

BIOSLURPER STATUS REPORT  
FOR SEPTEMBER THROUGH NOVEMBER 2003  
NAVAL WEAPONS STATION - EARLE  
COLTS NECK, NEW JERSEY

*Issued:*

January 27, 2004

*Prepared for:*

Engineering Field Activity Northeast  
10 Industrial Highway  
Lester, PA 19113

*Prepared by:*

Tetra Tech FW, Inc.  
2300 Lincoln Highway  
One Oxford Valley - Suite 200  
Langhorne, PA 19047 - 1829

REMEDIAL ACTION CONTRACT N62472-99-D-0032  
CONTRACT TASK ORDER NO. 0049

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## **1.0 INTRODUCTION**

Tetra Tech FW, Inc. (TtFW) was contracted by Engineering Field Activity Northeast to design, construct and operate bioslurper units for Site 16F at Naval Weapons Station (NWS) Earle located in Colts Neck, New Jersey. This system operational report is being submitted to satisfy the post-construction submittal requirements in paragraph 1.2.1, Pre-Post Construction Documentation of the Statement of Services for Contract Task Order No. 0049 under Remedial Action Contract No. N62472-99-D-0032.

This report summarizes the ongoing bioslurper operations at Site 16F at the NWS-Earle facility. The report summarizes the product recovered, groundwater treated, and the analytical results of the air and effluent discharges from the bioslurper systems. The operation period was from September 1, 2003 through November 30, 2003; however the recovery numbers for the entire operational time (February 1998 through November 2003) are summarized in this report.

Bioslurper Unit No. 1 (located adjacent to Building C-16) normally recovers product from the following product extraction wells: 16MW-13, 16MW-14, 16MW-15, 16MW-04, 16MW-25, 16MW-26, 16MW-27 and vapor extraction wells: 16MW-22 and 16MW-23. Bioslurper Unit No. 2 (located north of Building C-50) normally extracts from 16MW-20, 16MW-16, C17/20MW-07, 16MW-17 and 16MW-19.

## **2.0 PROJECT LOCATION AND DESCRIPTION**

NWS-Earle is located in east-central Monmouth County in the town of Colts Neck, New Jersey as depicted in Figure 2-1. Site 16F is located in the north-central portion of NWS-Earle. The areas addressed with the bioslurper remediation system at Site 16F are the light non-aqueous phase liquid (LNAPL) plume southeast of Building C-16, the small LNAPL plume northwest of Building C-50, and a former gas station west of Building C-18.

An underground fuel line located in the area north of Building C-19 was used to transport diesel fuel from an underground storage tank (UST) located at the northeast corner of Building C-18 to a dispensing station north of Building C-50. A leak in the fuel line was discovered in 1977. All of the former USTs were removed from the former gas station in 1998. Part of the former underground diesel transfer line is still in place.

### **2.1 PREVIOUS INVESTIGATIONS**

Between June and October of 1995, Brown and Root Environmental conducted a Remedial Investigation (RI) at Site 16F. The RI Report concluded that hydrocarbons detected in the subsurface impacted the groundwater. The groundwater contamination (primarily volatile organics and fuel constituents) is associated with a free-phase LNAPL layer. This floating product is the source of organics in the groundwater.

In 1995, the Navy conducted an investigation at Site 16F using a Site Characterization and Analysis Penetrometer System (SCAPS). SCAPS is a field screening technique, which detects polynuclear aromatic hydrocarbon (PAH) compounds using a Laser Induced Fluorescence (LIF)

system. The LIF is quantitative to a known matrix with a known contaminant. A soil sample collected at the site was used to calibrate the LIF using diesel fuel marine. The fluorescent mapping, obtained from the push samples, was used to gain a better understanding of the contaminant distribution. Twenty nine (29) SCAPS borings were completed in the area between Building C-16 and C-50.

The free-phase plume to the south and east of Building C-16 is suspected to have been the result of the leaking former underground diesel fuel line. As evidenced by laboratory analytical results of groundwater samples, there is also some residual gasoline contamination associated with the plume near Building C-16.

The free-phase plume north of Building C-50 is suspected to have been the result of minor spills at a former diesel dispensing station located between the railroad tracks, north of Building C-50.

## **2.2 GEOLOGY**

Site 16F is located within the Outer Coastal Plain of the Atlantic Coastal Plain Physiographic Province, approximately nine miles inland from the Atlantic Ocean. The site is relatively flat with most of the topographic relief being the drainage swales located between the railroad tracks. According to regional mapping, the site is located on an outcropping of the Vincentown Formation and upper colluvium. The upper colluvium, where present, is shallow and consists of massive sand and silty sand, which may contain quartz or ironstone pebbles. The Vincentown Formation consists of grey and green glauconitic, fine to coarse-grained sand with silt.

According to the information obtained from the well installation logs and the SCAPS Investigation, the soil underlying the site is composed of fine to medium grained sand and silty sand.

## **3.0 BIOSLURPER OBJECTIVES AND PLUME CHARACTERISTICS**

The objectives of the bioslurper systems operations are to conduct remedial operations in three separate areas: 1) the main free-phase plume located south and southeast of Building C-16; 2) a smaller free-phase plume northwest of Building C-50; and 3) the residual soil contamination associated with the former gas station site west of Building C-18.

The diesel fuel spills would have started out as free product or free phase oil. This phase is initially very mobile, and migrates downward through the unsaturated (vadose) zone due to gravitational forces until either the water table or a stratigraphic barrier is encountered. The viscosity of the light non-aqueous phase liquid (LNAPL), the groundwater gradient, and the permeability of the aquifer media control the rate of free product migration. A “smear zone” develops when the mobile LNAPL is smeared vertically through seasonal fluctuations in the water table. Once the smear zone develops, a portion of the LNAPL exists as a discontinuous non-wetting liquid phase (residual) that is relatively immobile except at seasonal low water table. An increased smear zone reduces the volume of the remaining mobile free-phase oil.

Based on previous data gathered from water level measurements obtained in the recovery wells, the elevations in the wells vary as much as 3.90 to 7.29-feet below grade, with the average groundwater fluctuation of 5.79-feet in a well. That means that the free-phase product is being smeared vertically across a smear zone of almost 6-feet. The main free product plume is located to the east and south of Building C-16. The free-phase plume area is overlain by drainage ditches and railroad tracks. Due to the topographic depressions of the drainage ditches, and the permeability of the ballast associated with the railroad tracks, the localized groundwater table is subject to excessive water table fluctuations from rain events, which cause an increase in the vertical distribution of the oil across the smear zone. According to Peargin, Ireland, and Stephenson (1997), the larger percentages of LNAPL occur within the smear zone versus the vadose zone.

As depicted in the latest product thickness maps (Figures 5-1 and 5-2) the majority of remaining oil is located in the southwest portion of the free-phase plume near former Building C-16. The concentration of the free-phase LNAPL appears to be underlying the parking lot area south of former Building C-16. Free-phase LNAPL is also concentrated east of former Building C-16, in the area between the railroad tracks. Based on the present location of the wells, the western extent of the free-phase plume cannot be completely defined. The estimated boundaries of the free-phase plume generated from the SCAPS Investigation (dashed line in figures) have been used to define the original free-phase plume boundary. Current data shows that the extent of the LNAPL plume has decreased significantly with treatment over time.

The extent of the free-phase plume located north of Building C-50 has not been verified with additional wells. The free-phase boundary depicted is based on the SCAPS Investigation. One extraction well (16MW-20) is being used to extract product from the central portion of the suspected plume. While extraction well 16MW-20 has consistently recovered free-phase oil, the oil thickness in the well is minimal. Measurements from an extraction well located at the hydraulically downgradient edge of the suspected free-phase plume north of Building C-50 have not detected any free-phase oil.

The soil contamination associated with the former gas station site was from previously removed USTs. There is no free-phase oil present in the former gas station area. Two bioventing wells are situated in this area to aid in remediating the vadose zone soils.

#### **4.0 BIOSLURPER SYSTEM OPERATION**

The bioslurper systems are designed to de-water the smear zone and remove LNAPL through drainage, volatilization, and biodegradation. The high vacuum of the bioslurper system extracts LNAPL from the pore spaces where it was formerly held by capillary tension. Typically, a vacuum pressure of 2.1 to 4.6 inches of mercury (Hg) is applied to each well. The velocity in the drop tube must be sufficient to lift water as an entrained fluid.

Unit No. 1, located adjacent to Building C-16, was operated utilizing seven product recovery wells (16MW-13, 16MW-04, 16MW-14, 16MW-15, 16MW-25, 16MW-26 and 16MW-27), and two bioventing wells (16MW-22 and 16MW-23). The product recovery wells were operated at a vacuum of approximately 5 to 8 inches of mercury, with the one-inch diameter drop tube set

immediately above the product level in the well. The bioventing wells were operated at a vacuum of 2 to 3 inches of mercury, and the one-inch diameter drop tube was placed several feet above the water table to minimize any water withdraw.

Unit No. 2, located north of Building C-50, was operated utilizing five product recovery wells (16MW-16, 16MW-17, 16MW-19, C17/20MW-07, and 16MW-20). The product recovery wells were operated at a vacuum of approximately 5 to 8 inches of mercury, with the one-inch diameter drop tube set right above the product level in the well. The pipe connections to Unit No. 2 were configured in order to allow extraction from the wells on the outer edge of the free-phase plume east of Building C-16, and the one recovery well north of Building C-50. The product thickness and product recovery rates of the wells were significantly less than the recovery wells connected to Unit No. 1; therefore Unit No. 2 was operated for a lesser amount of time.

## **5.0 OPERATIONS AND DIFFICULTIES ENCOUNTERED**

The bioslurper units consist of two self-contained 8 ft. by 40 ft. by 8 ft. high refurbished cargo boxes that house the bioslurper pumps, process equipment, and groundwater treatment units. The turnkey units are connected to the recovery wells via underground piping. Bioslurper Unit No. 1 is equipped with a vapor-phase knock out tank and vapor-phase activated carbon drums to treat the air discharge to comply with the NJDEP Air Discharge Permit. Unit No. 1 requires air treatment because of the suspected gasoline component of the LNAPL plume in the area around Building C-16. The air discharge from Bioslurper No. 2 does not require treatment prior to discharge because of the lower concentrations of volatile organics.

This section discusses the monthly operation of the units during this reporting period and any problems that were encountered. Appendix A contains graphs depicting the operational times and groundwater and oil extracted on a monthly basis.

An unanticipated volatile organic compound (VOC), vinyl chloride, was detected in the air effluent from Bioslurper No. 2 during several previous sampling events. The vinyl chloride is not believed to be associated with the LNAPL plume at the site. The vinyl chloride contamination is being monitored monthly in both the air and water effluent and is discussed in more detail later in this report.

### **SEPTEMBER 2003**

Operations and maintenance during September 2003 were limited for Bioslurpers No. 1 and No. 2. Bioslurper Unit No. 1 experienced down time due to minor operational difficulties. Bioslurper Unit No. 1 was operated for a total of 75.5 hours in September 2003. The total amount of groundwater extracted in September was approximately 13,448 gallons, with approximately 8.9 gallons of free-phase oil removed. Bioslurper Unit No. 2 operated on an intermittent basis for a total of 38 hours and extracted approximately 2,924 gallons of groundwater. Bioslurper Unit No. 2 produced a 4.19 gallons of free-phase oil. Operations are expected to continue on an intermittent basis, when product is present in the Unit No. 2

wells. Appendix A provides a graphical representation of the amount of oil/groundwater extracted, and the operations hours for each unit.

Groundwater samples were collected to investigate vinyl chloride contamination in the groundwater influent to and effluent from Bioslurper Unit No. 2 on September 30, 2003. No other chlorinated solvents (including cis-1,2-DCE) were detected in the water samples. The analytical data is included in Appendix D.

## **OCTOBER 2003**

Operations and maintenance during October 2003 continued with some minor difficulties for Bioslurper Units No. 1 and No. 2. Bioslurper Unit No. 1 was operated for a total of 106.5 hours in October 2003. The total amount of groundwater extracted in October was approximately 13,615 gallons, with approximately 16.76 gallons of free-phase oil removed. Bioslurper No. 2 was operated only intermittently because negligible amounts of free-phase oil were measured in the monitoring wells pumping to Unit No. 2. Bioslurper Unit No. 2 was operated for a total of 22.5 hours in October 2003. The total amount of groundwater treated through the Bioslurper Unit No. 2 was 1,190 gallons, with approximately 5.24 gallons of free-phase oil removed. Appendix A provides a graphical representation of the amount of oil/groundwater extracted, and the operations hours for each unit.

Influent and effluent water samples were collected from Bioslurpers Unit No. 1 and No. 2 and analyzed for VOCs. There were no detections of vinyl chloride or other chlorinated solvents.

## **NOVEMBER 2003**

Operations and maintenance during November 2003 continued for Bioslurper Unit No. 2 on an intermittent basis due to lack of recoverable oil in the wells. Bioslurper Unit No. 1 was not operated from November 15, 2003 through the end of the quarter (November 30, 2003). It was determined that a transfer pump was not working and a new pump was ordered for installation. Bioslurper Unit No. 1 was operated for a total of 31 hours in November 2003. The total amount of groundwater extracted in November was approximately 1,984 gallons, with negligible amounts of free-phase oil removed. Bioslurper No. 2 was operated only intermittently because negligible amounts of free-phase oil were measured in the monitoring wells pumping to Unit No. 2. Bioslurper Unit No. 2 operated for a total of 8 hours, extracted approximately 1,103 gallons of groundwater and negligible amounts of free-phase oil. Appendix A provides a graphical representation of the amount of oil/groundwater extracted, and the operations hours for each unit.

Influent and effluent water samples for VOC analysis were not collected from Bioslurpers Unit No. 1 and No. 2 during the November 2003 sampling event (December 8, 2003) because of operational difficulties on the day of sample collection. Influent and effluent water samples for TPH analysis were not collected from Bioslurper Unit No. 1 because of operational difficulties. Groundwater and product thickness data was not collected during November 2003.

## **5.1 EVALUATION OF SITE CONDITIONS**

Water level and product thickness measurements are obtained periodically to establish product thickness isopleths. Appendix B contains graphs and tables depicting the depth to product and depth to water in individual extraction wells. As demonstrated by Figures 5-1 and 5-2, it appears that the systems' operations have caused product thickness and the size of the plume to remain constant or decrease over the operational history of the groundwater treatment. The product thickness isopleths are based on the corrected thickness, adjusted for exaggeration measured in the well. Appendix B provides a tabular and graphical representation of the adjusted water levels and product thickness in the extraction wells. As demonstrated by the graphs in Appendix B, the water table elevations appear to have reached the levels seen prior to the drought like conditions which occurred during the early part of 2002. It should be noted that the most effective product recovery occurs when the water table elevations are lower than normal, thus exposing any trapped product below the water table (smear zone). The current product thickness data confirms that the main portion of the product plume is underlying the southeastern corner of Building C-16.

## **5.2 PRODUCT RECOVERY DATA**

Table 1 summarizes the amount of free-phase oil recovered from the Bioslurper Extraction Units. Appendix A provides a graphical representation of the amount of oil/groundwater extracted and the operational hours for each Unit. Table 2 summarizes the groundwater extracted/treated to date. Table 3 summarizes the volume of TPH removed via the groundwater treatment component of bioslurper systems. The TPH removal rate for the groundwater discharges was calculated using laboratory analytical data and the volume of water processed.

The product recovery operations since March 2003 have been somewhat inconsistent due to operational difficulties in both bioslurpers and due to the reduction of free-phase oil available in Unit No. 2 for recovery.

## **6.0 EFFLUENT AND AIR ANALYSIS**

### **6.1 AIR ANALYSIS**

The air discharges from the bioslurper units are routinely sampled to ensure discharges are in compliance with the NJDEP air discharge permit. The air discharge is sampled for total VOCs (including benzene). Appendix C summarizes the analytical results of the air discharge samples and the permit limits. Appendix C also contains the laboratory analytical results of the air samples. As indicated by the analytical results, both bioslurper units are operating within the permit requirements established for air discharge.

Vinyl chloride has been detected frequently in Bioslurper Unit No. 2 air effluent samples. Concentrations of vinyl chloride have ranged from 0.004 to 0.5 ppm(v) in the Unit No. 2 air samples. Vinyl chloride has not been detected in Bioslurper Unit No. 1 air discharge samples. Air samples from September and October 2003 also indicated the presence of cis-1,2-dichloroethene (cis-1,2-DCE) at concentrations of 0.002 ppm(v) both months. Cis-1,2-DCE had

not been detected in the air effluent of Bioslurper Unit No. 2 previously, nor was it detected in the November 2003 air sample.

Air effluent samples from Bioslurper Unit No. 2 will continue to be monitored for trends or increases in vinyl chloride as well as other chlorinated solvents (including cis-1,2-DCE) Vinyl chloride and cis-1,2-DCE were included in the monthly air emission calculations in order to determine that the total VOCs emissions were below the permitted emission of 0.035 lbs/hour. The total VOC emissions, including vinyl chloride, for September, October and November 2003, were below the permit emission limit. The calculated values are included in Appendix C.

## **6.2 EFFLUENT ANALYSIS**

The effluent from Bioslurper Unit No.1 is processed through one bag filter (equipped with a 75-micron filter), three modified bentonite clay vessels (operating in series), and two liquid-phase granular activated carbon vessels (operating in series). The bag filter removes particulates (mainly precipitated iron), the clay units remove the higher molecular weight VOCs and TPH, and the activated carbon removes the remaining VOC and TPH compounds. The effluent from Bioslurper Unit No. 2 is processed in the same manner, except that only two bentonite vessels in series are used instead of three. Unit No. 2 is configured in this manner because of the lower TPH concentrations of the effluent.

The groundwater effluent from the bioslurper units is routinely sampled to ensure the discharges are in compliance with the requirements set forth by the Naval Weapons Station-Earle Sewer Treatment Plant (< 10 ppm TPH).

Table 4 summarizes the TPH results of the effluent samples. Appendix D contains the laboratory analytical results of the effluent samples. As demonstrated by the laboratory analytical results, all effluent discharged (after treatment) to the NWS-Earle Sewer Treatment Plant contained TPH concentrations less than 10 ppm.

Note that samples were not collected and analyzed for TPH from Bioslurper Unit No. 1 in November 2003 due to operational difficulties at the time of sample collection.

