-Dichloroethene	<2	<2				813
1,1-Dichloroethane				41		811
trans-1,2-Dichloroethene				28		814
Chloroform				14		809
1,2-Dichloroethane						812
1,1,1-Trichloroethane				27		825
Carbon tetrachloride						804
Bromodichloromethane				79		810
1,2-Dichloropropane						815
trans-1,3-Dichloropropene						817
Trichloroethene				32		827
Benzene				49		802
Dibromochloromethane				70		806
1,1,2-Trichloroethane						826
cis-1,3-Dichloropropene						816
2-Chloroethyl vinyl ether	<5	<5				808
Bromoform	<2	<2				803
Tetrachloroethene				33		823
1,1,2,2-Tetrachloroethane						822
Toluene				38		824
Chlorobenzene				24		805
Ethyl benzene				5		818
1,3-Dichlorobenzene						830
1,2-Dichlorobenzene						829
1,4-Dichlorobenzene				36		831
Acetone	<10	<10		26		836

Limits in effect as of June 2, 1997

FREE-COL LABORATORIES, LTD.
VOA REPEAT CONTROL INFORMATION
(CLP - DUPLICATE SAMPLE LIMITS)

Date 3/24/98 Analyst Ecklund
Samples associated with this repeat control:

Sample used as repeat control: 808-22-008
AD = Absolute Difference RPD = Relative Percent Difference

Parameter	Samp. Value	Repeat Value	Accept AD	Accept RPD	Assayd AD/RPD	File
Units = ug/L						
3-Chloro-1-propene						
Dichlorodifluoromethane						
Methyl Ethyl Ketone	<10	<10			0	
MIBK	<10	<10			0	
1,1,1,2-Tetrachloroethane						
Trichlorofluoromethane						
1,2,3-Trichloropropane						
1,2-Dibromomethane						
Cis-1,2-Dichloroethane	<2	<2			0	
Xylene	<2	<2			0	
Ethyl Ether	<2	<2			0	
MBK	<10	<10			0	
CARBON DISULFIDE	<2	<2			0	
STYRENE	<2	<2			0	
VINYL ACETATE	<10	<10			0	

Limits in effect as of June 2, 1997

FREE-COL LABORATORIES, LTD.
VOA SPIKED CONTROL INFORMATION
(CLP - ANALYTICAL SPIKED SAMPLE LIMITS)

Date 8/24/98 Analyst Ecklund

Samples associated with this spiked control:

Sample used as spiked control: 808-22-008

PARAMETER	SPIKE ADDED UG/L	SPIKED RESULT UG/L	SAMPLE RESULT UG/L	ACCEPT. LIMITS % REC.	ASSYD % REC.	FILE
Chloromethane	20	22	<5	31-187	110	520
Bromomethane	20	22		34-207	110	519
Vinyl chloride	20	24		26-183	120	528
Chloroethane	20	18		55-168	90	507
Methylene chloride	20	23	<2	63-151	115	521
Acrolein	62	—	—	23-183	—	500
Acrylonitrile	58	—	—	52-186	—	501
1,1-Dichloroethene	20	23	<2	52-159	115	513
1,1-Dichloroethane	20	23		73-144	115	511
trans-1,2-Dichloroethene	20	23		64-151	115	514
Chloroform	20	23		68-142	115	509
1,2-Dichloroethane	20	23		54-155	115	512
1,1,1-Trichloroethane	20	24		59-158	120	525
Carbon tetrachloride	20	20		39-147	100	504
Bromodichloromethane	20	23		47-148	115	510
1,2-Dichloropropane	20	21		67-144	105	515
trans-1,3-Dichloropropene	20	22		56-141	110	517
Trichloroethene	20	23		64-130	115	527
Benzene	20	23		71-142	115	502
Dibromochloromethane	20	16		29-155	80	506
1,1,2-Trichloroethane	20	18		61-146	90	526
cis-1,3-Dichloropropene	20	21		46-149	105	516
2-Chloroethyl vinyl ether	20	16	<5	7-183	80	508
Bromoform	20	16	<2	10-149	80	503
Tetrachloroethene	20	17		50-160	85	523
1,1,2,2-Tetrachloroethane	20	20		44-163	100	522
Toluene	20	24		73-130	120	524
Chlorobenzene	20	22		72-131	110	505
Ethyl benzene	20	21		62-139	105	518
1,3-Dichlorobenzene	26	28		60-161	108	530
1,2-Dichlorobenzene	26	27		45-157	104	529
1,4-Dichlorobenzene	20	21		36-174	105	531
Diethyl Benzene	44	—		71-137	—	533
Ethyl Ether	35	36	<2	62-160	103	532
Xylenes	44	46	<2	72-130	104	534
MEK	20	18	<10	63-179	90	536

Limits in effect as of June 2, 1997

FREE-COL LABORATORIES, LTD.
VOA SPIKED CONTROL INFORMATION
(CLP - ANALYTICAL SPIKED SAMPLE LIMITS)

8/24/98 Analyst Eckelmeyer

Dates associated with this spiked control:
Sam

Sample used as spiked control: 808-22.008

PARAMETER	SPIKE ADDED UG/L	SPIKED RESULT UG/L	SAMPLE RESULT UG/L	ACCEPT. LIMITS % REC.	ASSYD % REC.	FILE
Acetone	20	19	<10	72-154	95	538
MIBK	20	16	<10	53-160	80	539
Ethyl Acetate	45	—	—	71-140	—	535
Tetrahydrofuran	45	—	—		—	
Carbondisulfide	20	24	<5		120	
Styrene	20	22	<2		110	
Vinyl Acetate	20	18	<10		90	
Amyl Acetate	44	—	—		—	
Methyl Butyl Ketone	20	20	<10		100	

RM

QUALITY CONTROL DATA I

PARAMETER: PCB 1242 ANALYST: Chris Williams DATE: 8/1

REFERENCE CONTROL UNITS: mg/L

Target	Acceptance Limits			
1.0	0.85	to 1.15	1.02, 1.04, 0.90, 0.98	
		to	, , ,	
		to	, , ,	

PREPARATION REFERENCE CONTROL Units:

Target	Acceptance Limits		Assayed Value:	
		to	Date Prepped:	

REPEAT CONTROL AD = Absolute Difference RPD = Relative Percent Diffe:
Units: mg/L Acceptable AD: 0.2 Acceptable RPD: %

Sample I.D.	Dilution	Sample Result	Repeat Result	AD	RPD
808-12-439	Florisil	1.60	1.58	0.02	
808-12-438	2X-Florisil	1.49	1.48		

SPIKE CONTROL Units: mg/L
Acceptable Limits for Percent Recovery: % to %

Sample I.D.	Dilution	Spike Added	Spike Result	Sample Result	% Recovery
808-12-439		1.0	1.68	0.8	88 %
					%
					%
					%

BLANK Units: mg/L
Result: <0.1 Liz Liz 8/14 Lab Blank 8/14/94
Date Prepped 8/14/94

DETECTION LIMIT Units: mg/L
Limit Value: 0.1 Assayed Value: 0.05

808-12-438+439
808-12-417, 418, 420
808-12-421

FREE-COL LABORATORIES, LTD.
P.O. BOX 557, 11618 COTTON ROAD
MEADVILLE, PA 16335
(814) 724-6242

808-12-408-416

FREE-COL LABORATORIES, LTD.
PCB SURROGATE SPIKE INFORMATION
METHOD 8082

WATER AND SOLID WASTE MATRICES

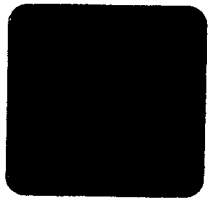
Date 8/17-19/91 **Analyst** M Henry + A Williams

Target Value = 1.0 mg/L

Units = mg/L

Free-Col ID	Limits:	Tetrachloro-m-Xylene 40-120%	Decachlorobiphenyl 40-120%
8/14/91 BL		61	55
808-12-408			71
808-12-409			76
410			102
411			82
412		44	102
413 10x			51
414 10x		47	40
415		45	40
416		66	79
808-12-438 5x Florisil			40
808-12-439 Florisil			45

FREE-COL LABORATORIES, LTD.
P.O. Box 557, 11618 Cotton Road
Meadville, Pennsylvania 16335-0557
Phone: Area Code 814/724-6242
FAX: Area Code 814/333-1466



ENVIRONMENTAL
OCCUPATIONAL HEALTH
FOOD SCIENCE
SPECIALISTS

DELPHI ENERGY & ENGINE
GENERAL MOTORS CORPORATION

MONITORING WELLS

SAMPLE DATES: 08/11/98

CHAIN OF CUSTODY RECORD

FREE-COL LABORATORIES, LTD.
P.O. BOX 557 — 800 836 - 4130
11618 COTTON ROAD — 814 724 - 6242
MEADVILLE, PA — 814 333 - 1466 Fax
16335-0557

1 CLIENT INFORMATION			
COMPANY	DELPHI ENERGY & ENGINE		
CONTACT	RICK EISENMAN		
ADDRESS	PO BOX 92700		
CITY	ROCHESTER		
STATE	NY	ZIP CODE	14606
PHONE	716-647-4766	FAX	716-647-4417
PURCHASE ORDER NUMBER			
CLIENT #	001649	ACCT #	01267

2 TYPE (Check all that apply)			
Normal	X	Wastewater	
Rush (Specify)		Monitoring Wells	XX
QA/QC		Drinking Water	
Methods		PWS#	
Due Date		Solid Waste	
Fax Data		I.H.	
		Other	

3 PROJECT NAME / NUMBER
MONITORING WELLS

4 SAMPLER'S NAME / DATE
Dick Valesky, Bill Slater 8/11/98

SAMPLE RANGE:

5 SAMPLE INFORMATION

	DATE	TIME	SAMPLE IDENTIFICATION	FOR FREE-COL USE ONLY: FREE-COL ID	RESULTS	GRAB/COMP	ANALYSIS REQUESTED/COMMENTS
1	8/11/98	11:00	SR-233			Grab	VOA's, PCB's Field: Temp 21°C pH 6.9 Spec Cond 2000
2		11:55	SR-234				18 6.9 5600
3		12:25	R-234				16 7.4 860
4		13:00	SR-235				20 7.0 10500
5		13:46	SR-2				18 6.9 4050
6		15:25	R-237				17 7.1 3420
7		15:25	R-237 Duplicate				17 7.1 3500
8		16:15	PZ-120				25 6.9 4300
9		16:20	SR-236				20 7.1 5580
10		13:00	R-235 LNAPL				
11		13:00	R-235 LNAPL DUP.				
12		13:45	R-2 LNAPL				
13			R-238 LNAPL				
14		16:30	R-236 LNAPL				
15			Trip Blank				" "

6 SAMPLE TRACABILITY

	Date Received	SIGNATURE	ORGANIZATION	Date Relinquished
1	8/11/98	Richard J. Vaz	FREE-COL LABORATORIES, LTD.	8/12/98
2	8-12-98	[illegible]	Free-Col	8-12-98
3	8-12-98	Lab Office	Freecol	8-28-98
4	8-28-98	John Starish	Freecol	8-28-98
5				
6				
7				