## **7.0 CONCLUSIONS**

The bioslurper units continued to operate within the design limits with some operational and maintenance problems. The bioslurper units were operated at a vacuum of approximately 25 inches of mercury. A vacuum of between 3 to 5 inches of mercury was applied to each extraction well. As demonstrated by the analytical results of air and effluent discharge samples, the system was adequately treating the air and effluent to the limits established by the NJDEP Air Discharge Permit and the restrictions of the NWS-Earle Sewer Treatment Plant.

The potential source of the vinyl chloride and cis-1,2-DCE in the air discharge and vinyl chloride in the groundwater of Bioslurper Unit No. 2 has been discussed in a report previously submitted

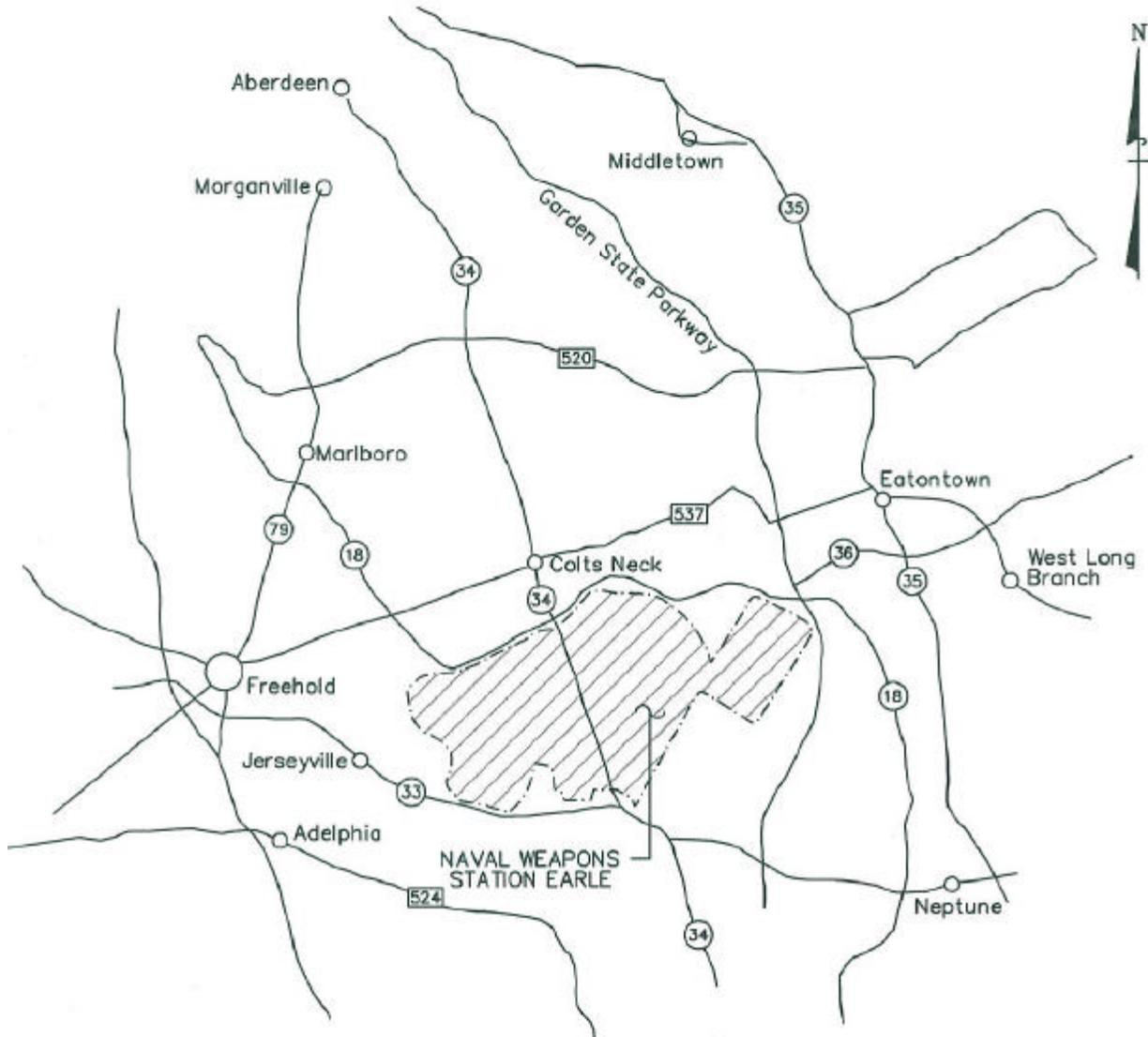
to the Navy. Specific recommendations were made and are being evaluated by the Navy and TtFW.

The effluent of both bioslurper systems is discharged to the NWS-Earle Sewer Treatment Plant. Based on agreements with NWS-Earle prior to the start-up of the systems, the effluent discharge from the systems was to meet the NJPDES Discharge Permit criteria for their discharge. The effluent discharge has met the applicable discharge criteria of 10 ppm TPH.

As demonstrated by the historical product thickness isopleths generated with site data, there has been a stabilization in product thickness and the LNAPL plume boundary south and east of former Building C-16. Product thickness is negligible in wells north of Building C-50. Data shows that product recoveries from September 2003 through November 2003 have been fairly consistent, except when operations were ceased due to difficulties. The systems are still recovering notable amounts of product even though the volume of measurable free-product in the groundwater has decreased significantly during the operational history of the bioslurpers.

It is anticipated that product recovery rates will decrease as the systems continue to remove product from the groundwater. This is due to the decrease in the amount of free product that is in the wells and therefore recoverable by the treatment systems. The decreased product recoveries over the history of treatment are demonstrated by the existing historical recovery data. The decreased product recoveries over time is not a result of the system becoming less effective, but a function of diminished returns based upon the lessening availability of free product. Bioslurper No. 2 will be operated intermittently because of the low quantity of free product available for recovery.

## FIGURES



NOT TO SCALE

U.S. Navy RAC  
NWS - Earle, Colts Neck, NJ

Figure 2-1  
Vicinity Map



**TETRA TECH FW, INC.**

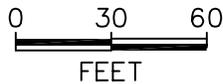
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**LEGEND**



Product plume boundary based on former SCAPs Study



**U.S. Navy RAC  
NWS - Earle, Colts Neck, NJ**

Figure 5-1  
Product Thickness (ft.) Isopleth  
09/17/2003



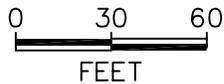
**TETRA TECH FW, INC.**



**LEGEND**



Product plume boundary based on former SCAPs Study



**U.S. Navy RAC  
NWS - Earle, Colts Neck, NJ**

Figure 5-2  
Product Thickness (ft.) Isopleth  
10/28/2003



**TETRA TECH FW, INC.**

## TABLES

**TABLE 1**  
**NAVAL WEAPONS STATION-EARLE**  
**BIOSLURPER UNITS**  
**FREE-PHASE OIL EXTRACTION TO DATE**

	1998 Free-Phase Oil Extracted (gallons)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1		400	375	275	300	ND	ND	225	250	250	140	225	2440.0
Bioslurper System #2		25	50	50	20	ND	ND	55	30	40	20	30	320.0
Total		425	425	325	320			280	280	290	160	255	2760.0
	1999 Free-Phase Oil Extracted (gallons)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	220	50	125	65	ND	ND	ND	34	ND	ND	66	ND	560.0
Bioslurper System #2	20	15	15	10	ND	ND	ND	14	ND	ND	14	ND	88.0
Total	240	65	140	75				48			80		648.0
	2000 Free-Phase Oil Extracted (gallons)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	30	60	78	57	10	15	32	43	57	55	33	32	502.0
Bioslurper System #2	ND	ND	ND	ND	ND	24	1	5	4	0	ND	0	34.0
Total	30	60	78	57	10	39	33	48	61	55	33	32	536.0
	2001 Free-Phase Oil Extracted (gallons)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	31	45	35	ND	ND	ND	14	48	30	15	30	10	258.0
Bioslurper System #2	ND	4.5	4.5	ND	ND	ND			2	4	0.5	0	15.5
Total	31	49.5	39.5	0	0	0	14	48	32	19	30.5	10	273.5
	2002 Free-Phase Oil Extracted (gallons)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	52	21	11	16	34	62	53	87	16	10	17	7	386.0
Bioslurper System #2	6	0.5	0.5	5	2	6	2	5	0	0	4	9	40.0
Total	58	21.5	11.5	21	36	68	55	92	16	10	21	16	426.0
	2003 Free-Phase Oil Extracted (gallons)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	50.8	5.2	7.85	3.6	22.5	25.7	10	8.9	8.9	16.76	0		160.2
Bioslurper System #2	0.5	0.5	2.75	0	2.62	0	4	5.7	4.19	5.24	0		25.5
Total	51.3	5.7	10.6	3.6	25.12	25.7	14	14.6	13.09	22	0		185.7

Notes:

ND - no data due to system not in operation

**Total Oil extracted to date (g): 4829.2**

**TABLE 2**  
**NAVAL WEAPONS STATION-EARLE**  
**BIOSLURPER UNITS**  
**GROUNDWATER EXTRACTION TO DATE**

	1998 Groundwater Extracted (gallons)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1		2675	26,169	23898	12799	ND	ND	16498	34612	29974	20503	40611	207739
Bioslurper System #2		5282	20,586	22607	6584	ND	ND	13537	14451	27850	16196	9141	136234
Total		7957	46755	46505	19383			30035	49063	57824	36699	49752	343973
	1999 Groundwater Extracted (gallons)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	35078	6536	49834	40889	ND	ND	ND	7321	ND	ND	ND	ND	139658
Bioslurper System #2	8843	536	12956		ND	ND	ND		ND	ND	ND	ND	22335
Total	43921	7072	62790	40889	ND	ND	ND	7321	ND	ND	ND	ND	161993
	2000 Groundwater Extracted (gallons)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	3393	4618	9842	10945	2764	14112	19758	23298	36900	31669	27785	30231	215315
Bioslurper System #2	ND	ND	ND	ND	ND	2976	5549	17704	21156	21588	ND	20848	89821
Total	3393	4618	9842	10945	2764	17088	25307	41002	58056	53257	27785	51079	305136
	2001 Groundwater Extracted (gallons)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	25897	30981	33832	ND	ND	ND	2812	12136	7669	1665	4635	3080	122707
Bioslurper System #2	ND	15852	19914	ND	ND	ND			2967	6814	1277	345	47169
Total	25897	46833	53746	ND	ND	ND	2812	12136	10636	8479	5912	3425	169876
	2002 Groundwater Extracted (gallons)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	13137	9292	16151	12749	24926	19641	24875	31129	10390	19562	4854	7694	194400
Bioslurper System #2	1095	1224	5726	7639	7727	6464	5362	5977	289	0	4771	4772	51046
Total	14232	10516	21877	20388	32653	26105	30237	37106	10679	19562	9625	12466	245446
	2003 Groundwater Extracted (gallons)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	22799	28656	14682	18084	20199	28439	15990	25071	13448	13615	1984		202967
Bioslurper System #2	10546	1614	6325	14649	4303	6546	4930	4938	2924	1190	1103		59068
Total	33345	30270	21007	32733	24502	34985	20920	30009	16372	14805	3087		262035

**Total Groundwater Extracted to Date = 1,488,459**

**TABLE 3**  
**NAVAL WEAPONS STATION-EARLE**  
**BIOSLURPER UNITS**  
**TOTAL PETROLEUM HYDROCARBON (TPH)**  
**REMOVED VIA GROUNDWATER TREATMENT**

	1998 TPH Removed via Groundwater Treatment (pounds)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1		60.75	125.14	306.42	135.56	ND	ND	47.30	ND	175.99	179.16	192.96	1223.28
Bioslurper System #2		4.25	14.17	32.40	9.61	ND	ND	ND	13.99	2.37	4.26	11.48	92.53
Total		65.00	139.31	338.82	145.17	ND	ND	47.30	13.99	178.36	183.42	204.44	1315.81
	1999 TPH Removed via Groundwater Treatment (pounds)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	60.48	56.18	394.28	285.29	ND	ND	ND	ND	ND	ND	0.29	ND	796.52
Bioslurper System #2	3.84	0.21	29.30	15.20	ND	ND	ND	ND	ND	ND	0.01	ND	48.56
Total	64.32	56.39	423.58	300.49	ND	ND	ND	ND	ND	ND	0.30	ND	845.08
	2000 TPH Removed via Groundwater Treatment (pounds)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	8.58	ND	17.20	30.99	ND	31.80	18.14	ND	95.47	160.86	92.04	327.49	782.56
Bioslurper System #2	0.01	ND	ND	ND	ND	0.11	0.40	ND	2.63	37.55	ND	21.71	62.40
Total	8.59	ND	17.20	30.99	ND	31.91	18.53	ND	98.10	198.40	92.04	349.20	844.96
	2001 TPH Removed via Groundwater Treatment (pounds)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	34.31	45.04	50.54	ND	ND	ND	0.07	52.80	2.61	2.25	2.97	10.82	201.42
Bioslurper System #2	ND	8.59	59.43	ND	ND	ND	ND	ND	1.12	3.73	0.13	0.01	73.01
Total	34.31	53.63	109.97				0.07	52.80	3.73	5.98	3.10	10.83	274.42
	2002 TPH Removed via Groundwater Treatment (pounds)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	40.35	21.35	13.51	35.86	21.58	7.60	581.16	73.62	68.41	19.99	2.27	22.60	908.30
Bioslurper System #2	2.40	0.18	4.68	0.75	5.08	1.60	2.77	1.13	0.02	ND	1.43	3.54	23.58
Total	42.75	21.53	18.19	36.61	26.66	9.20	583.93	74.75	68.43	19.99	3.70	26.14	931.88
	2003 TPH Removed via Groundwater Treatment (pounds)												Year Total
	Jan.	Feb.	March	April	May	June	July	August	Sep.	Oct.	Nov.	Dec.	
Bioslurper System #1	95.99	135.13	53.06	25.56	39.69	38.69	76.87	0.26	17.06	14.66	ND		496.97
Bioslurper System #2	ND	0.28	0.64	4.84	0.38	0.91	0.22	0.09	0.16	0.27	0.03		7.82
Total	95.99	135.41	53.70	30.40	40.07	39.60	77.09	0.35	17.22	14.93	0.03		504.79

**Pounds of TPH Removed via Groundwater Treatment to Date = 4716.95**

Notes:

ND - no data due to system not in operation

Pounds of TPH: Influent - effluent concentration (mg/l) x 3.785 l/gal x 0.001 g/mg x 0.002205 lb/g x monthly effluent (gal) = lbs TPH

**TABLE 4**  
**NAVAL WEAPONS STATION-EARLE**  
**BIOSLURPER UNITS NO. 1 AND NO. 2**  
**TOTAL PETROLEUM HYDROCARBON (TPH)**  
**EFFLUENT CONCENTRATIONS (mg/l)**

Effluent Sample Date	Unit No. 1		Unit No. 2	
	Before Clay/Carbon	After Clay/Carbon	Before Clay/Carbon	After Clay/Carbon
02/29/00	<0.5	<0.5	NA	NA
04/04/00	210	0.57	NA	NA
04/28/00	16(A)EW00W5	16(A)EW00W6		
	340	0.68	NA	NA
06/19/00	270	<1.0	4.4	<1.0
07/21/00	16(A)EW00W10	16(A)EW00W09	16(B)EW00W05	16(B)EW00W06
	110	<1.0	8.7	<1.0
09/07/00	16(A)EW11	16(A)EW12	16(B)EW07	16(B)EW08
	310	5.1	18	3.1
10/30/00	16(A)EW13	16(A)EW14	16(B)EW09	16(B)EW10
	610	1.4	210	1.6
11/30/00	16(A)EW15	16(A)EW16	16(B)EW11	16(B)EW12
	400	3.1	220	2
12/28/00	16(A)EW17	16(A)EW18	16(B)EW13	16(B)EW14
	1300	2.4	130	2.6
01/29/01	16(A)EW19	16(A)EW20	16(B)EW15	16(B)EW16
	210	1.6	75	1.6
02/27/01	16(A)EW21	16(A)EW22	16(B)EW17	16(B)EW18
	160	1.2	67	2.1
03/30/01	16(A)EW23	16(A)EW24	16(B)EW19	16(B)EW20
	180	1	360	2.4
07/31/01	16(A)EW24	16(A)EW25	NA	NA
	3.1	0.018	NA	NA
08/29/01	16(A)EW27	16(A)EW28	NA	NA
	187	<0.068	NA	NA
09/30/01	16(A)EW27	16(A)EW28	16(B)EW19	16(B)EW20
	40.8	<0.068	45.3	<0.067
10/31/01	16(A)EW31	16(A)EW32	16(B)EW01	16(B)EW02
	50	<0.07	65.7	<0.066
11/30/01	16(A)EW33	16(A)EW34	16(B)EW05	16(B)EW06
	76.9	0.18	12	<.20
01/09/02	16(A)EW35	16(A)EW36	16(B)EW07	16(B)EW08
	421	<0.066	2.3	<0.066
01/31/02	16(A)EW31	16(A)EW32	16(B)EW01	16(B)EW02
	368	<0.066	22.1	<0.066
02/27/02	16(A)EW39	16(A)EW40	16(B)EW11	16(B)EW12
	276	0.7	17.6	
02/28/02	16(A)EW41	16(A)EW42	16(B)EW13	16(B)EW14
	101	0.81	98.1	0.19
03/29/02	16(A)EW41	16(A)EW42	16(B)EW13	16(B)EW14
	101	0.81	98.1	0.24
04/23/02	16(A)EW43	16(A)EW44	16(B)EW15	0.24
	338	0.96	12	0.19

Notes:

All units are mg/L.

The NWS-Earle Sewer Treatment Plant NJPDES Permit Discharge Limit for TPH is 10 ppm.