USE BY LABORATORY ONLY

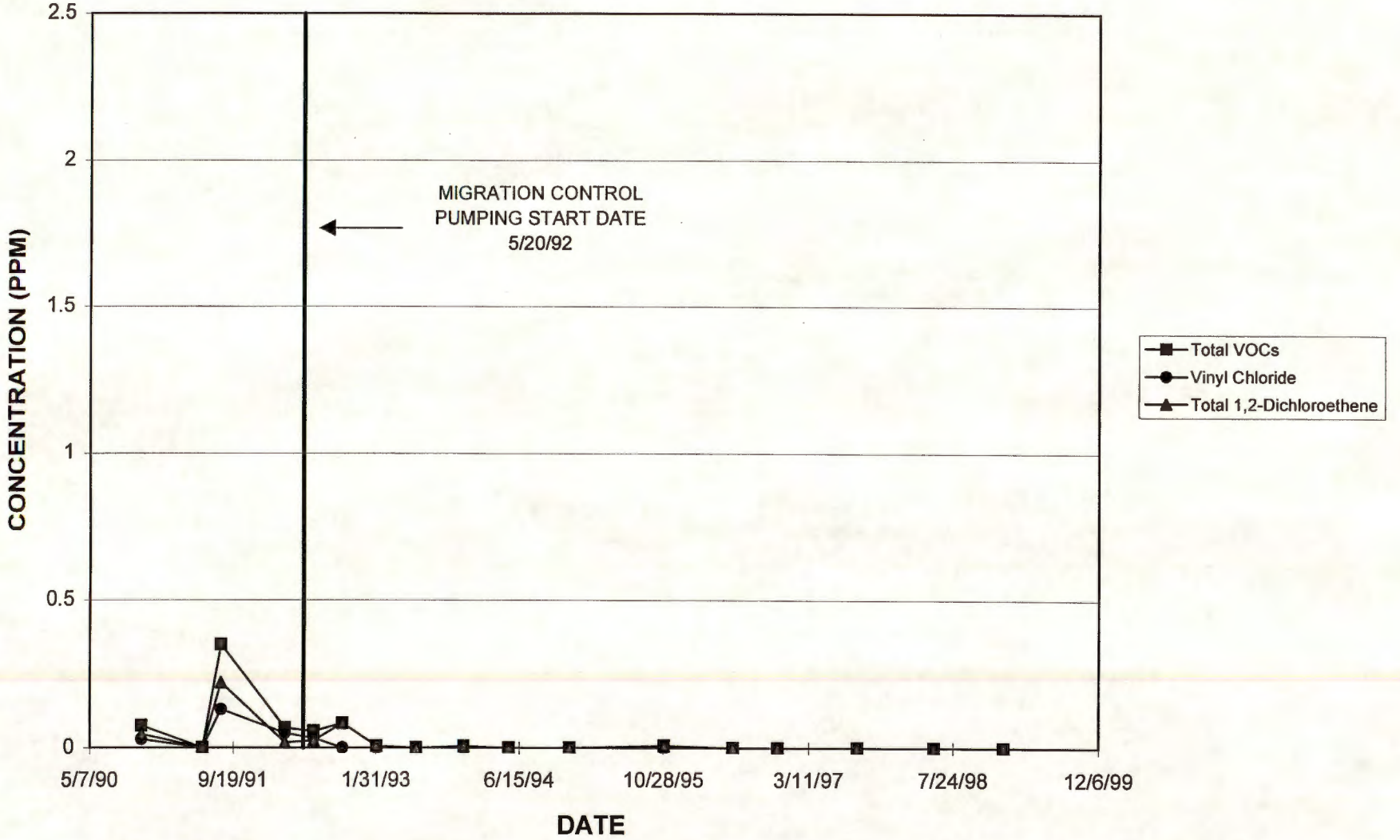
	Date	Time	Refrigerated upon receipt?
Samples received at lab	8/12/98	15:50	YES / NO
Means of delivery to lab	TS		
Sample cooler temp. upon receipt	4 (deg. C)		
Sample check in started	8.12.98	Completed	8.12.98
Analyst		Date Run	
Reviewed by		Date	
Worksheet Number			

Appendix D

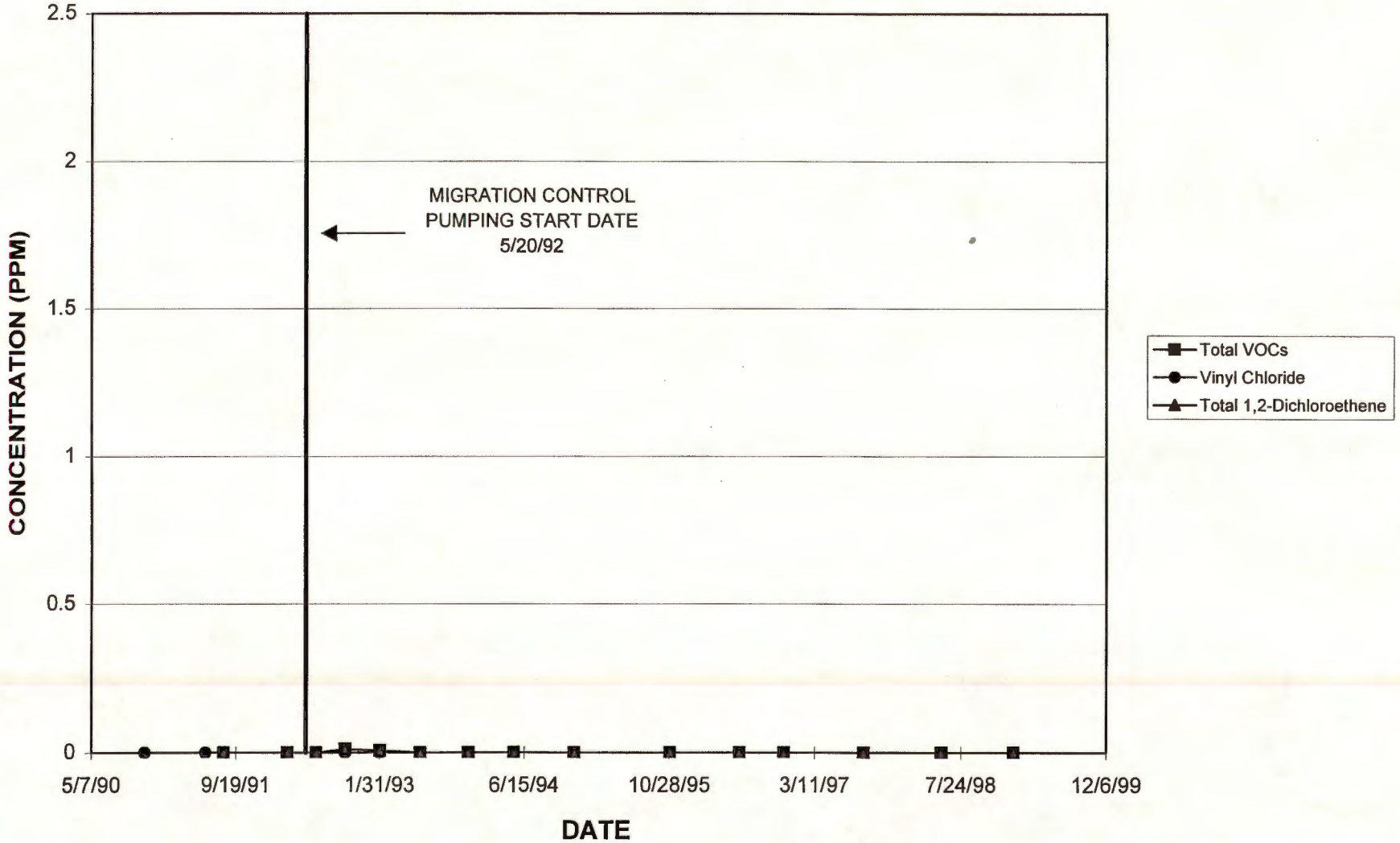
Time Series Plots

HALEY & ALDRICH

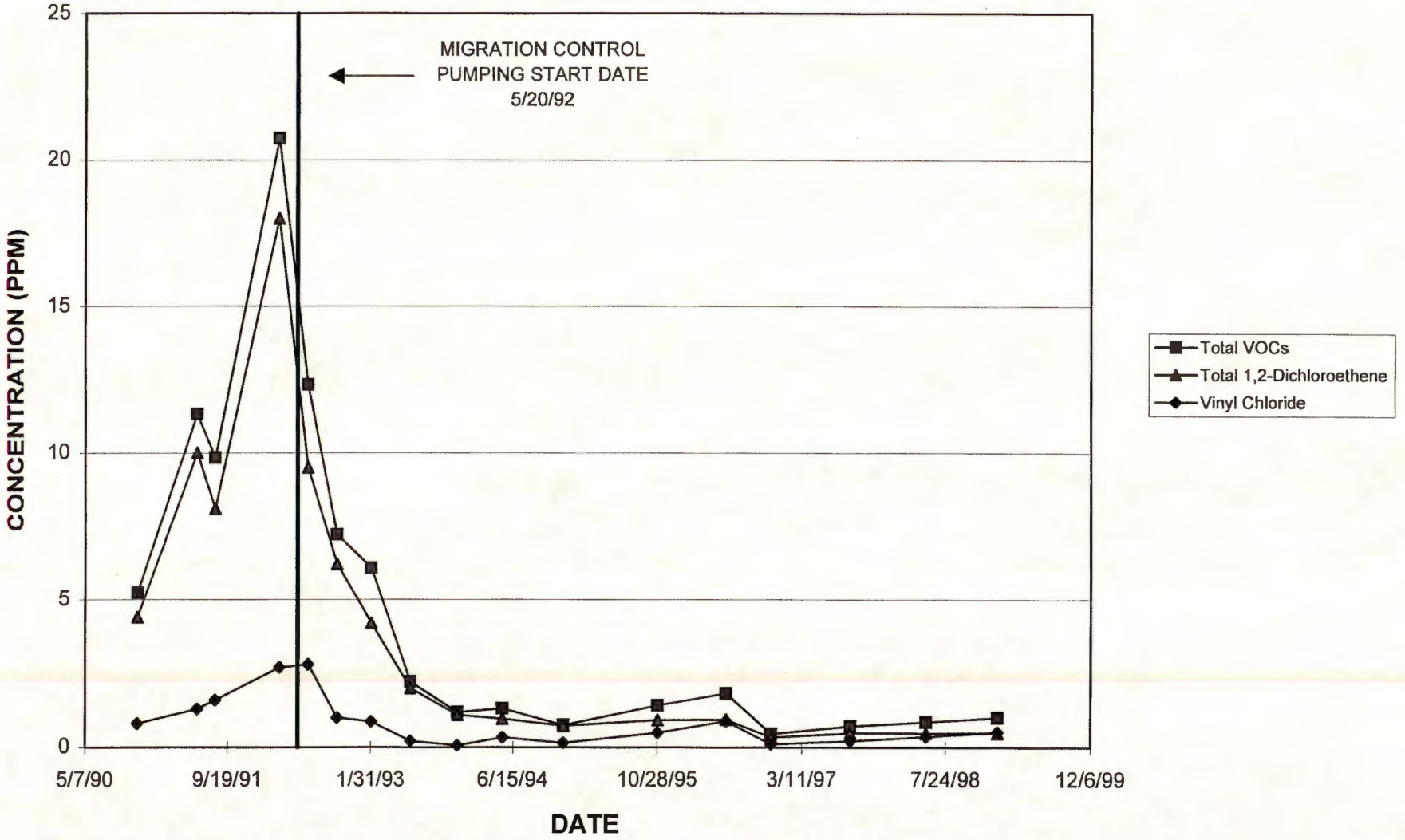
Chemical Time Series Plot For SR-107



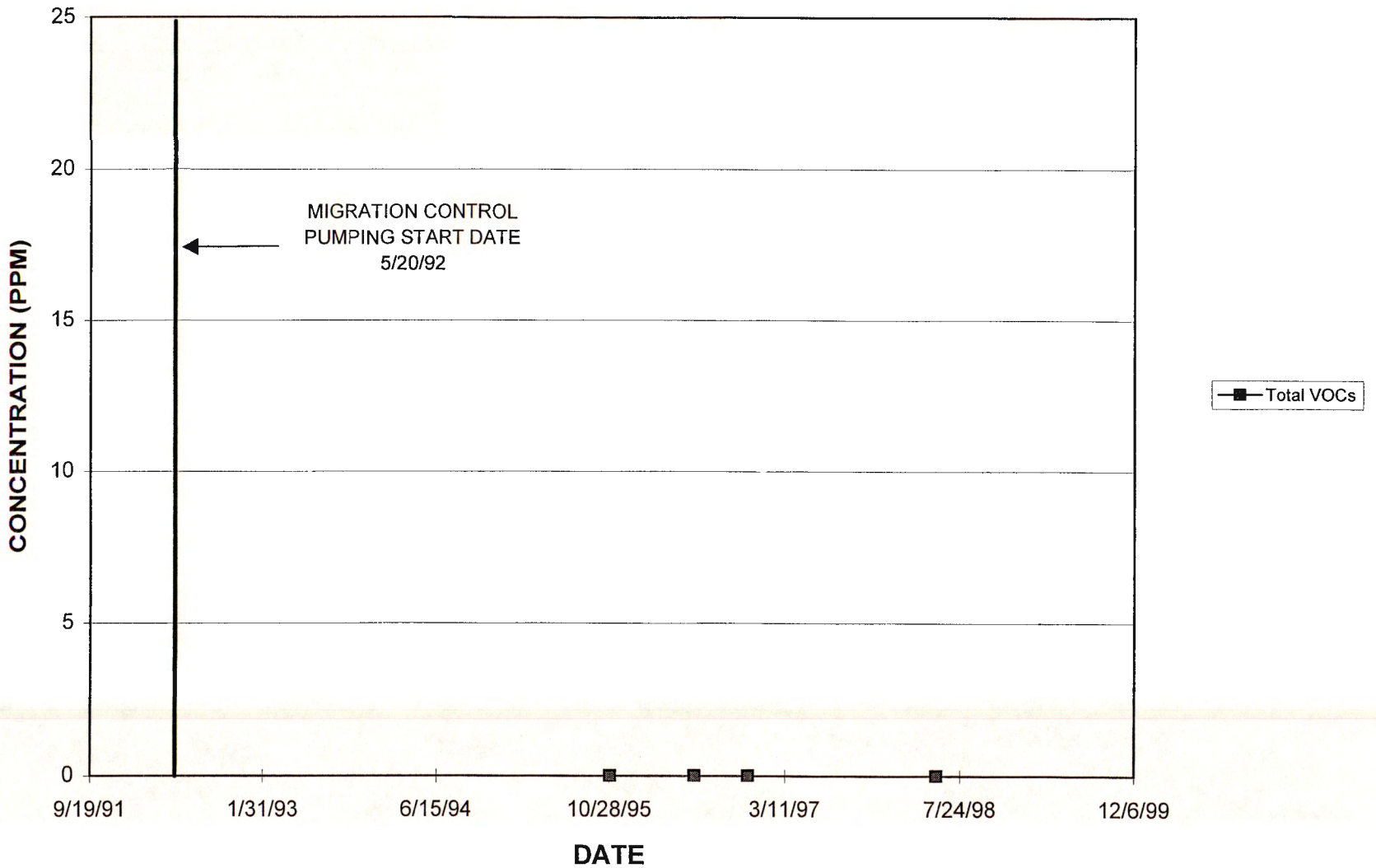
Chemical Time Series Plot For R-107



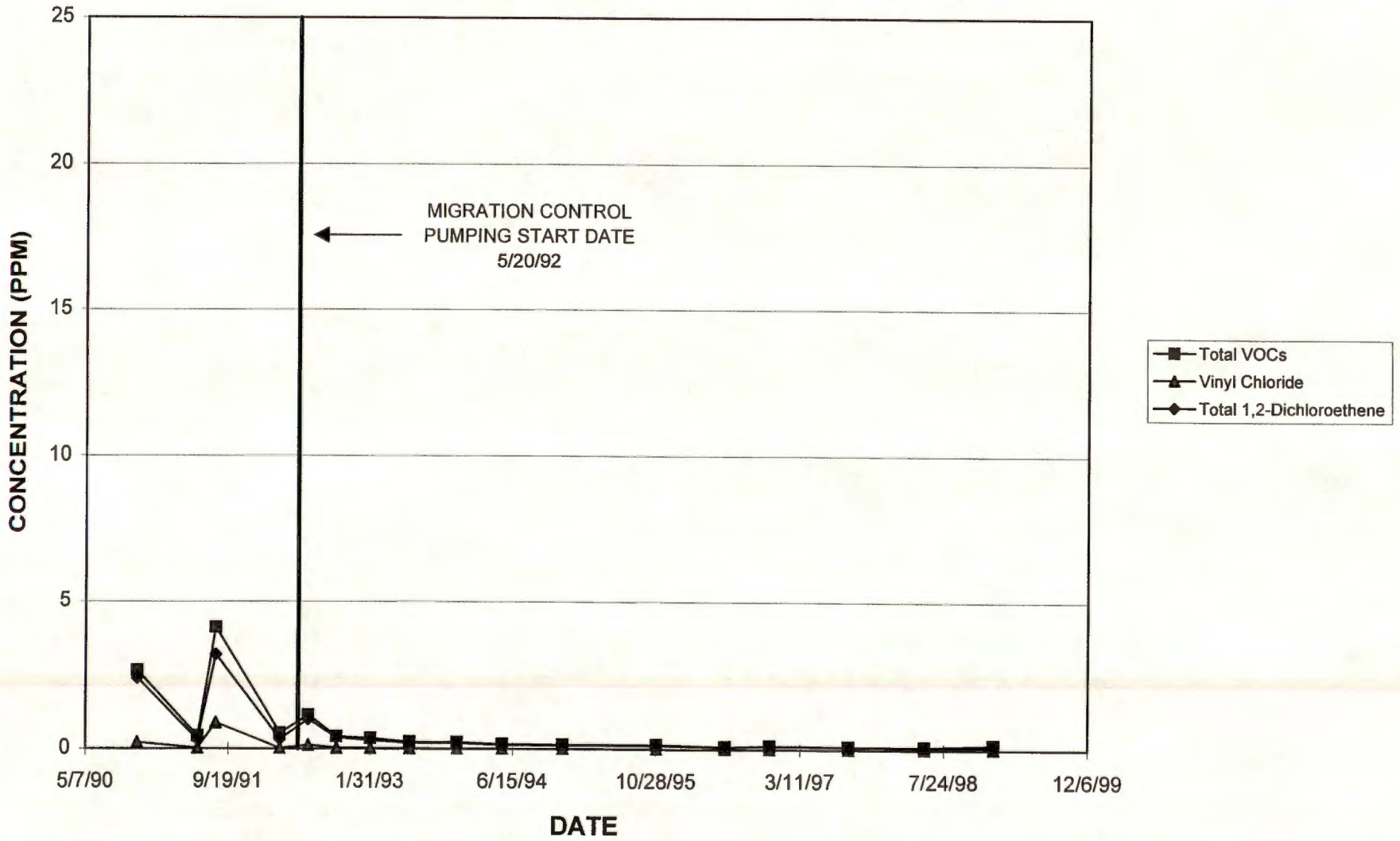
Chemical Time Series Plot For R-108



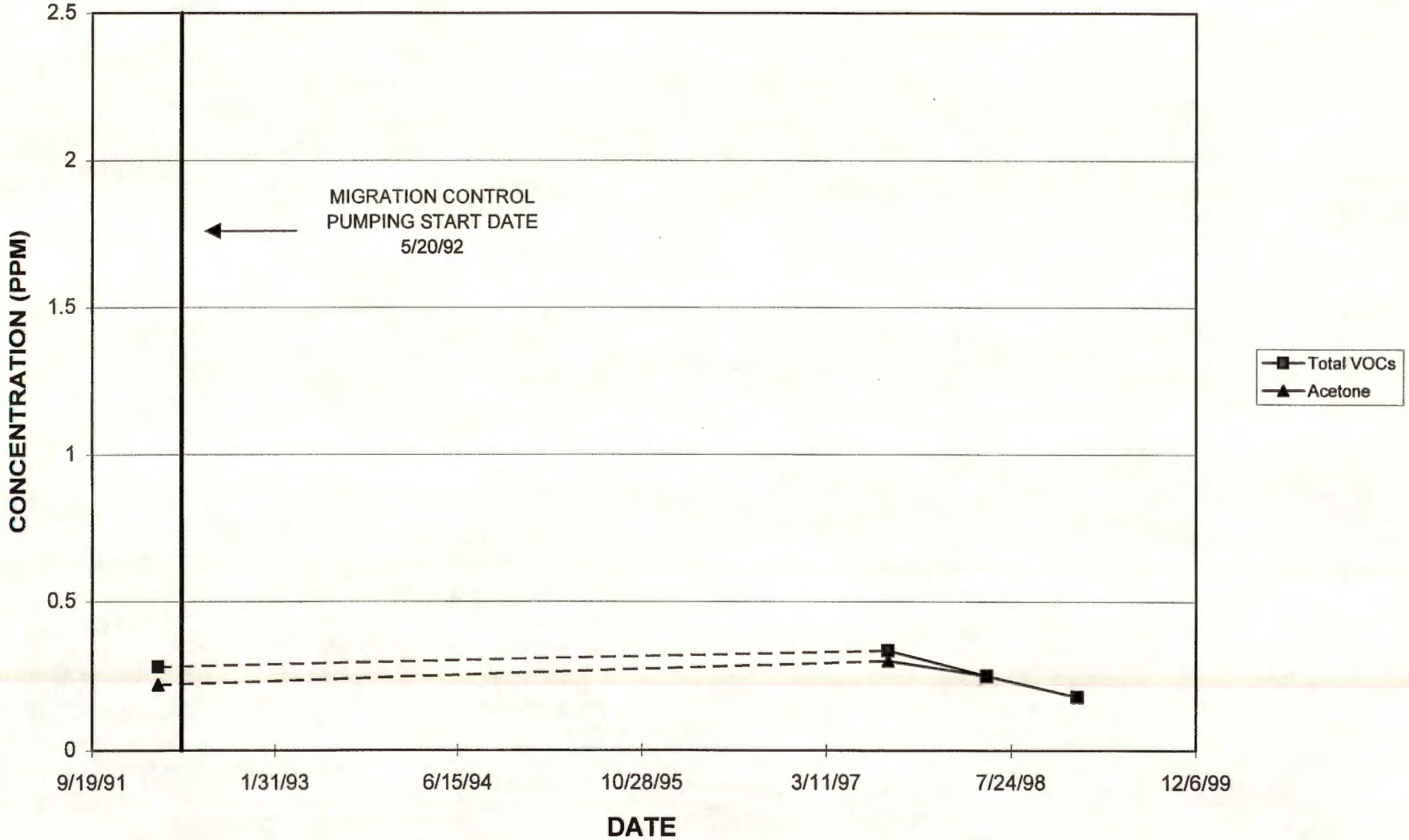
Chemical Time Series Plot For SR-8



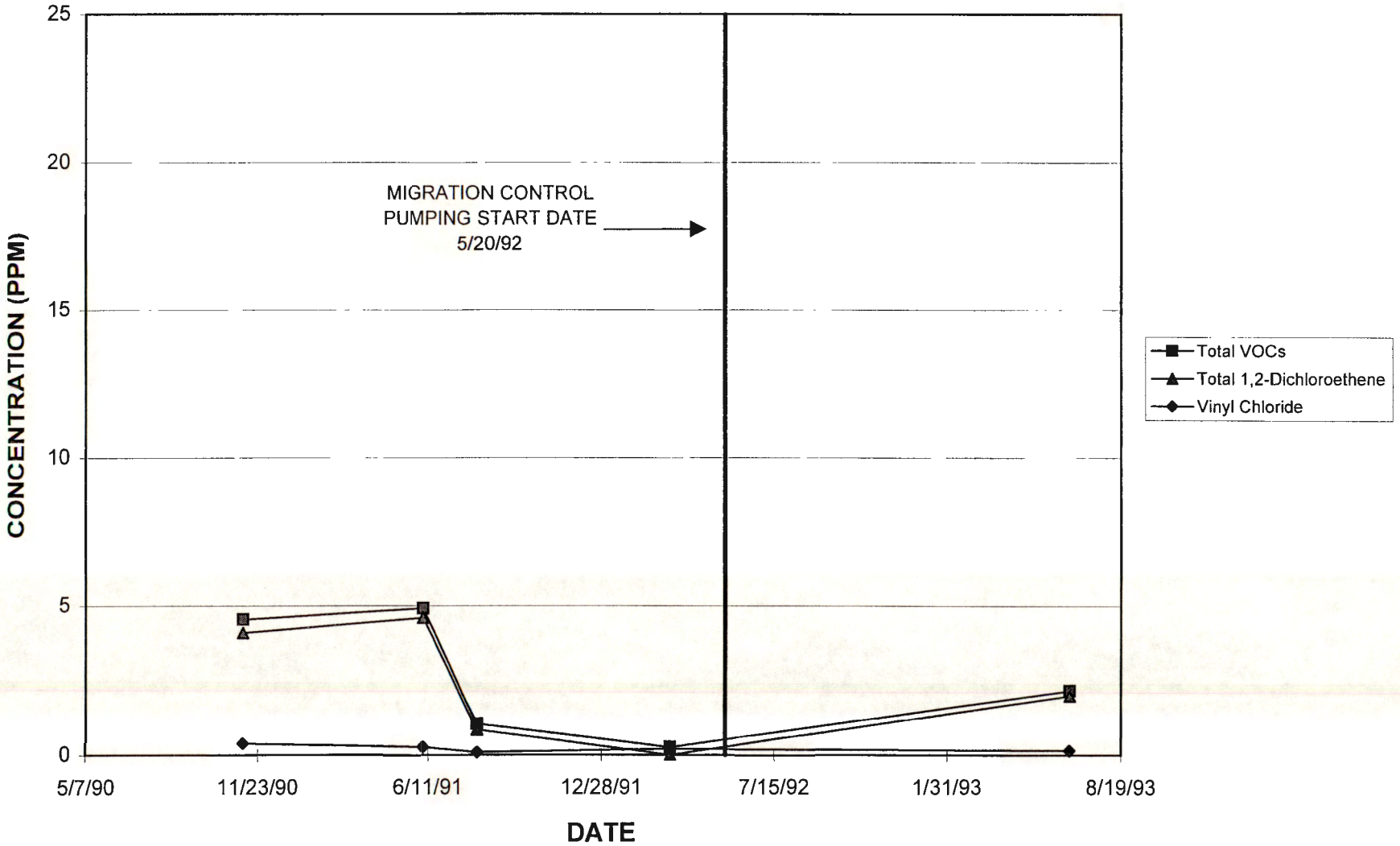
Chemical Time Series Plot For R-109



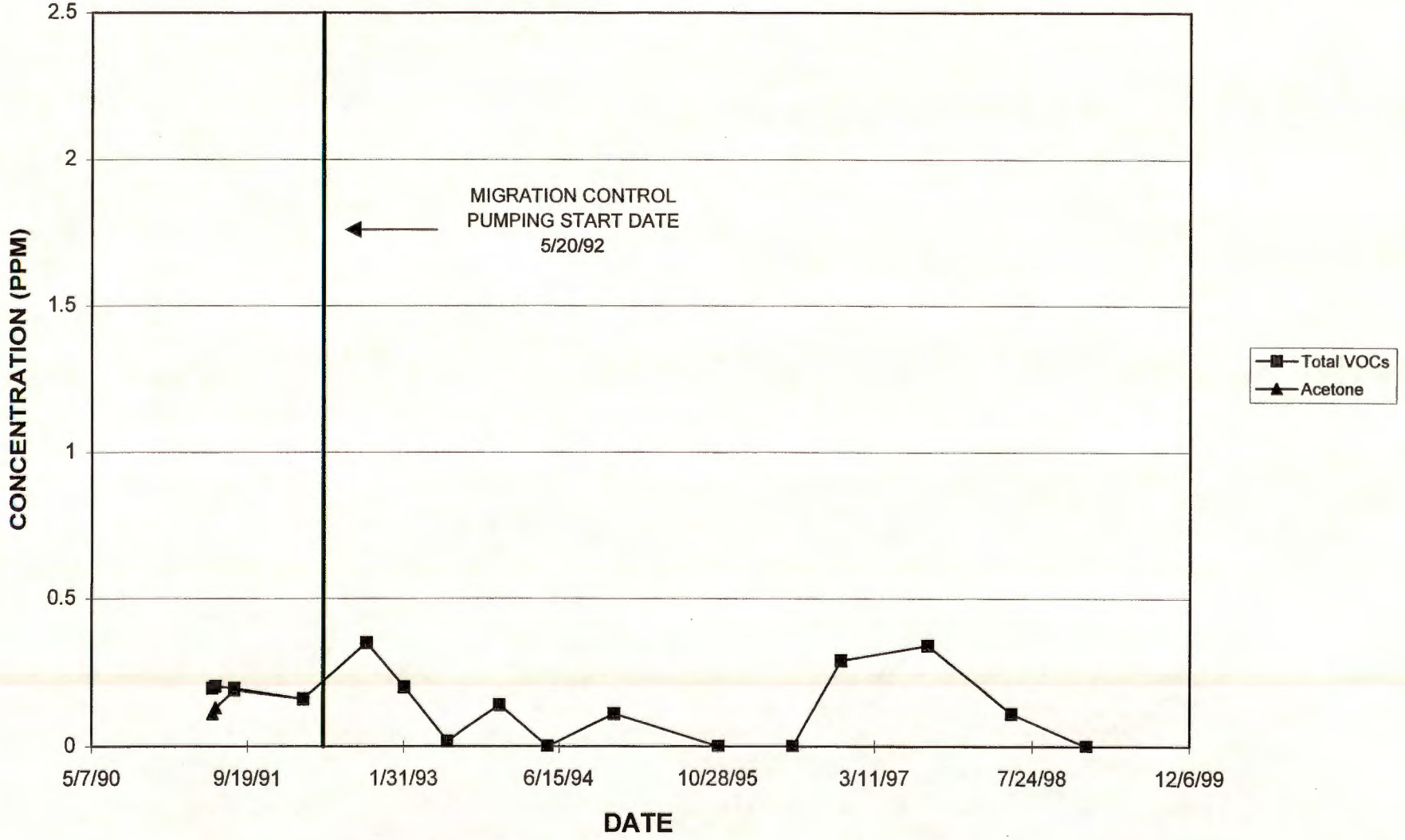
Chemical Time Series Plot For DR-108



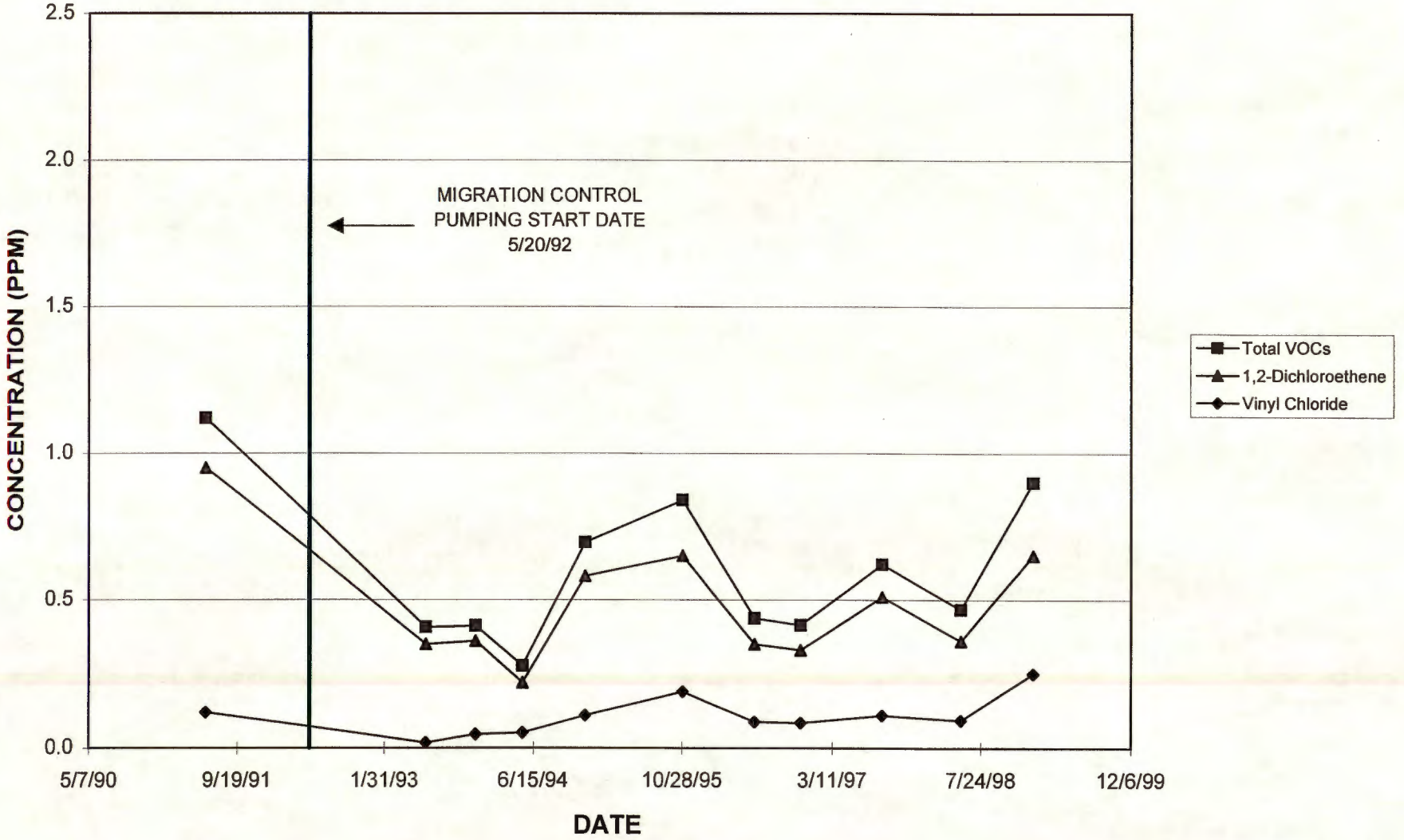
Chemical Time Series Plot For SR-9