ND - not detected above laboratory detection limit

NA - not available (no sample collected)

**TABLE 4**  
**NAVAL WEAPONS STATION-EARLE**  
**BIOSLURPER UNITS NO. 1 AND NO. 2**  
**TOTAL PETROLEUM HYDROCARBON (TPH)**  
**EFFLUENT CONCENTRATIONS (mg/l)**

Effluent Sample Date	Unit No. 1		Unit No. 2	
	Before Clay/Carbon	After Clay/Carbon	Before Clay/Carbon	After Clay/Carbon
05/29/02	16(A)EW45 104	16(A)EW46 0.28	16(B)EW17 78.9	16(B)EW18 0.076
06/28/02	16(A)EW47 46.6	16(A)EW48 0.23	16(B)EW19 29.7	16(B)EW20 0.11
07/29/02	16(A)EW49 2800	16(A)EW50 0.63	16(B)EW21 62.5	16(B)EW22 0.54
08/28/02	16(A)EW51 284	16(A)EW52 0.61	16(B)EW23 23.3	16(B)EW24 0.74
09/30/02	16(A)EW53 790	16(A)EW54 1.09	16(B)EW25 8.8	16(B)EW26 0.5
10/29/02	16(A)EW55 124	16(A)EW56 1.57	16(B)EW27 97	16(B)EW28 3.12
11/26/02	16(A)EW57 56	16(A)EW58 <0.16	16(B)EW29 36	16(B)EW30 <0.17
12/30/02	16(A)EW59 352	16(A)EW60 <0.16	16(B)EW31 89	16(B)EW32 <0.16
02/03/03	16(A)EW61 506	16(A)EW62 1.52	16(B)EW31 NA	16(B)EW32 NA
02/26/03	16(A)EW63 565	16(A)EW64 <0.17	16(B)EW33 20.9	16(B)EW34 <0.16
03/31/03	16(A)EW67 433	16(A)EW68 <0.18	16(B)EW33 12.2	16(B)EW34 <0.16
04/29/03	16(A)EW69 176	16(A)EW70 <0.16	16(B)EW35 39.6	16(B)EW36 <0.16
05/23/03	16(A)EW71 235.61	16(A)EW72 0.17	16(B)EW37 10.56	16(B)EW38 0.03
06/30/03	16(A)EW73 163	16(A)EW74 <0.16	16(B)EW39 16.7	16(B)EW40 <0.16
07/29/03	16(A)EW77 576	16(A)EW78 <0.18	16(B)EW43 5.25	16(B)EW44 <0.17
08/27/03	16(A)EW77 1.4	16(A)EW78 <0.17	16(B)EW43 2.2	16(B)EW44 <0.17
09/30/03	16(A)EW79 152	16(A)EW80 <0.18	16(B)EW45 6.42	16(B)EW46 <0.17
10/22/03	16(A)EW81 129	16(A)EW82 <0.17	16(B)EW47 27.5	16(B)EW48 <0.17
12/8/2003*	no sample	no sample	16(B)EW49 3.05	16(B)EW50 <0.17

Unit #1 and #2 were not operating at the time of sample collection (month end) in October 2003

\* Samples collected 2/8/03 were for November operating period. Unit #1 was not operating at time of sample collection.

Notes:

All units are mg/L.

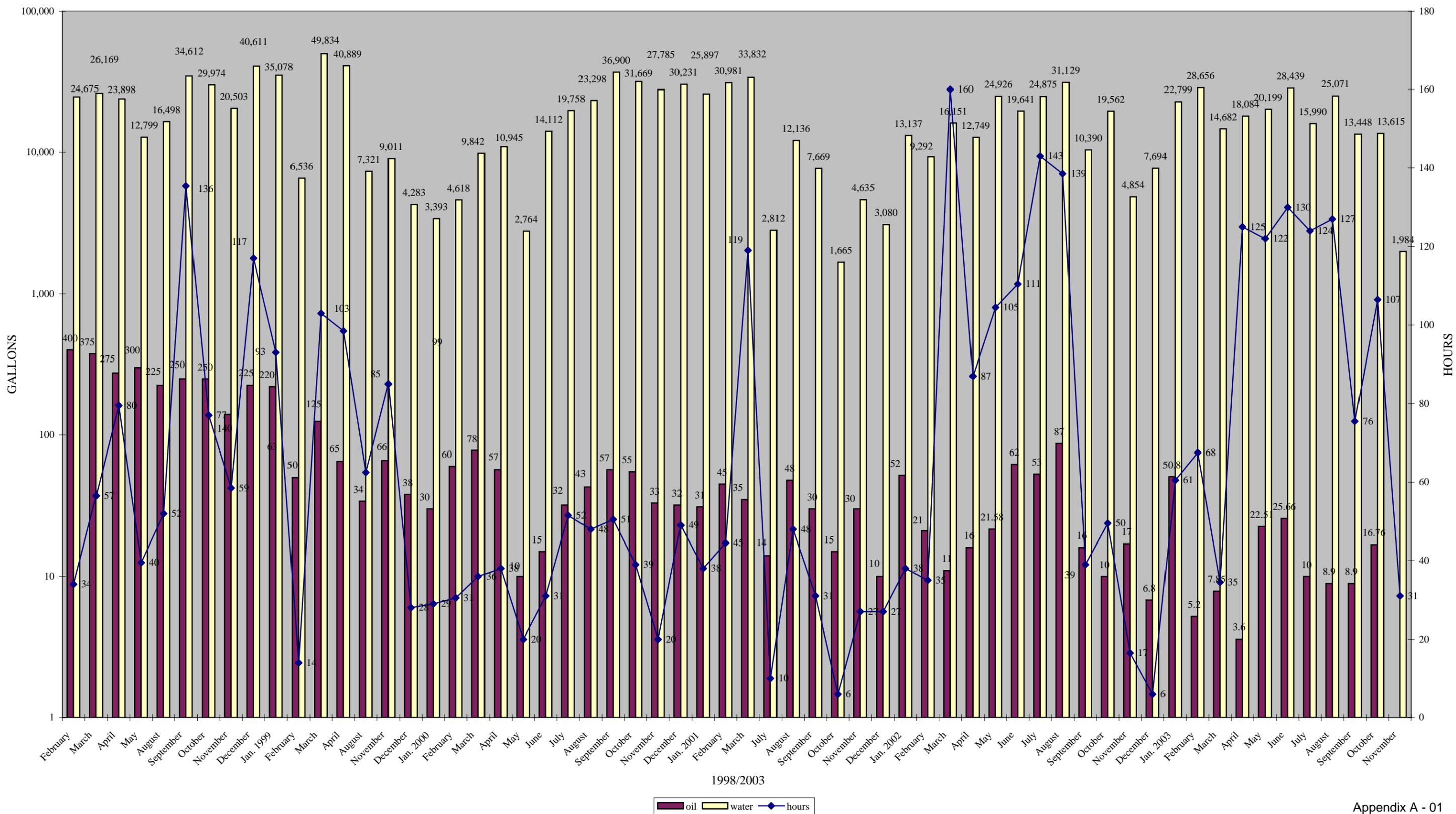
The NWS-Earle Sewer Treatment Plant NJPDES Permit Discharge Limit for TPH is 10 ppm.

ND - not detected above laboratory detection limit

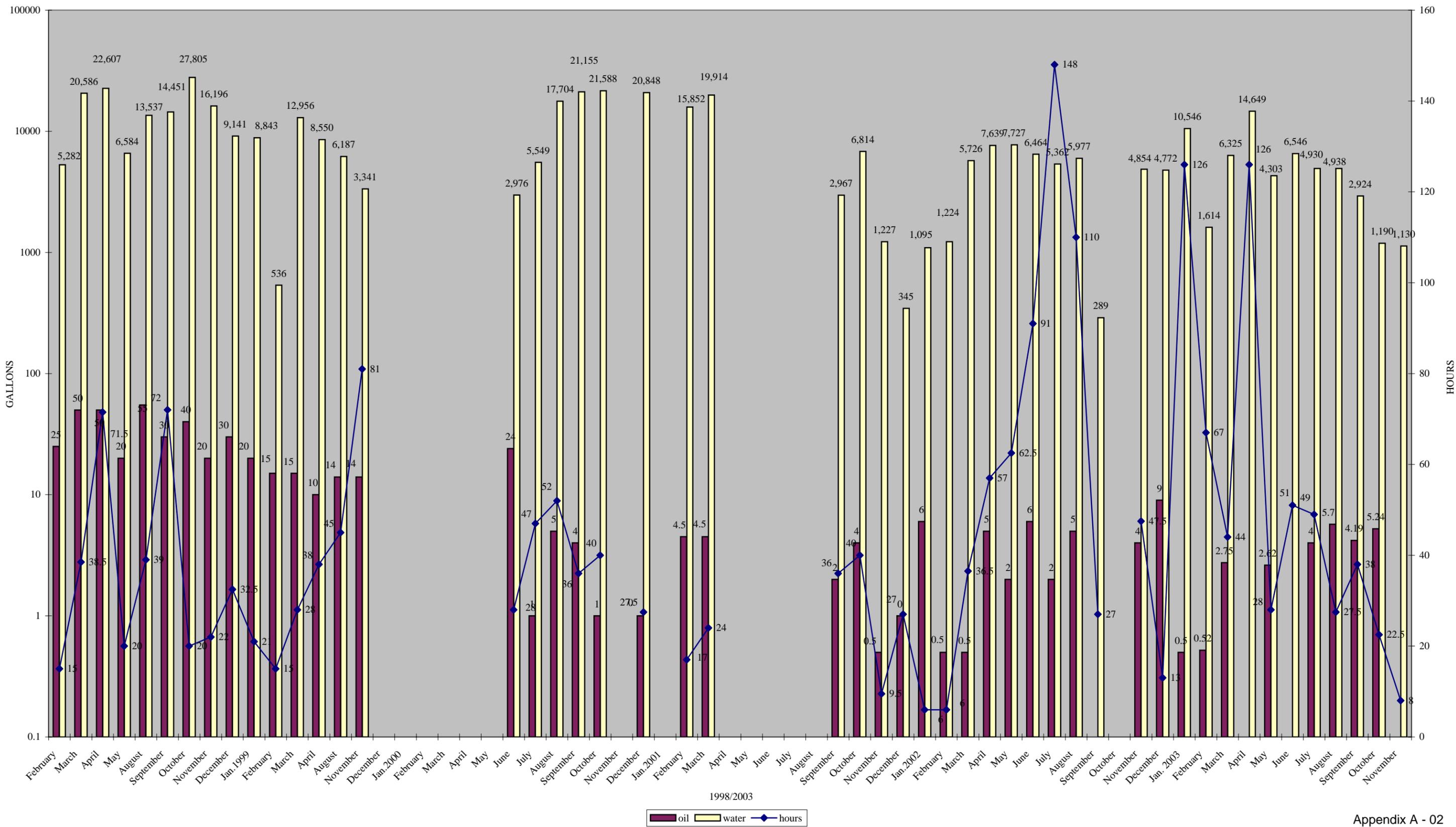
NA - not available (no sample collected)

APPENDIX A  
GRAPHS OF OIL/WATER EXTRACTED TO DATE

### BIOSLURPER UNIT 1 OIL/WATER RECOVERED VERSUS OPERATIONAL TIME



# BIOSLURPER UNIT 2 OIL/WATER RECOVERED VERSUS OPERATIONAL TIME

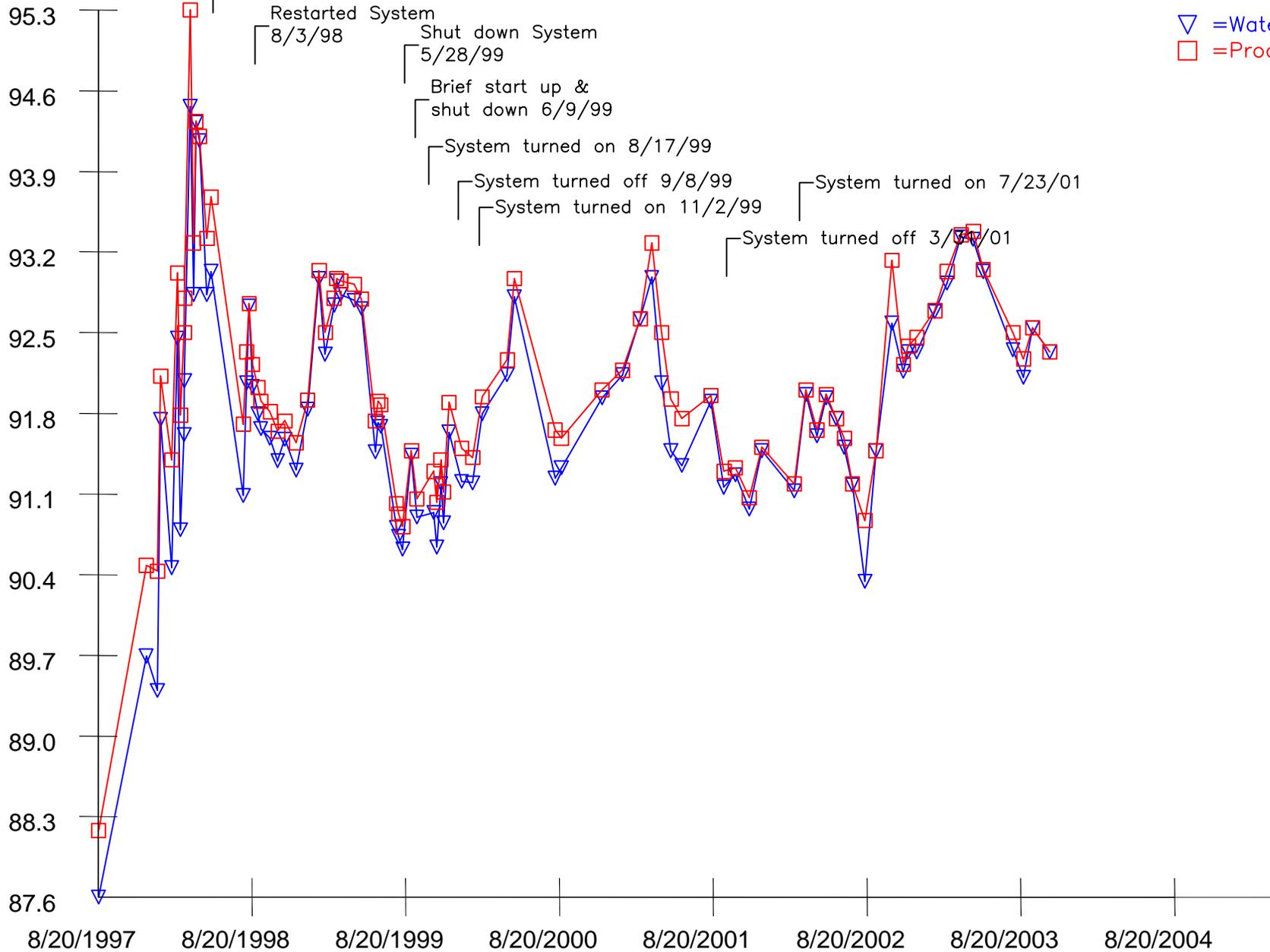


APPENDIX B  
GRAPHS OF WATER LEVELS AND PRODUCT THICKNESS  
DATA FROM EXTRACTION WELLS

# Water Level & Product Surface Elevation 16MW-04

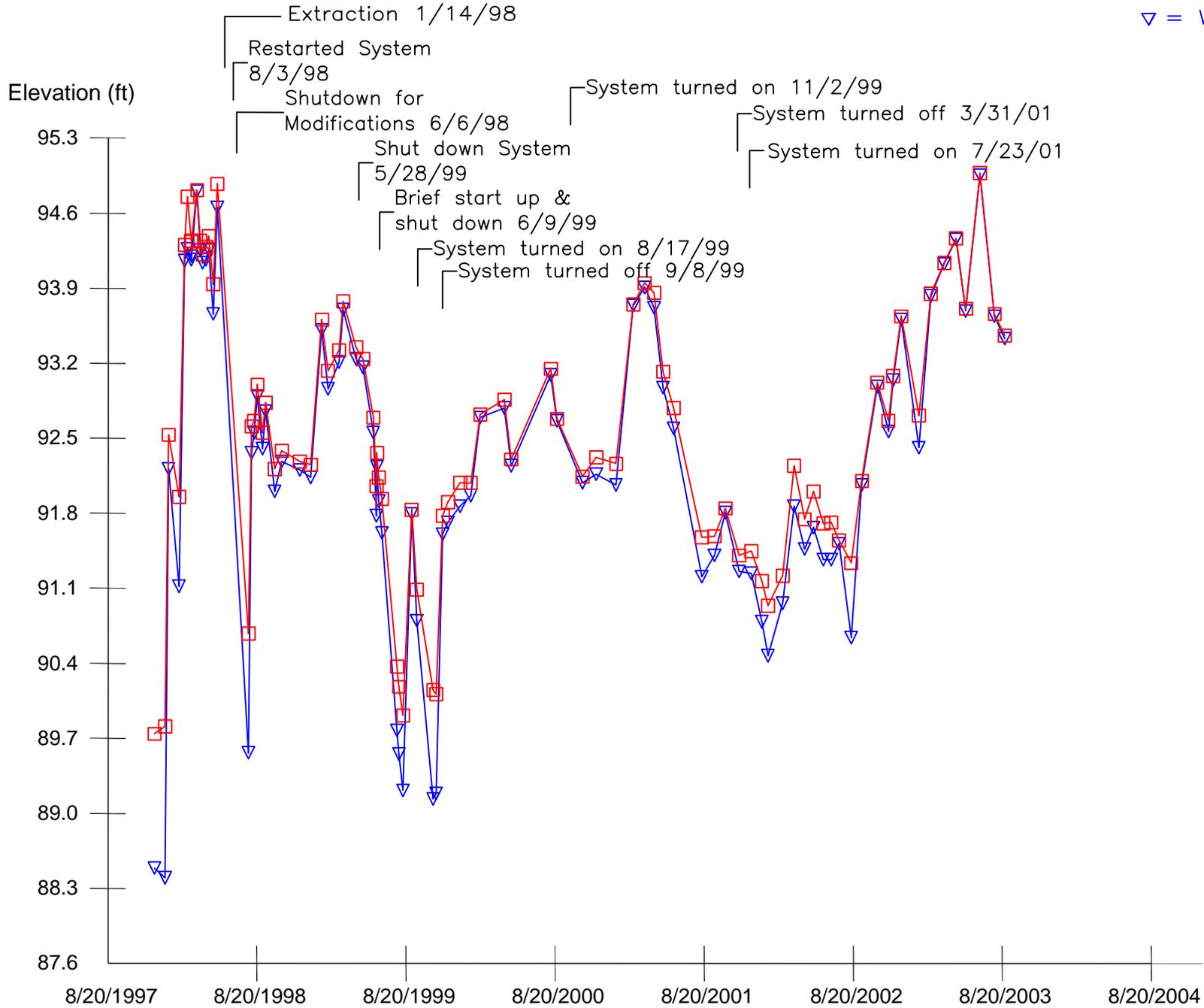
Elevation (ft)