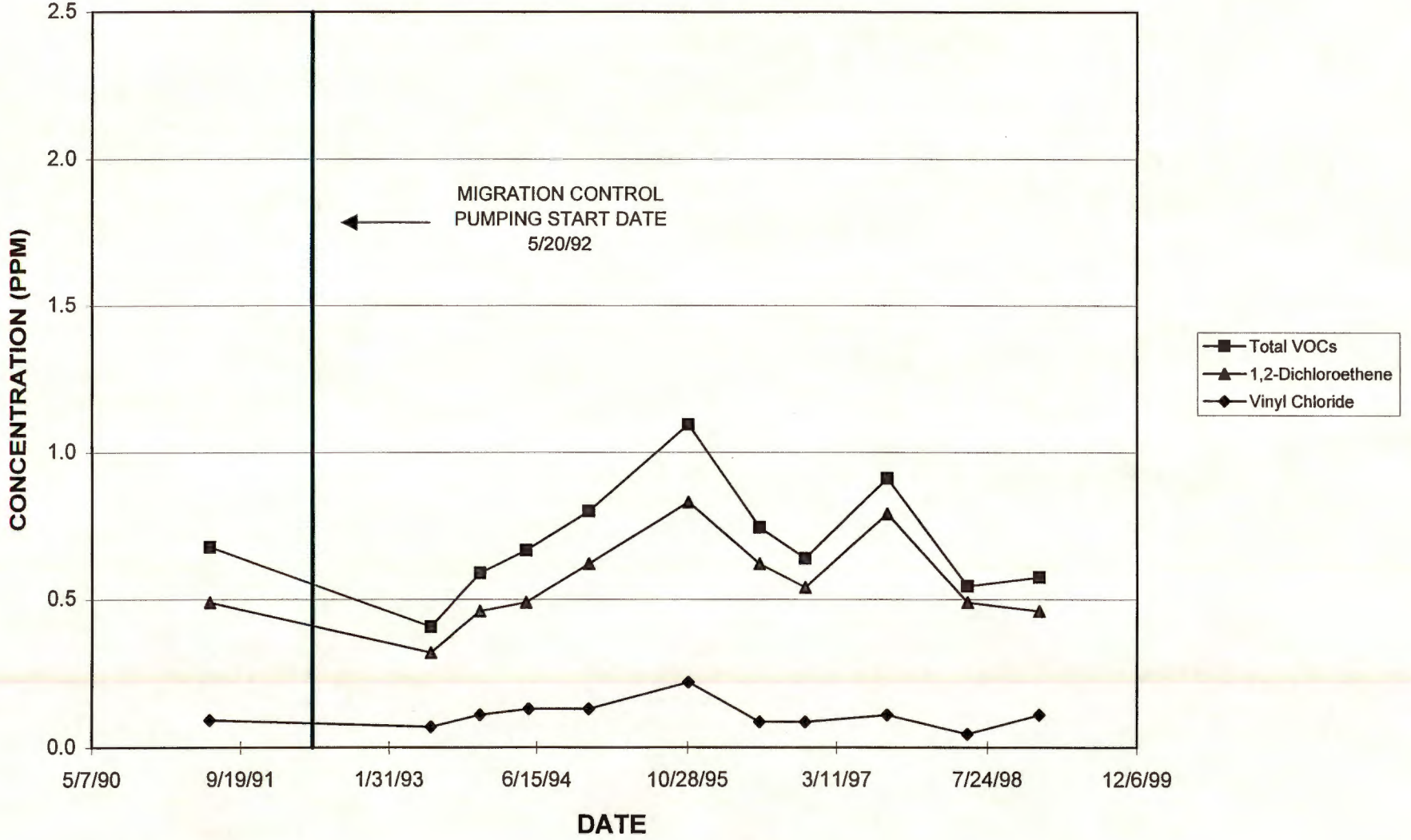
Chemical Time Series Plot For DR-109



Chemical Time Series Plot For PZ-140



Chemical Time Series Plot For PZ-141



Appendix E

Lexington Avenue Sewer Tunnel Photographs

HALEY & ALDRICH

1. Shaft at Tunnel Station 72+90. The east wall of the tunnel is the concrete and brick wall in the right half of the picture. Person is standing on shelf 3'10' above the tunnel invert--Seeps above his head and at the top of the concrete are from built-in weep holes.

2. Built-in weep holes in south wall of shaft at Station 72+90.

3. East wall of shaft. Tunnel ellipse is 7 ft. wide.

4. Ladder is on north wall of shaft.

5. Rusty-orange stain from groundwater seep to base of south wall of shaft, top of shelf 3'10" above invert. Light brown mineral deposits are from a weep hole seep above.

6. Seep in south wall of Tunnel 225 ft. east of shaft. Note accumulation of mineral deposits. Sample of groundwater collected here. (Tunnel Station = 75+15).

7. Same seep at 225' East of shaft, south side of tunnel (seep located approx. at Tunnel Station 75+15).

8. Seep in south wall of Tunnel 440 ft. East of shaft (seep located approx. at Tunnel Station 77+30). Dark material appeared to be oily but was determined not to be so upon examination at the project laboratory.

9. Seep 440 Ft. East of shaft (same as previous picture).

10. Seep on north side of Tunnel 462 ft. East of shaft (at Tunnel Station 77+52)--No oil observed. Groundwater sample collected.

11. Same seep at 462 ft. East of shaft, north side.

12. Seep in north wall of Tunnel 163 ft. East of shaft (approx. Tunnel Station = 74+53)--No oil observed. GW sample collected here.

13. Same seep at 163 ft. East of shaft, north side.

14. Looking west towards shaft at Station 72+90 from seep at Station 74+53; showing numerous inactive or very minor seeps along joint 6" above floor.

15. Oil seep in south wall of Tunnel 101 ft. East of shaft. Sampled oily mineral deposits at this location. No freely flowing oil or water observed from oily section. (Tunnel Section = 73+91).

16. Same oily seep on south wall 101 ft. East of shaft.

17. Seep at base of south wall 20 ft. West of 72+90 shaft, possible oil puddled on floor in accumulation of mineral material -No samples collected (Tunnel Station = 72+70).

18. Same seep in south wall 20 ft. west of shaft.

19. Seep at base of south wall of Tunnel 134 ft. west of shaft--No oil observed--No sample collected. (Tunnel Station 71+56).

20. Same seep at 134 ft. west of shaft.