▽ = Water Level  
□ = Product



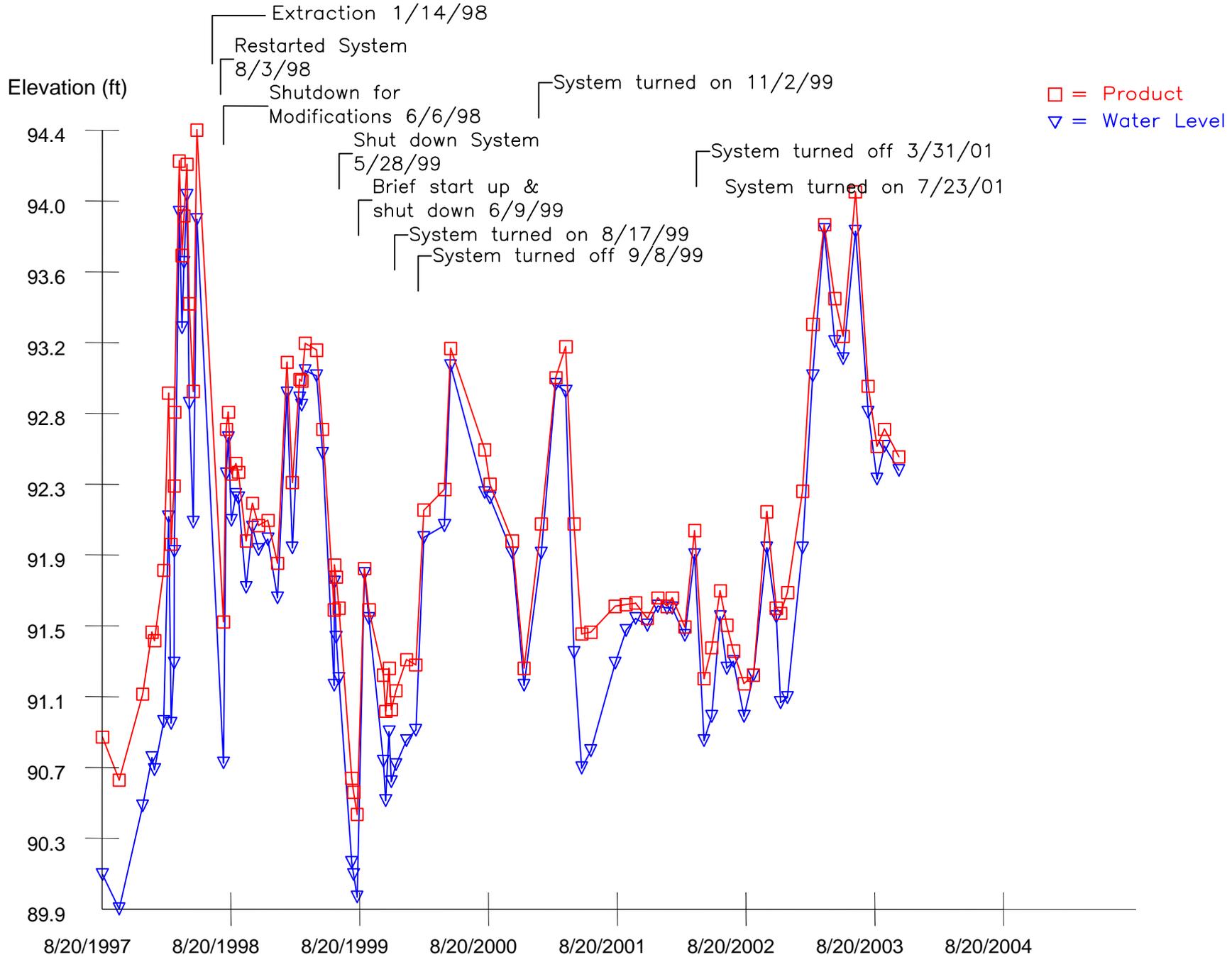
# Water Level & Product Surface Elevation C17MW-07

□ = Product  
▽ = Water Level

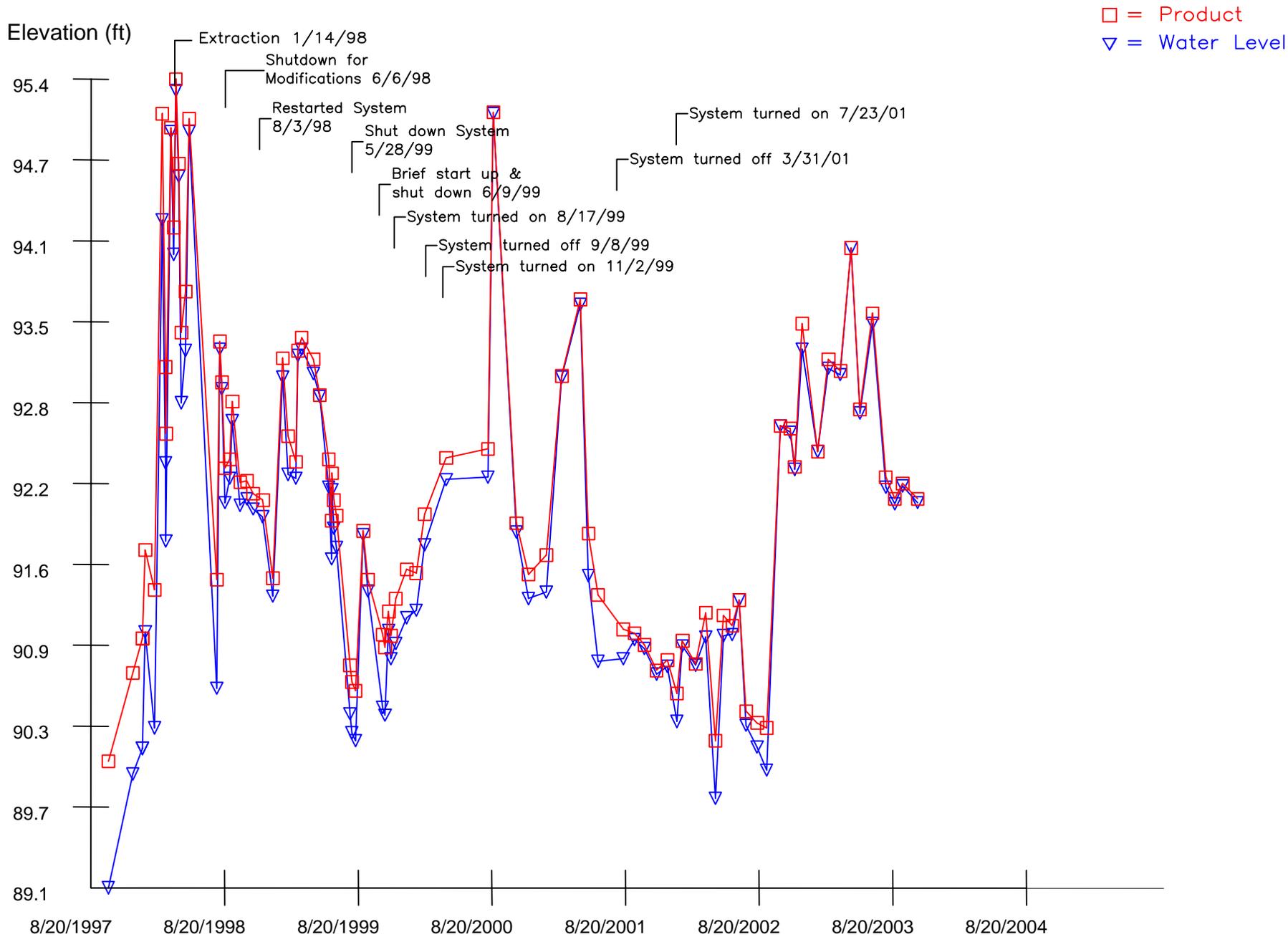


# Water Level & Product Surface Elevation

## 16MW -13



# Water Level & Product Surface Elevation 16MW-14

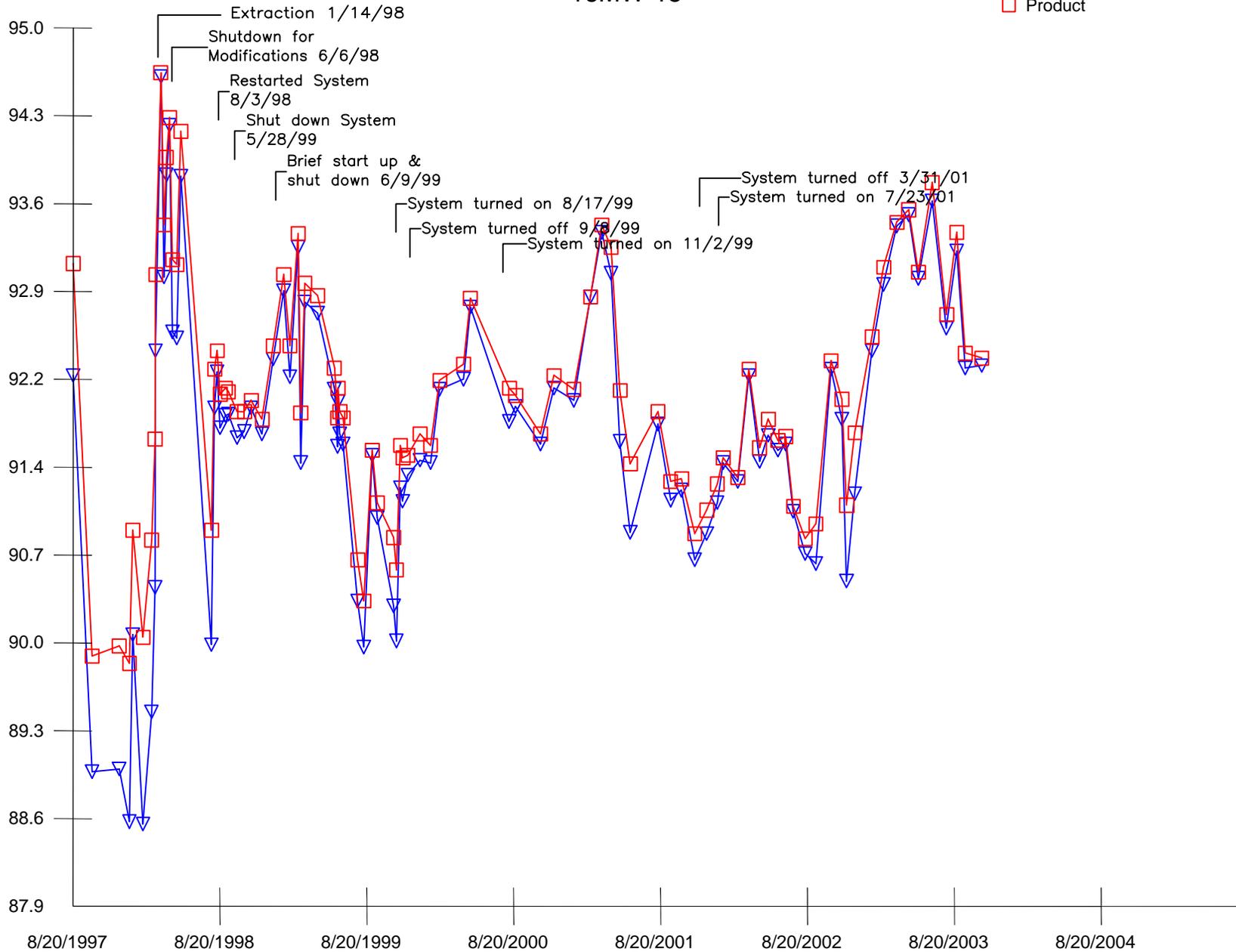


# Water Level & Product Surface Elevation

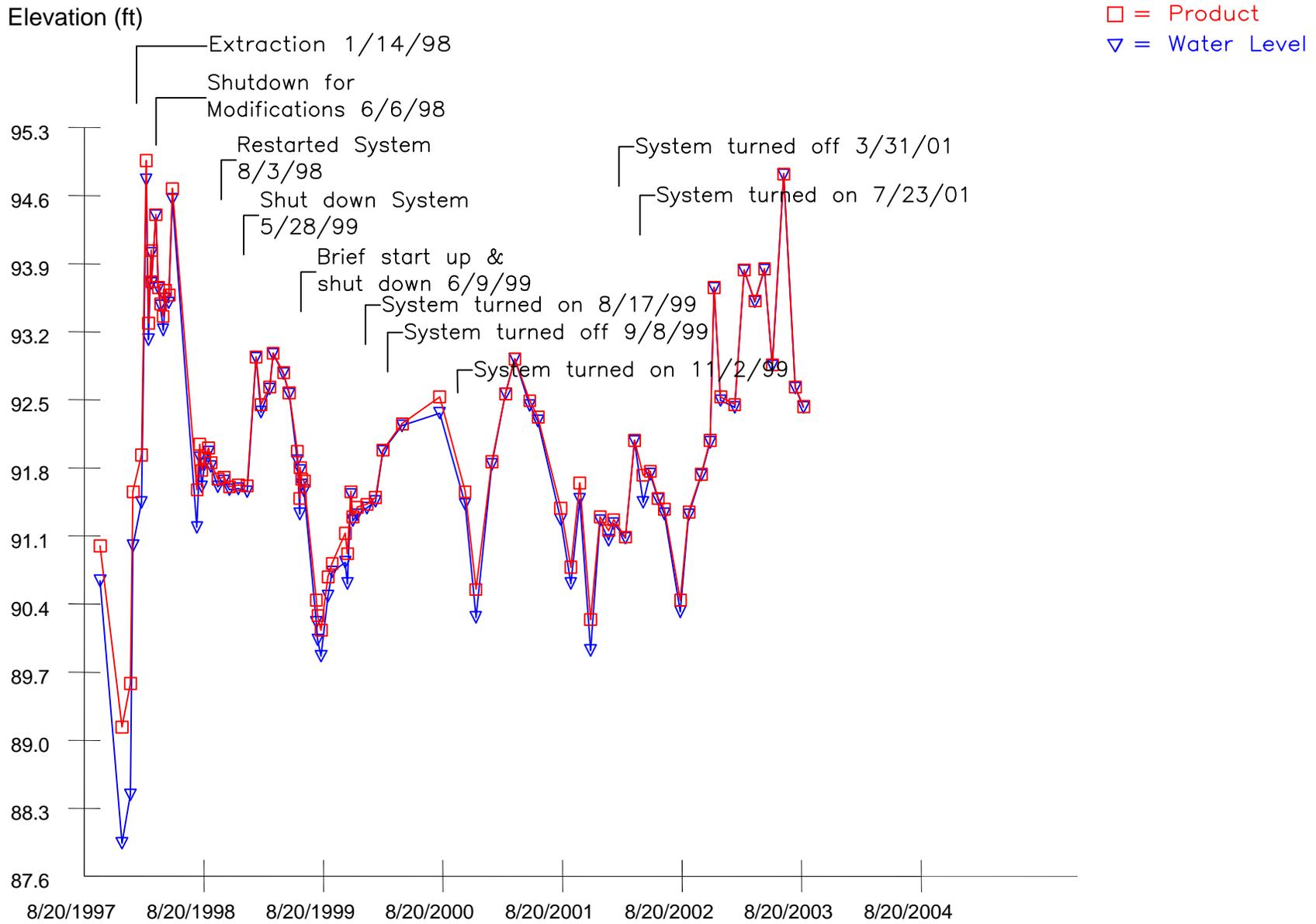
## 16MW-15

Elevation (ft)

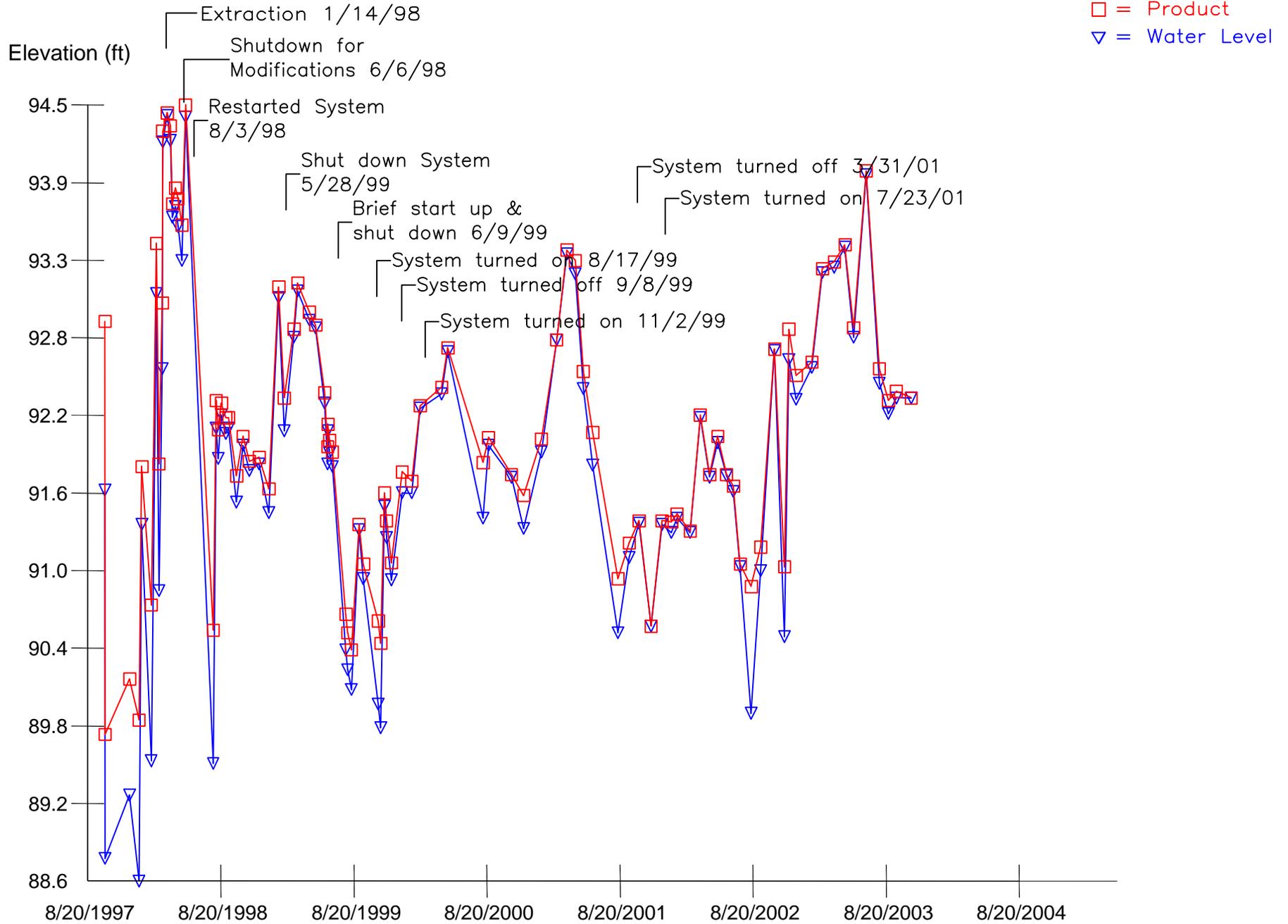
▽ Water Level  
□ Product



# Water Level & Product Surface Elevation 16MW-16

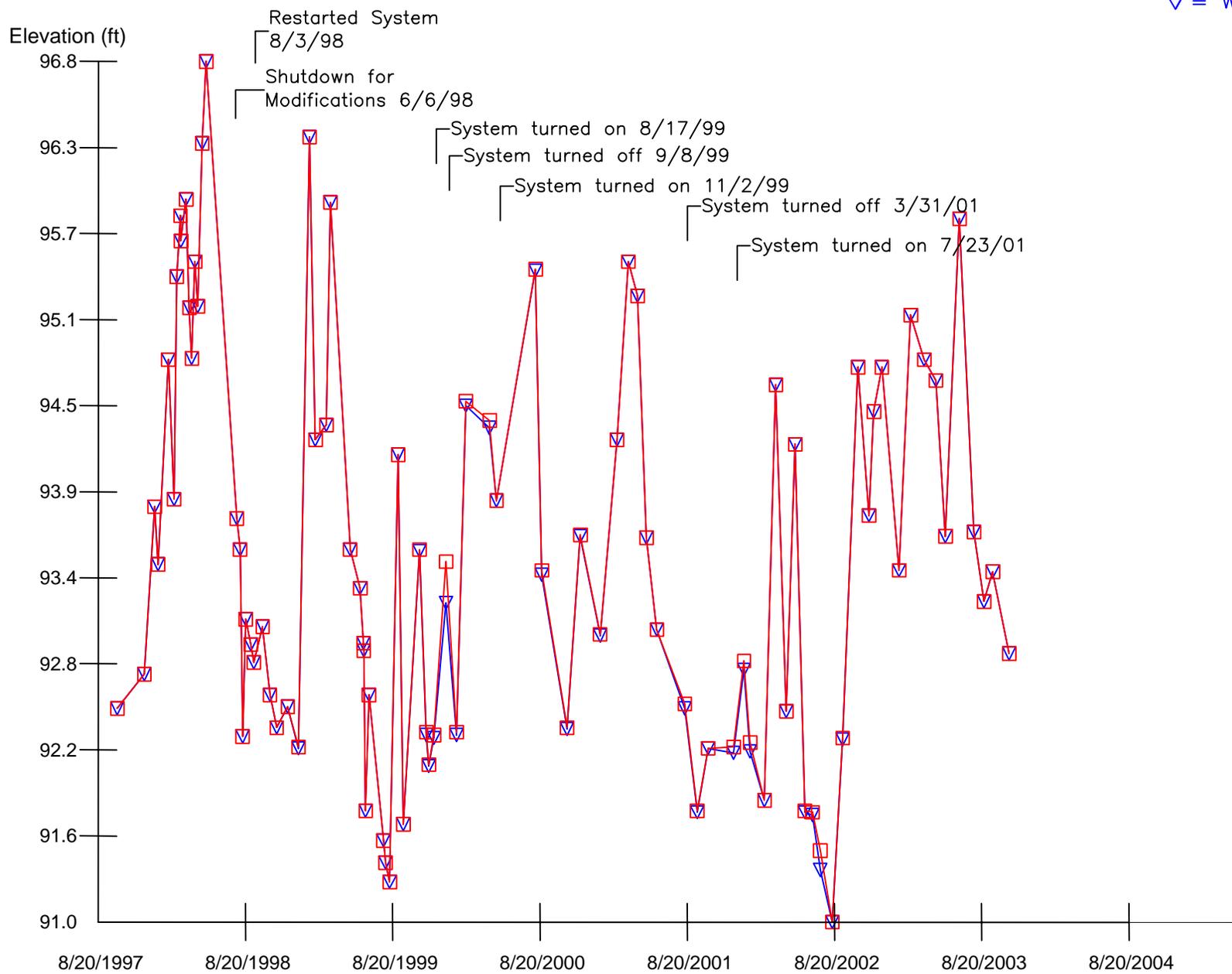


# Water Level & Product Surface Elevation 16MW-17



# Water Level & Product Surface Elevation 16MW-18

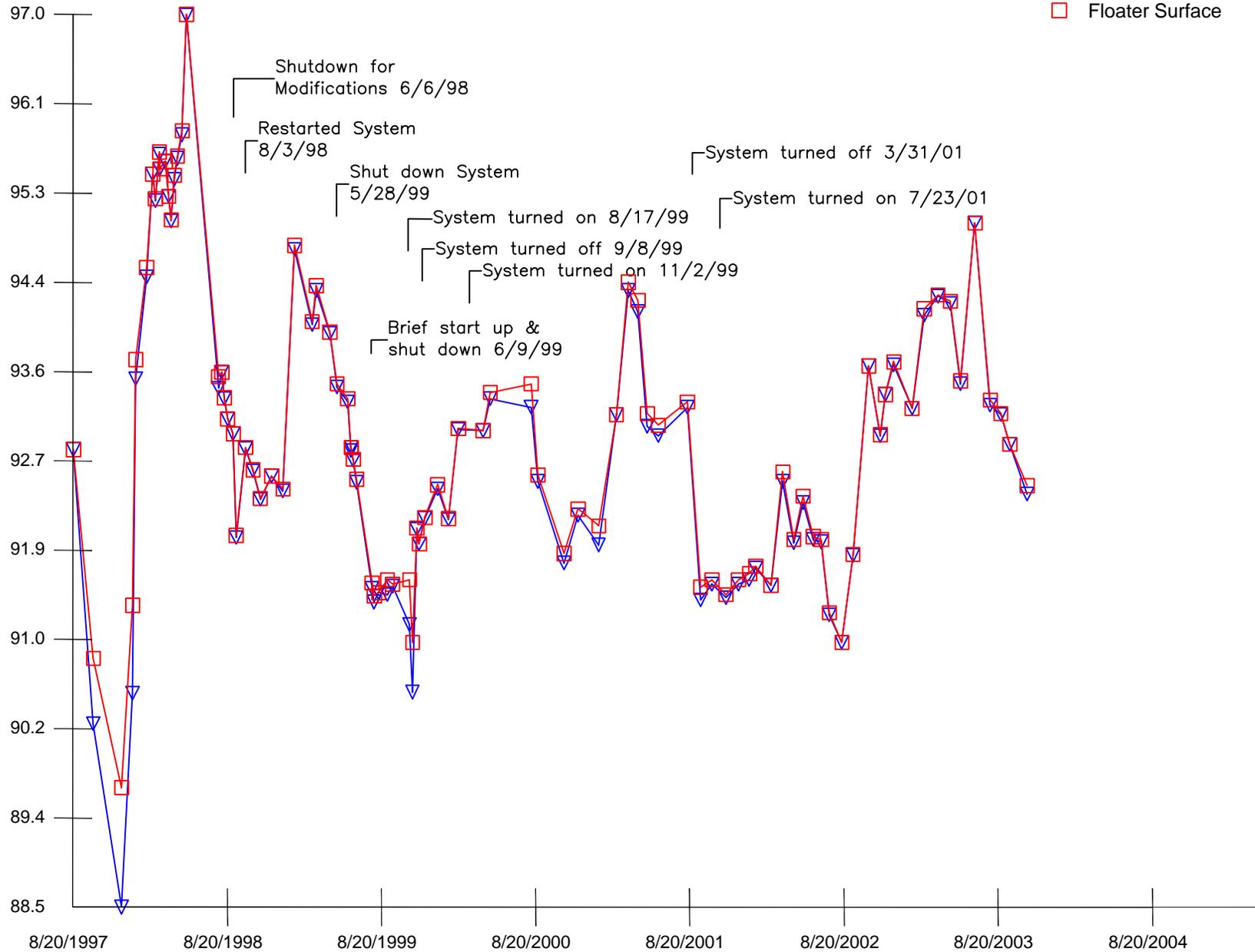
□ = Product  
▽ = Water Level



# Water Level & Product Surface Elevation 16MW-19

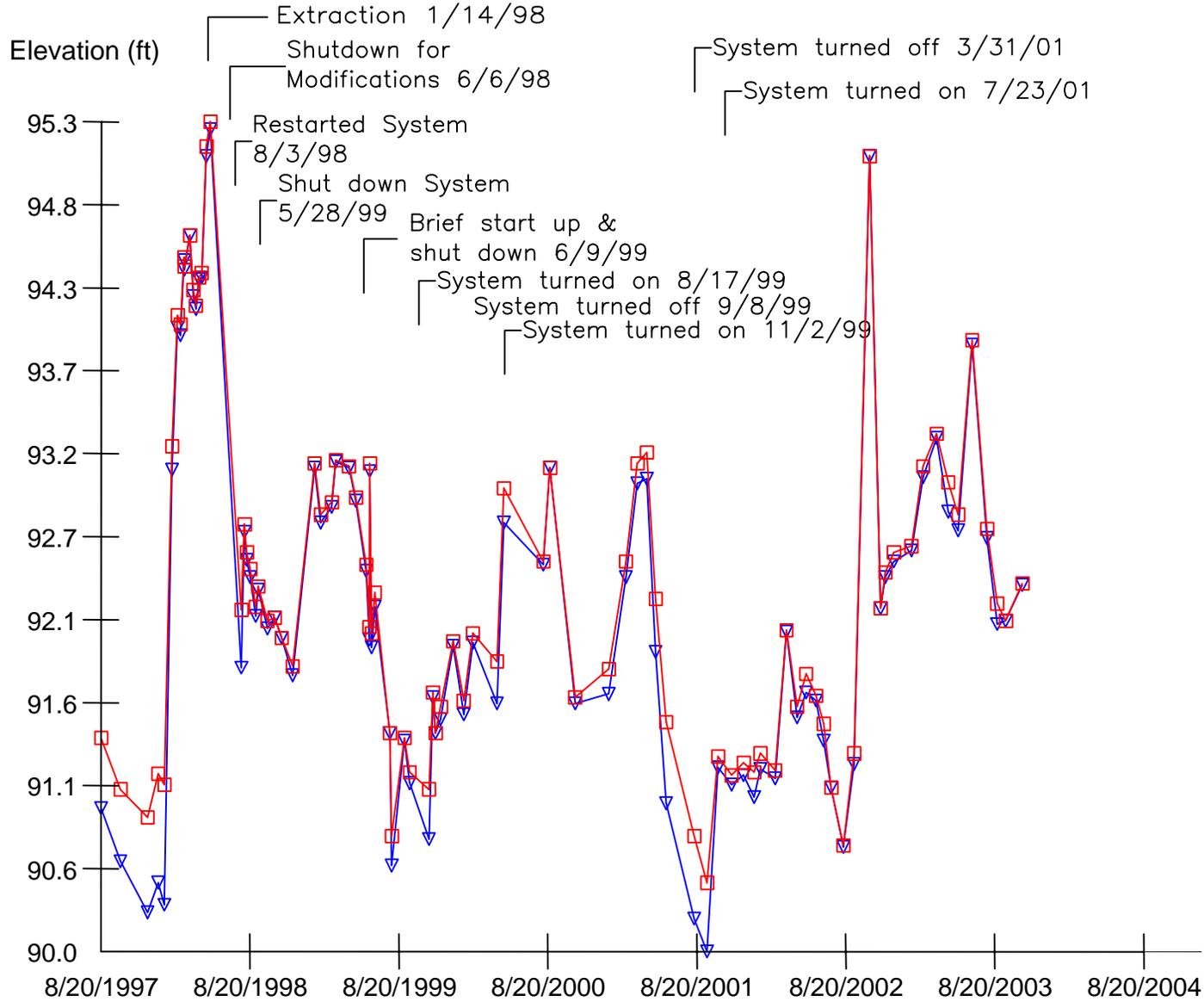
Elevation (ft)

▽ Water Level  
□ Floater Surface



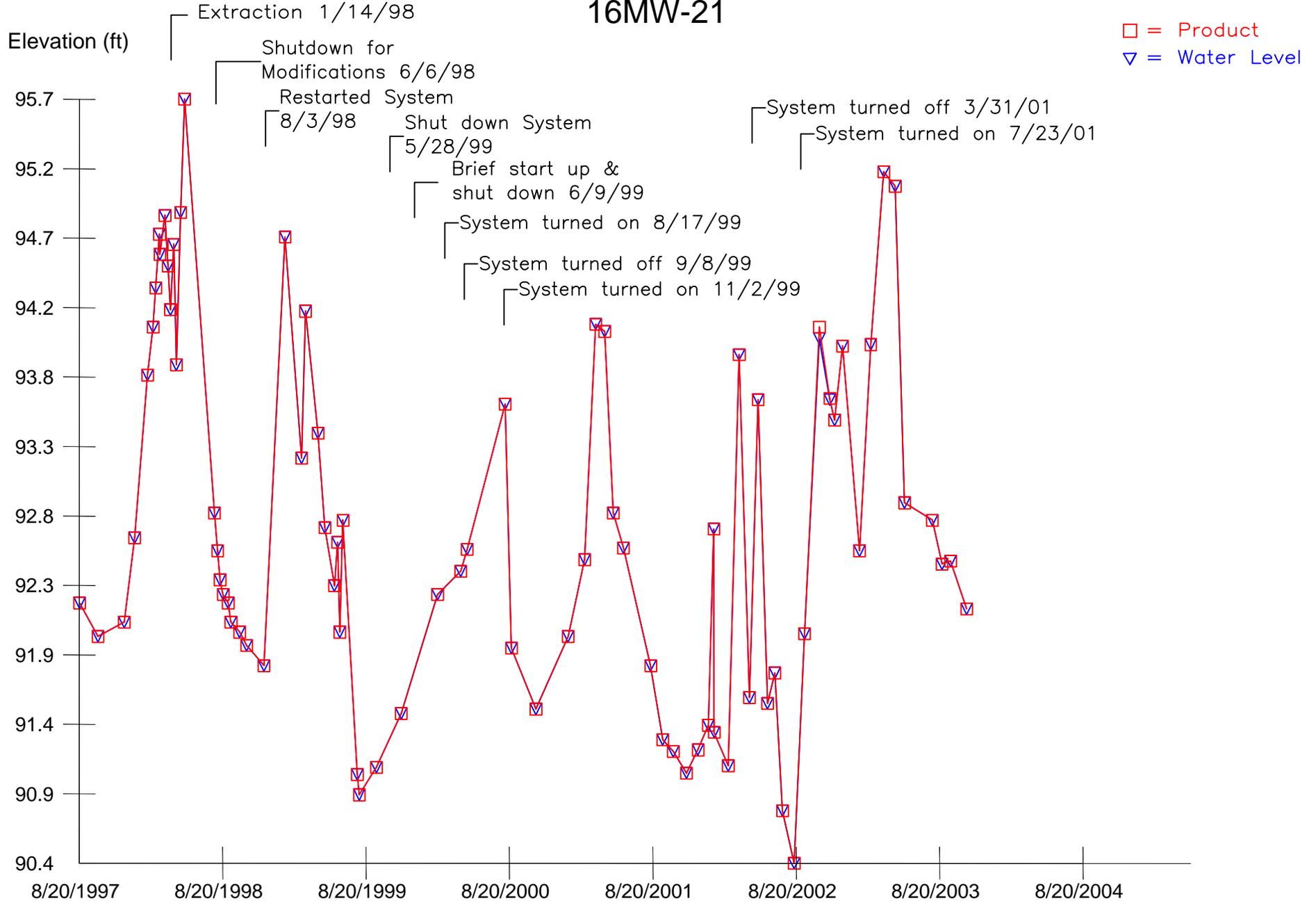
# Water Level & Product Surface Elevation 16MW-20

□ = Product  
▽ = Water Level



# Water Level & Product Surface Elevation

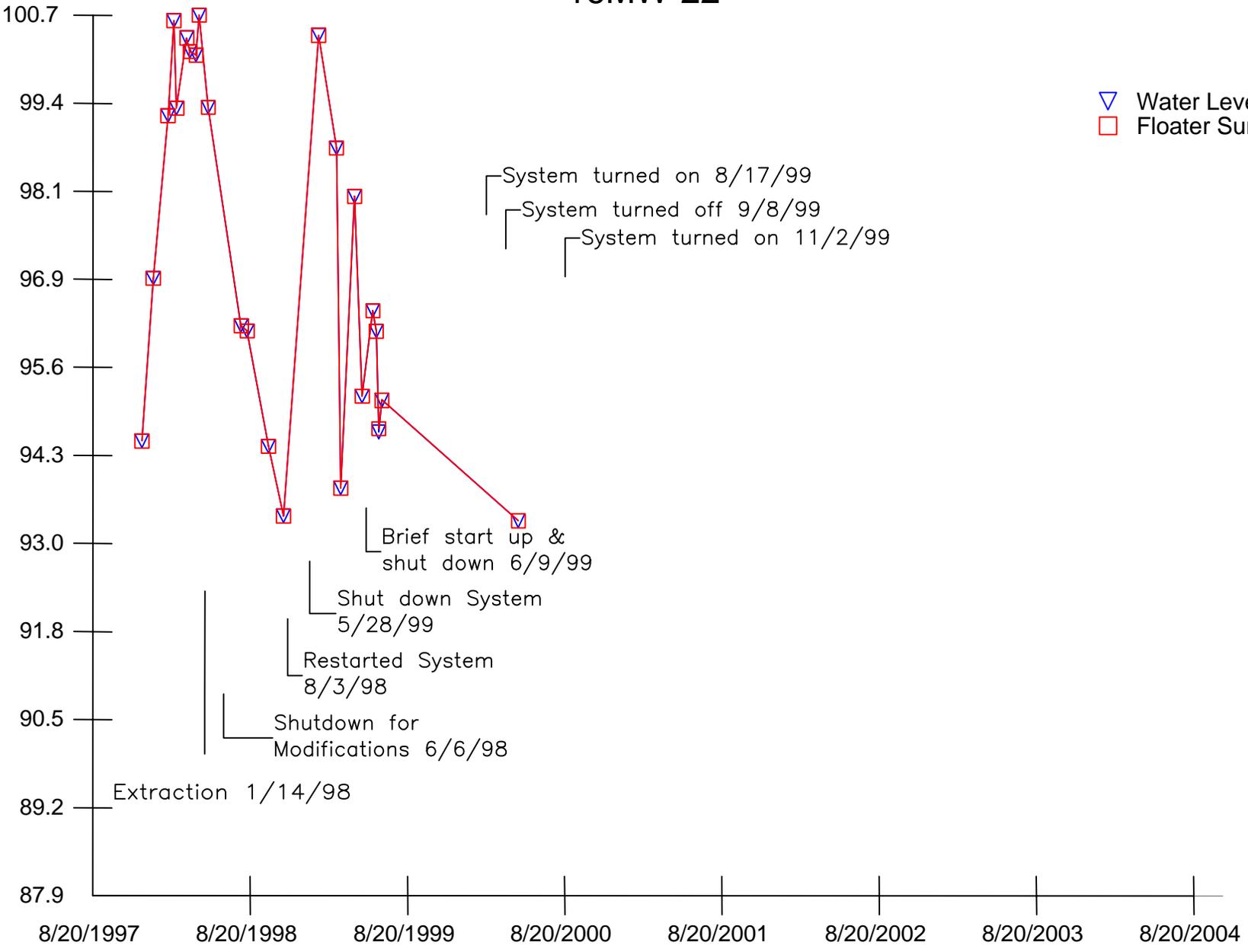
## 16MW-21



Elevation (ft)

# Water Level & Product Surface Elevation 16MW-22

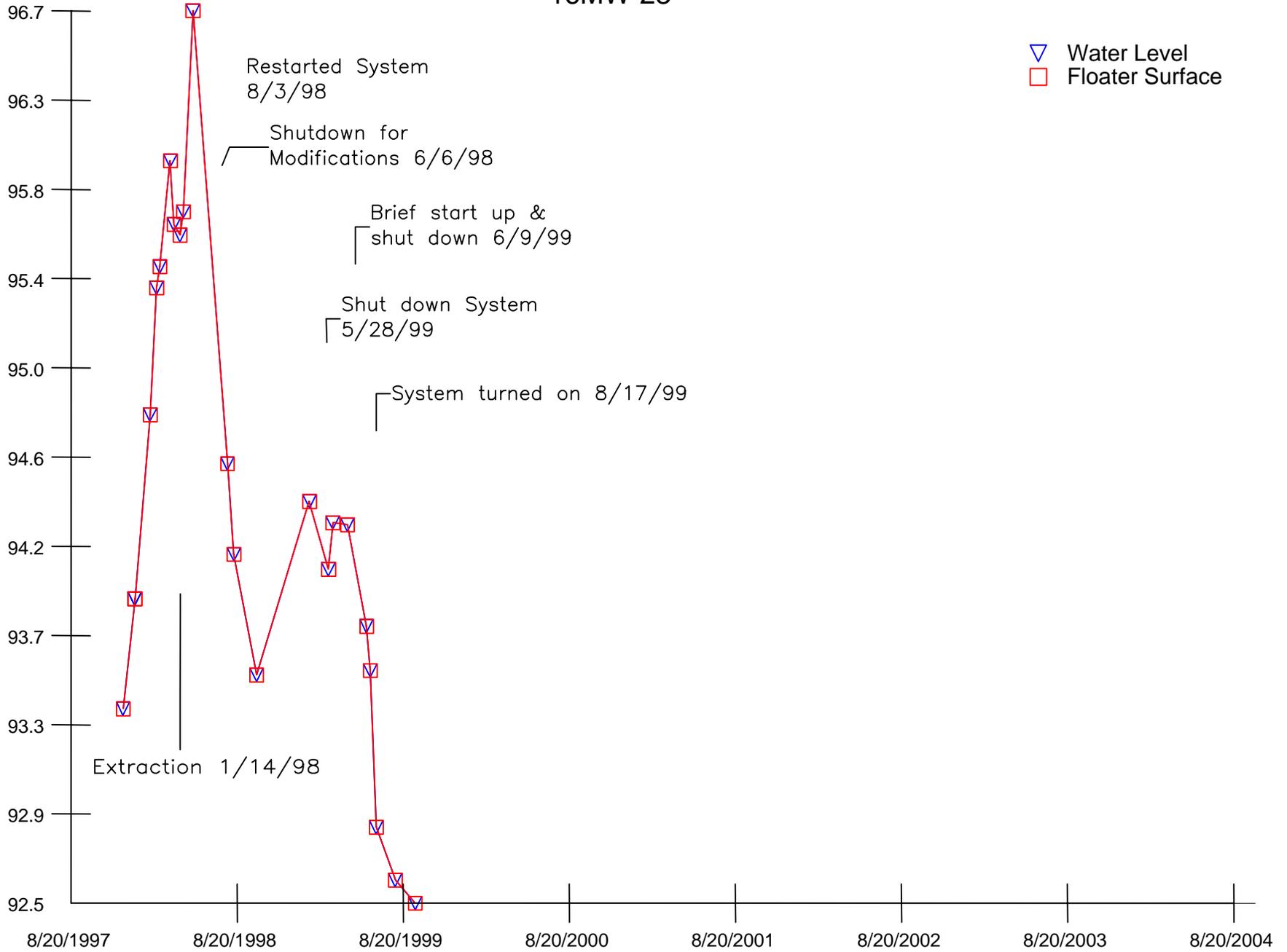
▽ Water Level  
□ Floater Surface



# Water Level & Product Surface Elevation 16MW-23

Elevation (ft)

▽ Water Level  
□ Floater Surface



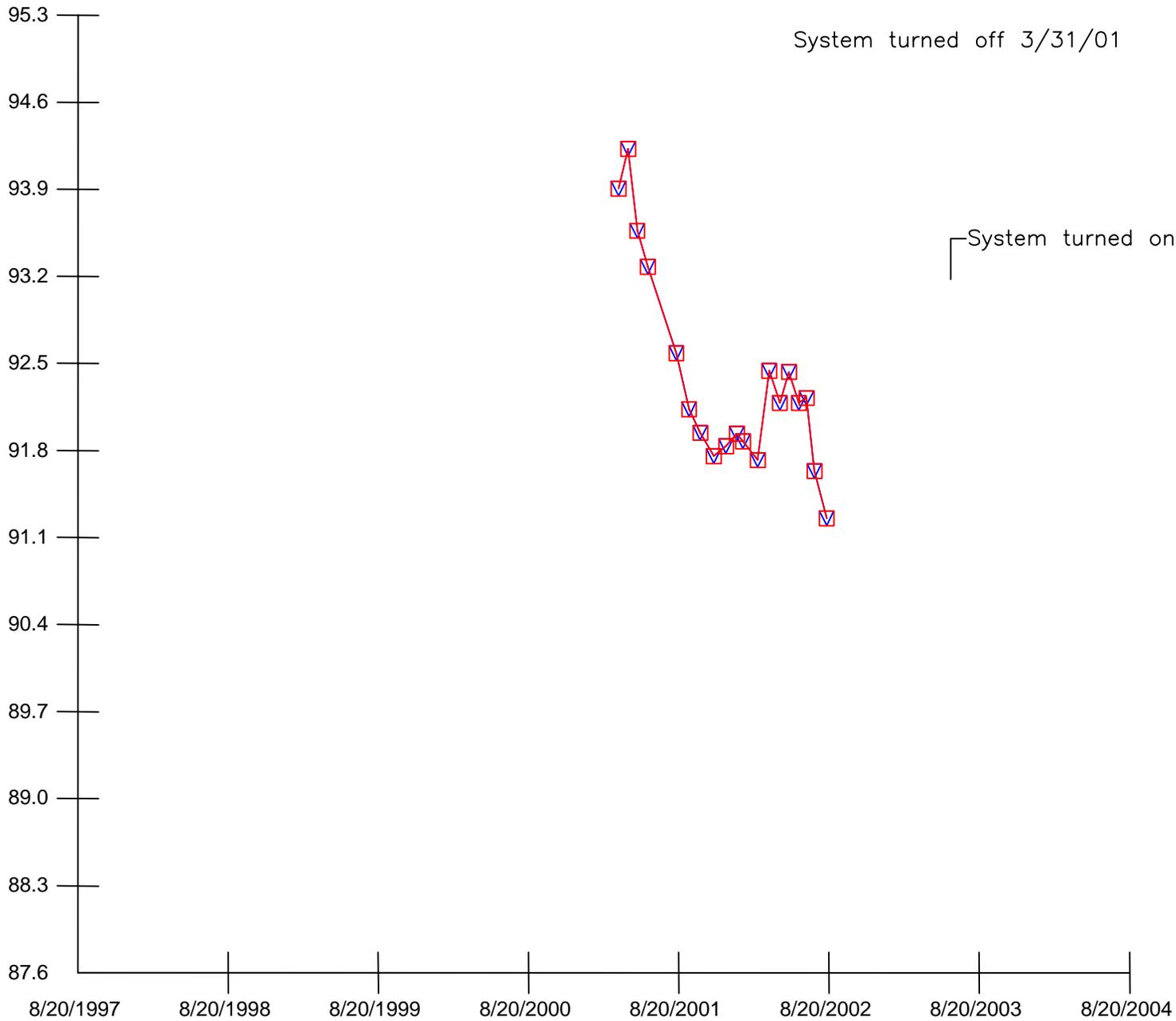
# Water Level & Product Surface Elevation 16MW-24

Elevation (ft)

□ = Product  
▽ = Water Level

System turned off 3/31/01

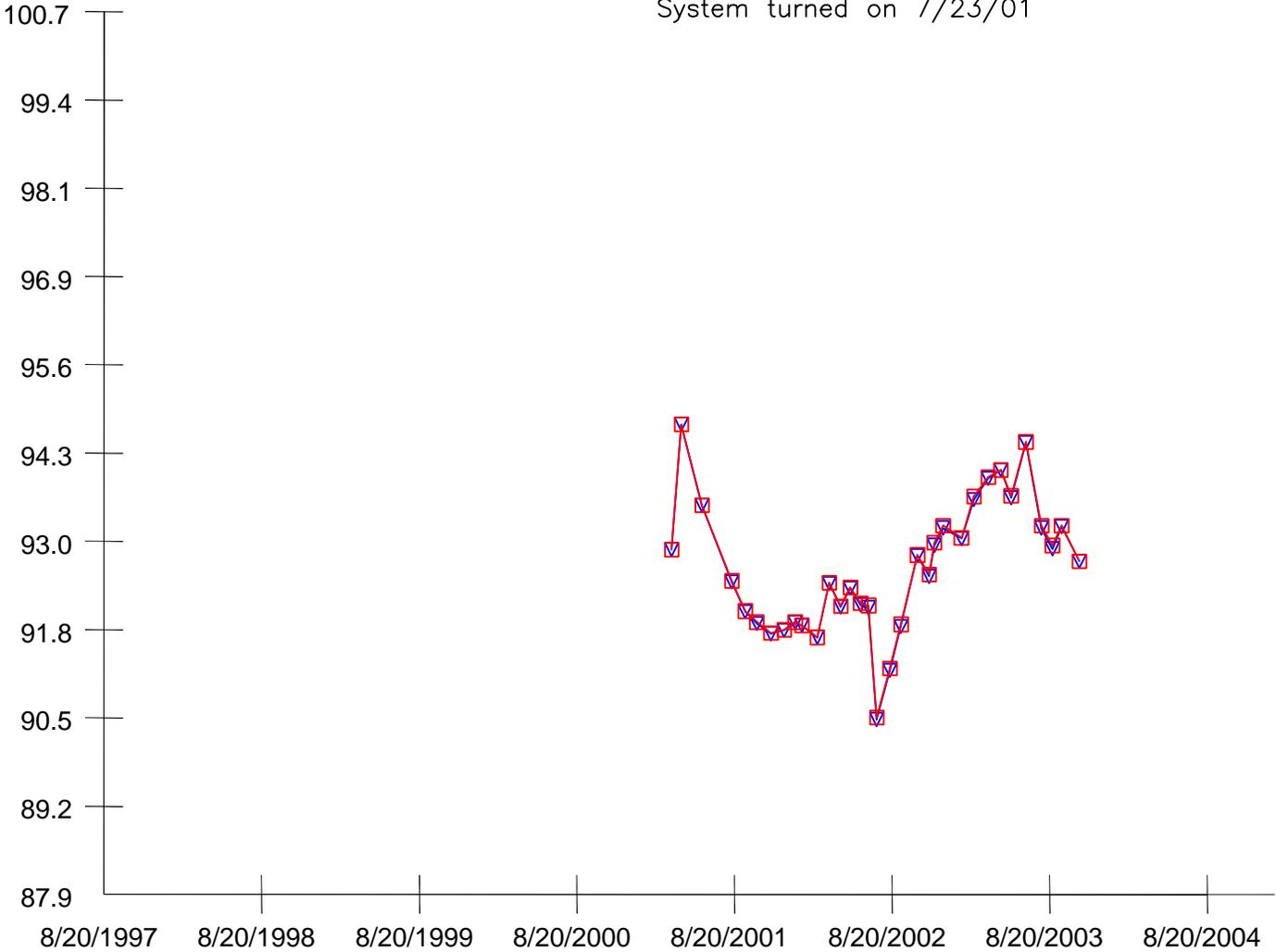
System turned on 7/23/01



# Water Level & Product Surface Elevation 16MW-25

□ = Product  
▽ = Water Level

Elevation (ft)



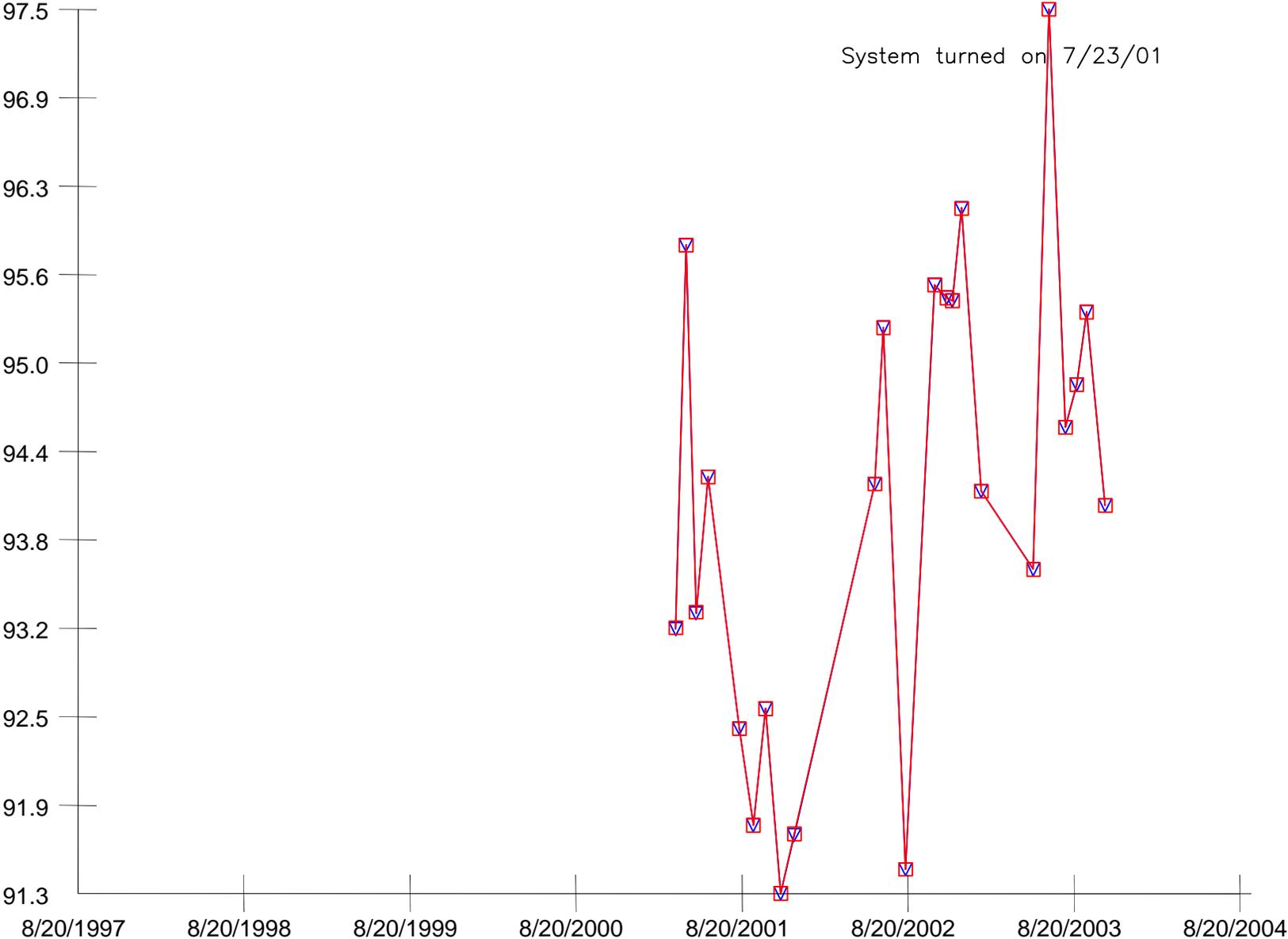
# Water Level & Product Surface Elevation 16MW-26

□ = Product  
▽ = Water Level

Elevation (ft)

System turned off 3/31/01

System turned on 7/23/01



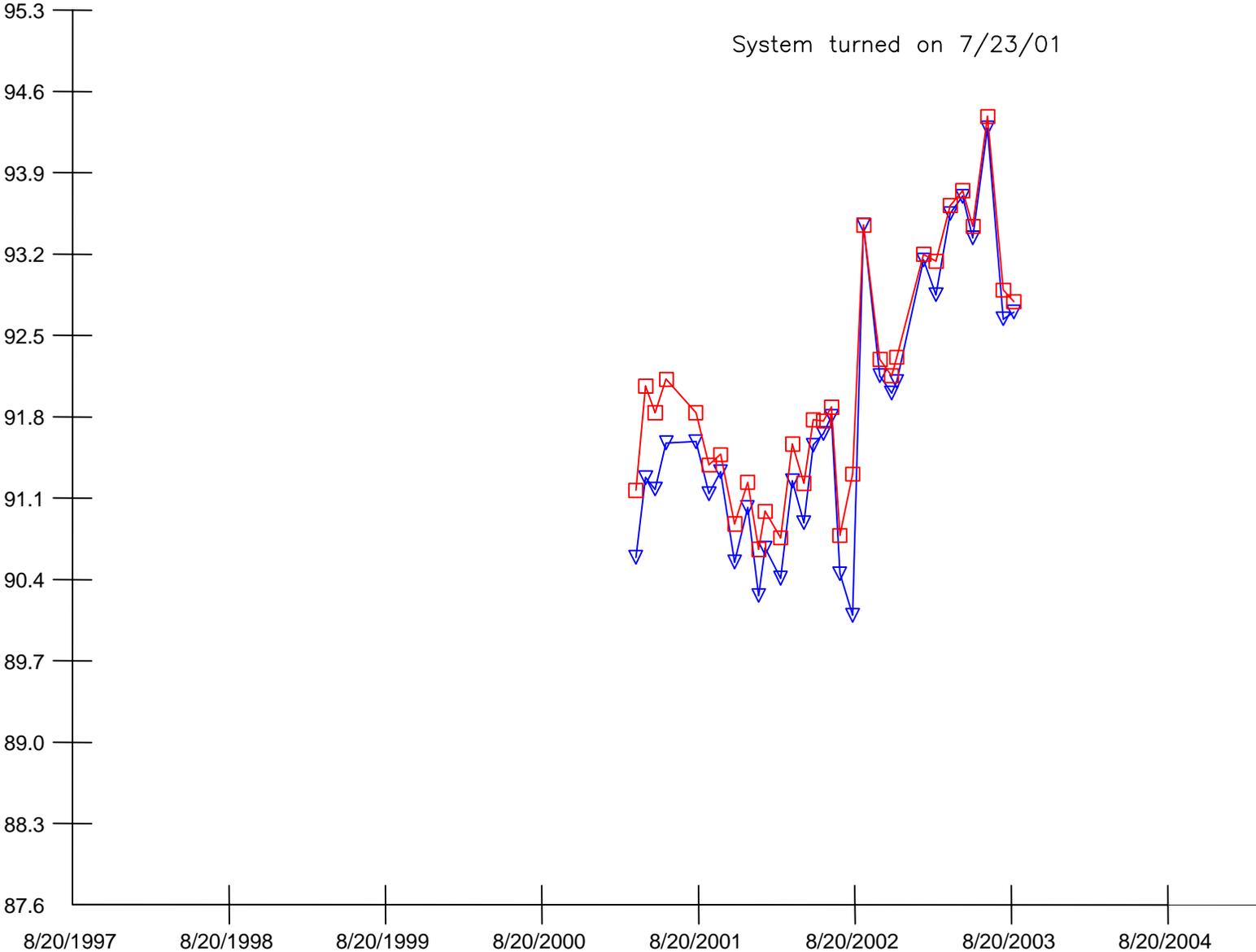
# Water Level & Product Surface Elevation 16MW-27

□ = Product  
▽ = Water Level

Elevation (ft)

System turned off 3/31/01

System turned on 7/23/01



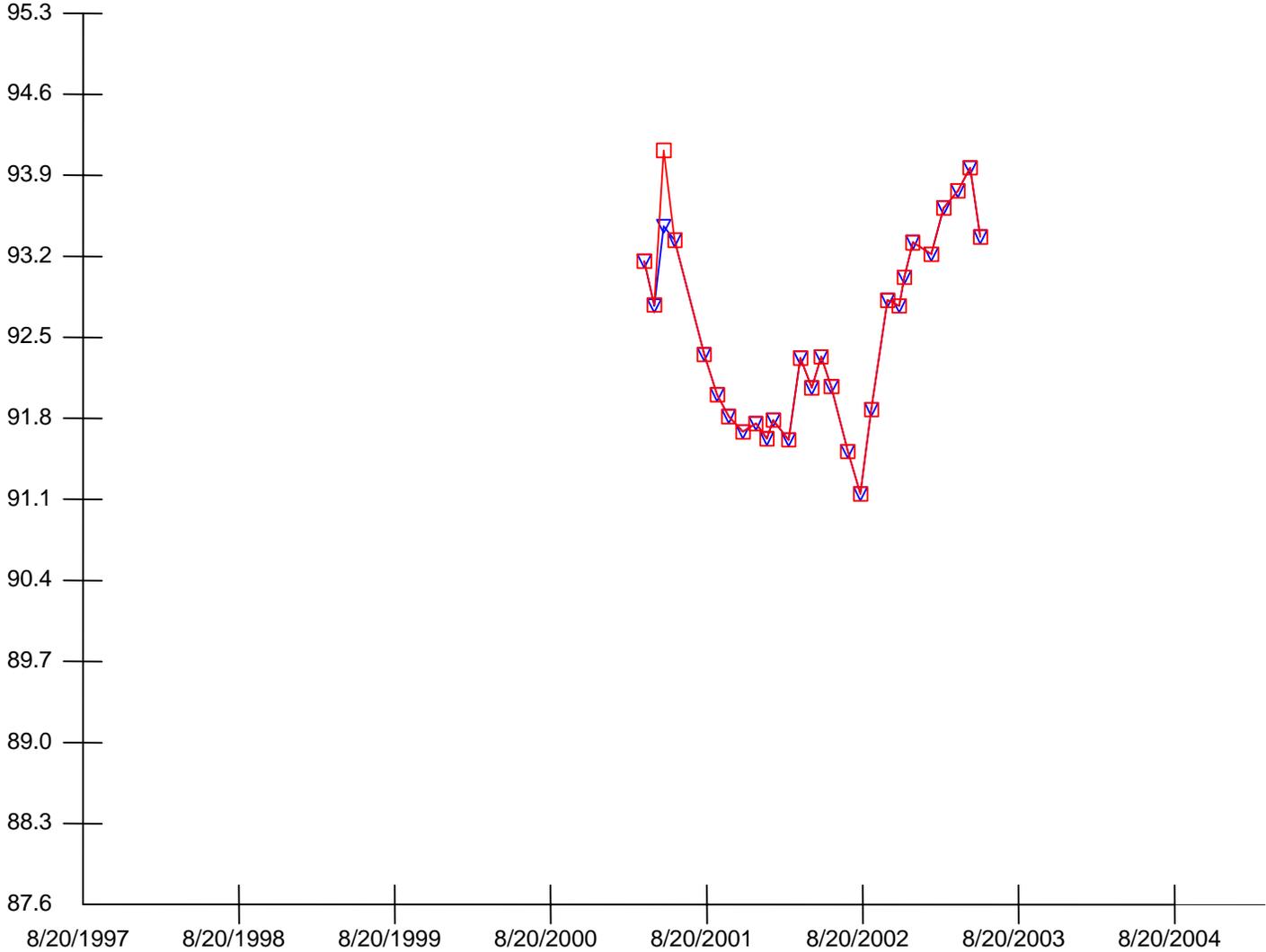
# Water Level & Product Surface Elevation 16MW-28

□ = Product  
▽ = Water Level

System turned off 3/31/01

System turned on 7/23/01

Elevation (ft.)



## Water Level &amp; Product Thickness Data

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-04	8/20/1997	101.23	11:34	13.65	0.58	87.58	NA	88.07
16MW-13	8/20/1997	100.97	08:45	10.90	0.80	90.07	NA	90.75
16MW-15	8/20/1997	100.98	09:12	8.80	0.90	92.18	NA	92.95
16MW-19	8/20/1997	100.54	08:57	7.70	0.00	92.84	NA	92.84
16MW-20	8/20/1997	100.82	09:26	9.88	0.45	90.94	NA	91.32
16MW-21	8/20/1997	99.78	09:35	7.57	0.00	92.21	NA	92.21
16MW-13	10/6/1997	100.97	10:45	11.10	0.75	89.87	-0.20	90.51
16MW-14	10/6/1997	100.66	10:45	11.61	0.99	89.05	NA	89.90
16MW-15	10/6/1997	100.98	10:45	11.98	0.93	89.00	-3.18	89.80
16MW-16	10/6/1997	98.82	10:45	8.19	0.36	90.63	NA	90.93
16MW-17	10/6/1997	99.79	00:00	8.19	1.28	91.60	NA	92.69
16MW-17	10/6/1997	99.79	10:45	10.98	0.94	88.81	-2.79	89.61
16MW-18	10/6/1997	100.69	10:45	8.21	0.00	92.48	NA	92.48
16MW-19	10/6/1997	100.54	10:45	10.29	0.62	90.25	-2.59	90.78
16MW-20	10/6/1997	100.82	10:45	10.22	0.46	90.60	-0.34	90.99
16MW-21	10/6/1997	99.78	10:45	7.80	0.00	91.98	-0.23	91.98
16MW-04	12/12/1997	101.23	00:00	11.55	0.79	89.68	2.10	90.35
16MW-13	12/12/1997	100.97	08:30	10.50	0.65	90.47	0.60	91.02
16MW-14	12/12/1997	100.66	08:30	10.72	0.79	89.94	0.89	90.61
16MW-15	12/12/1997	100.98	08:30	11.96	0.99	89.02	0.02	89.87
16MW-16	12/12/1997	98.82	08:30	10.90	1.20	87.92	-2.71	88.95
16MW-17	12/12/1997	99.79	08:30	10.50	0.88	89.29	0.48	90.04
16MW-18	12/12/1997	100.69	08:30	7.98	0.00	92.71	0.23	92.71
16MW-19	12/12/1997	100.54	08:30	12.02	1.13	88.52	-1.73	89.48
16MW-20	12/12/1997	100.82	08:30	10.55	0.61	90.27	-0.33	90.79
16MW-21	12/12/1997	99.78	08:30	7.70	0.00	92.08	0.10	92.08
16MW-22	12/12/1997	102.22	00:00	7.70	0.00	94.52	NA	94.52
16MW-23	12/12/1997	102.58	08:30	9.19	0.00	93.39	NA	93.39
C17MW-07	12/12/1997	100.16	00:00	11.69	1.26	88.47	NA	89.54
16MW-04	1/7/1998	101.23	11:02	11.85	1.04	89.38	-0.30	90.26
16MW-13	1/7/1998	100.97	09:35	10.22	0.73	90.75	0.28	91.37
16MW-14	1/7/1998	100.66	09:49	10.52	0.86	90.14	0.20	90.87
16MW-14	1/7/1998	100.66	09:56	10.52	0.86	90.14	0.00	90.87
16MW-15	1/7/1998	100.98	10:05	12.38	1.27	88.60	-0.42	89.68
16MW-16	1/7/1998	98.82	10:10	10.40	1.15	88.42	0.50	89.40
16MW-17	1/7/1998	99.79	10:23	11.15	1.22	88.64	-0.65	89.68

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

Water Level & Product Thickness Data

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-18	1/7/1998	100.69	10:30	6.85	0.00	93.84	1.13	93.84
16MW-19	1/7/1998	100.54	10:37	10.00	0.83	90.54	2.02	91.24
16MW-20	1/7/1998	100.82	10:49	10.36	0.70	90.46	0.19	91.05
16MW-21	1/7/1998	99.78	10:58	7.12	0.00	92.66	0.58	92.66
16MW-22	1/7/1998	102.22	00:00	5.34	0.00	96.88	2.36	96.88
16MW-23	1/7/1998	102.58	09:35	8.67	0.00	93.91	0.52	93.91
16MW-23	1/7/1998	102.58	09:49	8.67	0.00	93.91	0.00	93.91
C17MW-07	1/7/1998	100.16	00:00	11.78	1.42	88.38	-0.09	89.59
16MW-04	1/15/1998	101.23	00:00	9.49	0.38	91.74	2.36	92.06
16MW-13	1/15/1998	100.97	07:30	10.29	0.75	90.68	-0.07	91.32
16MW-14	1/15/1998	100.66	07:30	9.61	0.64	91.05	0.91	91.59
16MW-15	1/15/1998	100.98	07:30	10.88	0.84	90.10	1.50	90.82
16MW-16	1/15/1998	98.82	07:30	7.83	0.56	90.99	2.57	91.47
16MW-17	1/15/1998	99.79	07:30	8.45	0.44	91.34	2.70	91.71
16MW-18	1/15/1998	100.69	07:30	7.24	0.00	93.45	-0.39	93.45
16MW-19	1/15/1998	100.54	07:30	7.03	0.18	93.51	2.97	93.67
C17MW-07	1/15/1998	100.16	00:00	7.95	0.32	92.21	3.83	92.48
16MW-20	1/22/1998	100.82	00:00	10.50	0.77	90.32	-0.14	90.97
16MW-04	2/10/1998	101.23	00:00	10.78	0.94	90.45	-1.29	91.25
16MW-13	2/10/1998	100.97	00:00	10.01	0.88	90.96	0.28	91.71
16MW-14	2/10/1998	100.66	00:00	10.36	1.08	90.30	-0.75	91.22
16MW-15	2/10/1998	100.98	00:00	12.40	1.50	88.58	-1.52	89.85
16MW-16	2/10/1998	98.82	00:00	7.38	0.49	91.44	0.45	91.86
16MW-17	2/10/1998	99.79	00:00	10.24	1.18	89.55	-1.79	90.55
16MW-18	2/10/1998	100.69	00:00	5.86	0.00	94.83	1.38	94.83
16MW-19	2/10/1998	100.54	00:00	6.07	0.09	94.47	0.96	94.55
16MW-20	2/10/1998	100.82	00:00	7.71	0.15	93.11	2.79	93.24
16MW-21	2/10/1998	99.78	00:00	6.00	0.00	93.78	1.12	93.78
16MW-22	2/10/1998	102.22	00:00	2.98	0.00	99.24	2.36	99.24
16MW-23	2/10/1998	102.58	00:00	7.80	0.00	94.78	0.87	94.78
C17MW-07	2/10/1998	100.16	00:00	9.05	0.84	91.11	-1.10	91.82
16MW-04	2/24/1998	101.23	00:00	8.78	0.57	92.45	2.00	92.93
16MW-13	2/24/1998	100.97	00:00	8.82	0.72	92.15	1.19	92.76
16MW-16	2/24/1998	98.82	00:00	4.05	0.20	94.77	3.33	94.94
16MW-17	2/24/1998	99.79	00:00	6.70	0.38	93.09	3.54	93.41
16MW-18	2/24/1998	100.69	00:00	6.80	0.00	93.89	-0.94	93.89

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-19	2/24/1998	100.54	00:00	5.10	0.00	95.44	0.97	95.44
16MW-20	2/24/1998	100.82	00:00	6.80	0.08	94.02	0.91	94.09
16MW-21	2/24/1998	99.78	00:00	5.67	0.00	94.11	0.33	94.11
16MW-22	2/24/1998	102.22	00:00	1.60	0.00	100.62	1.38	100.62
16MW-23	2/24/1998	102.58	00:00	7.20	0.00	95.38	0.60	95.38
C17MW-07	2/24/1998	100.16	00:00	6.00	0.15	94.16	3.05	94.29
16MW-04	3/3/1998	101.23	00:00	10.45	1.00	90.78	-1.67	91.63
16MW-13	3/3/1998	100.97	00:00	10.02	1.04	90.95	-1.20	91.84
16MW-14	3/3/1998	100.66	00:00	6.40	0.84	94.27	3.97	94.98
16MW-15	3/3/1998	100.98	00:00	11.50	1.38	89.48	0.90	90.65
16MW-16	3/3/1998	98.82	00:00	5.70	0.17	93.12	-1.65	93.27
16MW-17	3/3/1998	99.79	00:00	8.95	0.96	90.84	-2.25	91.66
16MW-18	3/3/1998	100.69	00:00	5.30	0.00	95.39	1.50	95.39
16MW-19	3/3/1998	100.54	00:00	5.35	0.02	95.19	-0.25	95.20
16MW-20	3/3/1998	100.82	00:00	6.85	0.07	93.97	-0.05	94.03
16MW-21	3/3/1998	99.78	00:00	5.40	0.00	94.38	0.27	94.38
16MW-22	3/3/1998	102.22	00:00	2.87	0.00	99.35	-1.27	99.35
16MW-23	3/3/1998	102.58	00:00	7.10	0.00	95.48	0.10	95.48
C17MW-07	3/3/1998	100.16	00:00	5.89	0.49	94.27	0.11	94.69
16MW-04	3/12/1998	101.23	00:00	9.62	0.89	91.61	0.83	92.36
16MW-13	3/12/1998	100.97	00:00	9.67	1.03	91.30	0.35	92.17
16MW-14	3/12/1998	100.66	00:00	8.29	0.75	92.37	-1.90	93.01
16MW-15	3/12/1998	100.98	00:00	10.50	1.19	90.48	1.00	91.49
16MW-16	3/12/1998	98.82	00:00	4.81	0.03	94.01	0.89	94.03
16MW-17	3/12/1998	99.79	00:00	7.27	0.50	92.52	1.68	92.94
16MW-18	3/12/1998	100.69	00:00	4.89	0.00	95.80	0.41	95.80
16MW-19	3/12/1998	100.54	00:00	4.91	0.02	95.63	0.44	95.64
16MW-20	3/12/1998	100.82	00:00	6.37	0.02	94.45	0.48	94.47
16MW-21	3/12/1998	99.78	00:00	5.03	0.00	94.75	0.37	94.75
C17MW-07	3/12/1998	100.16	00:00	5.99	0.18	94.17	-0.10	94.32
16MW-04	3/13/1998	101.23	00:00	9.15	0.72	92.08	0.47	92.69
16MW-13	3/13/1998	100.97	00:00	9.02	0.81	91.95	0.65	92.64
16MW-14	3/13/1998	100.66	00:00	8.90	0.84	91.76	-0.61	92.47
16MW-15	3/13/1998	100.98	00:00	8.60	0.61	92.38	1.90	92.90
16MW-16	3/13/1998	98.82	00:00	5.12	0.02	93.70	-0.31	93.72
16MW-17	3/13/1998	99.79	00:00	5.55	0.08	94.24	1.72	94.30

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-18	3/13/1998	100.69	00:00	5.06	0.00	95.63	-0.17	95.63
16MW-19	3/13/1998	100.54	00:00	5.05	0.00	95.49	-0.14	95.49
16MW-20	3/13/1998	100.82	00:00	6.43	0.02	94.39	-0.06	94.41
16MW-21	3/13/1998	99.78	00:00	5.17	0.00	94.61	-0.14	94.61
C17MW-07	3/13/1998	100.16	00:00	5.96	0.14	94.20	0.03	94.32
16MW-04	3/26/1998	101.23	00:00	6.76	0.84	94.47	2.39	95.19
16MW-13	3/26/1998	100.97	00:00	7.05	0.30	93.92	1.97	94.18
16MW-14	3/26/1998	100.66	00:00	5.70	0.03	94.96	3.20	94.99
16MW-15	3/26/1998	100.98	00:00	6.40	0.03	94.58	2.20	94.61
16MW-16	3/26/1998	98.82	00:00	4.42	0.01	94.40	0.70	94.41
16MW-17	3/26/1998	99.79	00:00	5.35	0.02	94.44	0.20	94.45
16MW-18	3/26/1998	100.69	00:00	4.78	0.00	95.91	0.28	95.91
16MW-19	3/26/1998	100.54	00:00	4.98	0.00	95.56	0.07	95.56
16MW-20	3/26/1998	100.82	00:00	6.21	0.00	94.61	0.22	94.61
16MW-21	3/26/1998	99.78	00:00	4.90	0.00	94.88	0.27	94.88
16MW-22	3/26/1998	102.22	00:00	1.85	0.00	100.37	1.02	100.37
16MW-23	3/26/1998	102.58	00:00	6.60	0.00	95.98	0.50	95.98
C17MW-07	3/26/1998	100.16	00:00	5.35	0.01	94.81	0.61	94.82
16MW-04	4/3/1998	101.23	00:00	8.40	0.45	92.83	-1.64	93.21
16MW-13	4/3/1998	100.97	00:00	7.72	0.42	93.25	-0.67	93.61
16MW-14	4/3/1998	100.66	00:00	6.66	0.21	94.00	-0.96	94.18
16MW-15	4/3/1998	100.98	00:00	8.01	0.42	92.97	-1.61	93.32
16MW-16	4/3/1998	98.82	00:00	5.17	0.01	93.65	-0.75	93.66
16MW-17	4/3/1998	99.79	00:00	5.54	0.11	94.25	-0.19	94.34
16MW-18	4/3/1998	100.69	00:00	5.51	0.00	95.18	-0.73	95.18
16MW-19	4/3/1998	100.54	00:00	5.31	0.00	95.23	-0.33	95.23
16MW-20	4/3/1998	100.82	00:00	6.60	0.04	94.22	-0.39	94.25
16MW-21	4/3/1998	99.78	00:00	5.25	0.00	94.53	-0.35	94.53
16MW-22	4/3/1998	102.22	00:00	2.05	0.00	100.17	-0.20	100.17
16MW-23	4/3/1998	102.58	00:00	6.90	0.00	95.68	-0.30	95.68
C17MW-07	4/3/1998	100.16	00:00	5.90	0.09	94.26	-0.55	94.34
16MW-04	4/9/1998	101.23	00:00	6.90	0.01	94.33	1.50	94.34
16MW-13	4/9/1998	100.97	00:00	7.34	0.27	93.63	0.38	93.86
16MW-14	4/9/1998	100.66	00:00	5.38	0.09	95.28	1.28	95.36
16MW-15	4/9/1998	100.98	00:00	7.19	0.14	93.79	0.82	93.91
16MW-16	4/9/1998	98.82	00:00	5.35	0.02	93.47	-0.18	93.49

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-17	4/9/1998	99.79	00:00	6.12	0.10	93.67	-0.58	93.75
16MW-18	4/9/1998	100.69	00:00	5.85	0.00	94.84	-0.34	94.84
16MW-19	4/9/1998	100.54	00:00	5.54	0.01	95.00	-0.23	95.01
16MW-20	4/9/1998	100.82	00:00	6.68	0.02	94.14	-0.08	94.16
16MW-21	4/9/1998	99.78	00:00	5.55	0.00	94.23	-0.30	94.23
C17MW-07	4/9/1998	100.16	00:00	6.02	0.08	94.14	-0.12	94.21
16MW-04	4/17/1998	101.23	00:00	7.06	0.04	94.17	-0.16	94.20
16MW-13	4/17/1998	100.97	00:00	6.95	0.18	94.02	0.39	94.17
16MW-14	4/17/1998	100.66	00:00	6.05	0.10	94.61	-0.67	94.69
16MW-15	4/17/1998	100.98	00:00	6.79	0.06	94.19	0.40	94.24
16MW-16	4/17/1998	98.82	00:00	5.60	0.14	93.22	-0.25	93.34
16MW-17	4/17/1998	99.79	00:00	6.04	0.14	93.75	0.08	93.87
16MW-18	4/17/1998	100.69	00:00	5.20	0.00	95.49	0.65	95.49
16MW-19	4/17/1998	100.54	00:00	5.15	0.04	95.39	0.39	95.42
16MW-20	4/17/1998	100.82	00:00	6.49	0.01	94.33	0.19	94.34
16MW-21	4/17/1998	99.78	00:00	5.10	0.00	94.68	0.45	94.68
16MW-22	4/17/1998	102.22	00:00	2.10	0.00	100.12	-0.05	100.12
16MW-23	4/17/1998	102.58	00:00	6.95	0.00	95.63	-0.05	95.63
C17MW-07	4/17/1998	100.16	00:00	5.99	0.12	94.17	0.03	94.28
16MW-04	4/24/1998	101.23	00:00	NM	NA	NA	NA	NA
16MW-13	4/24/1998	100.97	00:00	8.16	0.58	92.81	-1.21	93.30
16MW-14	4/24/1998	100.66	00:00	7.82	0.55	92.84	-1.77	93.30
16MW-15	4/24/1998	100.98	00:00	8.45	0.58	92.53	-1.66	93.02
16MW-16	4/24/1998	98.82	00:00	5.28	0.09	93.54	0.32	93.62
16MW-17	4/24/1998	99.79	00:00	6.19	0.21	93.60	-0.15	93.78
16MW-18	4/24/1998	100.69	00:00	5.50	0.00	95.19	-0.30	95.19
16MW-19	4/24/1998	100.54	00:00	4.95	0.02	95.59	0.20	95.61
16MW-20	4/24/1998	100.82	00:00	6.48	0.03	94.34	0.01	94.36
16MW-21	4/24/1998	99.78	00:00	5.93	0.00	93.85	-0.83	93.85
16MW-22	4/24/1998	102.22	00:00	1.52	0.00	100.70	0.58	100.70
16MW-23	4/24/1998	102.58	00:00	6.84	0.00	95.74	0.11	95.74
C17MW-07	4/24/1998	100.16	00:00	5.90	0.13	94.26	0.09	94.37
16MW-04	5/5/1998	101.23	00:00	8.40	0.49	92.83	-8.40	93.25
16MW-13	5/5/1998	100.97	00:00	8.85	0.76	92.12	-0.69	92.77
16MW-14	5/5/1998	100.66	00:00	7.41	0.46	93.25	0.41	93.64
16MW-15	5/5/1998	100.98	00:00	8.50	0.59	92.48	-0.05	92.98

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

Water Level & Product Thickness Data

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-16	5/5/1998	98.82	00:00	5.32	0.08	93.50	-0.04	93.56
16MW-17	5/5/1998	99.79	00:00	6.45	0.27	93.34	-0.26	93.57
16MW-18	5/5/1998	100.69	00:00	4.40	0.00	96.29	1.10	96.29
16MW-19	5/5/1998	100.54	00:00	4.73	0.04	95.81	0.22	95.85
16MW-20	5/5/1998	100.82	00:00	5.70	0.06	95.12	0.78	95.17
16MW-21	5/5/1998	99.78	00:00	4.88	0.00	94.90	1.05	94.90
C17MW-07	5/5/1998	100.16	00:00	6.50	0.28	93.66	-0.60	93.94
16MW-04	5/15/1998	101.23	00:00	8.20	0.65	93.03	0.20	93.59
16MW-13	5/15/1998	100.97	00:00	7.09	0.52	93.88	1.76	94.32
16MW-14	5/15/1998	100.66	00:00	5.70	0.10	94.96	1.71	95.05
16MW-15	5/15/1998	100.98	00:00	7.20	0.36	93.78	1.30	94.09
16MW-16	5/15/1998	98.82	00:00	4.25	0.11	94.57	1.07	94.66
16MW-17	5/15/1998	99.79	00:00	5.36	0.09	94.43	1.09	94.51
16MW-18	5/15/1998	100.69	00:00	3.85	0.00	96.84	0.55	96.84
16MW-19	5/15/1998	100.54	00:00	3.60	0.01	96.94	1.13	96.95
16MW-20	5/15/1998	100.82	00:00	5.54	0.06	95.29	0.17	95.33
16MW-21	5/15/1998	99.78	00:00	4.10	0.00	95.68	0.78	95.68
16MW-22	5/15/1998	102.22	00:00	2.86	0.00	99.36	-1.34	99.36
16MW-23	5/15/1998	102.58	00:00	5.89	0.00	96.69	0.95	96.69
C17MW-07	5/15/1998	100.16	00:00	5.50	0.22	94.66	1.00	94.85
16MW-04	7/30/1998	101.23	00:00	10.15	0.62	91.08	-1.95	91.61
16MW-13	7/30/1998	100.97	00:00	10.25	0.82	90.72	-3.16	91.42
16MW-14	7/30/1998	100.66	00:00	10.05	0.85	90.61	-4.35	91.34
16MW-15	7/30/1998	100.98	00:00	10.96	0.92	90.02	-3.76	90.81
16MW-16	7/30/1998	98.82	00:00	7.64	0.39	91.18	-3.39	91.51
16MW-17	7/30/1998	99.79	00:00	10.26	1.01	89.53	-4.90	90.39
16MW-18	7/30/1998	100.69	00:00	6.93	0.00	93.76	-3.08	93.76
16MW-19	7/30/1998	100.54	00:00	7.12	0.11	93.42	-3.52	93.51
16MW-20	7/30/1998	100.82	00:00	8.98	0.37	91.84	-3.45	92.15
16MW-21	7/30/1998	99.78	00:00	6.95	0.00	92.83	-2.85	92.83
16MW-22	7/30/1998	102.22	00:00	6.03	0.00	96.19	-3.17	96.19
16MW-23	7/30/1998	102.58	00:00	8.03	0.00	94.55	-2.14	94.55
C17MW-07	7/30/1998	100.16	00:00	10.61	1.12	89.55	-5.11	90.50
16MW-04	8/7/1998	101.23	00:00	9.17	0.27	92.06	0.98	92.29
16MW-13	8/7/1998	100.97	00:00	8.57	0.26	92.40	1.68	92.62
16MW-14	8/7/1998	100.66	00:00	7.40	0.06	93.26	2.65	93.31

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-15	8/7/1998	100.98	00:00	9.06	0.31	91.92	1.90	92.18
16MW-16	8/7/1998	98.82	00:00	6.92	0.14	91.90	0.72	92.02
16MW-17	8/7/1998	99.79	00:00	7.72	0.21	92.07	2.54	92.25
16MW-18	8/7/1998	100.69	00:00	7.14	0.00	93.55	-0.21	93.55
16MW-19	8/7/1998	100.54	00:00	6.97	0.00	93.57	0.15	93.57
16MW-20	8/7/1998	100.82	00:00	8.11	0.05	92.71	0.87	92.75
16MW-21	8/7/1998	99.78	00:00	7.21	0.00	92.57	-0.26	92.57
C17MW-07	8/7/1998	100.16	00:00	7.80	0.25	92.36	2.81	92.57
16MW-04	8/13/1998	101.23	00:00	8.50	0.02	92.73	0.67	92.75
16MW-13	8/13/1998	100.97	00:00	8.36	0.15	92.61	0.21	92.73
16MW-14	8/13/1998	100.66	00:00	7.71	0.05	92.95	-0.31	92.99
16MW-15	8/13/1998	100.98	00:00	8.77	0.17	92.21	0.29	92.36
16MW-16	8/13/1998	98.82	00:00	7.22	0.17	91.60	-0.30	91.75
16MW-17	8/13/1998	99.79	00:00	7.95	0.22	91.84	-0.23	92.03
16MW-18	8/13/1998	100.69	00:00	8.40	0.00	92.29	-1.26	92.29
16MW-19	8/13/1998	100.54	00:00	7.22	0.01	93.32	-0.25	93.32
16MW-20	8/13/1998	100.82	00:00	8.29	0.05	92.53	-0.18	92.57
16MW-21	8/13/1998	99.78	00:00	7.41	0.00	92.37	-0.20	92.37
16MW-22	8/13/1998	102.22	00:00	6.10	0.00	96.12	-0.07	96.12
16MW-23	8/13/1998	102.58	00:00	8.46	0.00	94.12	-0.43	94.12
C17MW-07	8/13/1998	100.16	00:00	7.61	0.11	92.55	0.19	92.65
16MW-04	8/21/1998	101.23	00:00	9.20	0.19	92.03	-0.70	92.19
16MW-13	8/21/1998	100.97	00:00	8.84	0.27	92.13	-0.48	92.36
16MW-14	8/21/1998	100.66	00:00	8.60	0.27	92.06	-0.89	92.29
16MW-15	8/21/1998	100.98	00:00	9.22	0.27	91.76	-0.45	91.99
16MW-16	8/21/1998	98.82	00:00	6.99	0.07	91.83	0.23	91.89
16MW-17	8/21/1998	99.79	00:00	7.62	0.09	92.17	0.33	92.25
16MW-18	8/21/1998	100.69	00:00	7.61	0.00	93.08	0.79	93.08
16MW-19	8/21/1998	100.54	00:00	7.41	0.00	93.13	-0.19	93.13
16MW-20	8/21/1998	100.82	00:00	8.40	0.05	92.42	-0.11	92.46
16MW-21	8/21/1998	99.78	00:00	7.51	0.00	92.27	-0.10	92.27
C17MW-07	8/21/1998	100.16	00:00	7.27	0.11	92.89	0.34	92.98
16MW-04	9/3/1998	101.23	00:00	9.44	0.23	91.79	-0.24	91.99
16MW-13	9/3/1998	100.97	00:00	8.69	0.18	92.28	0.15	92.43
16MW-14	9/3/1998	100.66	00:00	8.41	0.15	92.25	0.19	92.38
16MW-15	9/3/1998	100.98	00:00	9.12	0.22	91.86	0.10	92.05

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-16	9/3/1998	98.82	00:00	6.86	0.04	91.96	0.13	91.99
16MW-17	9/3/1998	99.79	00:00	7.76	0.12	92.03	-0.14	92.14
16MW-18	9/3/1998	100.69	00:00	7.78	0.00	92.91	-0.17	92.91
16MW-19	9/3/1998	100.54	00:00	7.55	0.00	92.99	-0.14	92.99
16MW-20	9/3/1998	100.82	00:00	8.65	0.06	92.17	-0.25	92.22
16MW-21	9/3/1998	99.78	00:00	7.57	0.00	92.21	-0.06	92.21
C17MW-07	9/3/1998	100.16	00:00	7.76	0.15	92.40	-0.49	92.53
16MW-04	9/10/1998	101.23	00:00	9.57	0.24	91.66	-0.13	91.86
16MW-13	9/10/1998	100.97	00:00	8.71	0.15	92.26	-0.02	92.39
16MW-14	9/10/1998	100.66	00:00	7.96	0.15	92.70	0.45	92.83
16MW-15	9/10/1998	100.98	00:00	9.11	0.18	91.87	0.01	92.02
16MW-16	9/10/1998	98.82	00:00	7.01	0.04	91.81	-0.15	91.84
16MW-17	9/10/1998	99.79	00:00	7.72	0.08	92.07	0.04	92.14
16MW-18	9/10/1998	100.69	00:00	7.90	0.00	92.79	-0.12	92.79
16MW-19	9/10/1998	100.54	00:00	8.53	0.02	92.01	-0.98	92.03
16MW-20	9/10/1998	100.82	00:00	8.48	0.02	92.34	0.17	92.36
16MW-21	9/10/1998	99.78	00:00	7.70	0.00	92.08	-0.13	92.08
C17MW-07	9/10/1998	100.16	00:00	7.42	0.09	92.75	0.35	92.82
16MW-04	10/2/1998	101.23	00:00	9.65	0.23	91.58	-0.08	91.78
16MW-13	10/2/1998	100.97	00:00	9.23	0.27	91.74	-0.52	91.97
16MW-14	10/2/1998	100.66	00:00	8.62	0.18	92.04	-0.66	92.20
16MW-15	10/2/1998	100.98	00:00	9.30	0.21	91.68	-0.19	91.86
16MW-16	10/2/1998	98.82	00:00	7.22	0.08	91.60	-0.21	91.67
16MW-17	10/2/1998	99.79	00:00	8.28	0.20	91.51	-0.56	91.68
16MW-18	10/2/1998	100.69	00:00	7.66	0.00	93.03	0.24	93.03
16MW-19	10/2/1998	100.54	00:00	7.69	0.01	92.85	0.84	92.86
16MW-20	10/2/1998	100.82	00:00	8.73	0.05	92.09	-0.25	92.13
16MW-21	10/2/1998	99.78	00:00	7.77	0.00	92.01	-0.07	92.01
16MW-22	10/2/1998	102.22	00:00	7.78	0.00	94.44	-1.68	94.44
16MW-23	10/2/1998	102.58	00:00	9.03	0.00	93.55	-0.57	93.55
C17MW-07	10/2/1998	100.16	00:00	8.16	0.21	92.00	-0.75	92.18
16MW-04	10/20/1998	101.23	00:00	9.85	0.26	91.38	-0.20	91.60
16MW-13	10/20/1998	100.97	00:00	8.88	0.14	92.09	0.35	92.21
16MW-14	10/20/1998	100.66	00:00	8.57	0.14	92.09	0.05	92.21
16MW-15	10/20/1998	100.98	00:00	9.25	0.16	91.73	0.05	91.87
16MW-16	10/20/1998	98.82	00:00	7.16	0.04	91.66	0.06	91.69

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-17	10/20/1998	99.79	00:00	7.85	0.07	91.94	0.43	92.00
16MW-18	10/20/1998	100.69	00:00	8.12	0.00	92.57	-0.46	92.57
16MW-19	10/20/1998	100.54	00:00	7.90	0.01	92.64	-0.21	92.65
16MW-20	10/20/1998	100.82	00:00	8.66	0.00	92.16	0.07	92.16
16MW-21	10/20/1998	99.78	00:00	7.86	0.00	91.92	-0.09	91.92
C17MW-07	10/20/1998	100.16	00:00	7.88	0.10	92.28	0.28	92.37
16MW-04	11/6/1998	101.23	00:00	9.66	0.16	91.57	0.19	91.71
16MW-13	11/6/1998	100.97	00:00	9.01	0.14	91.96	-0.13	92.08
16MW-14	11/6/1998	100.66	00:00	8.65	0.12	92.01	-0.08	92.11
16MW-15	11/6/1998	100.98	00:00	9.06	0.06	91.92	0.19	91.97
16MW-16	11/6/1998	98.82	00:00	7.25	0.03	91.57	-0.09	91.60
16MW-17	11/6/1998	99.79	00:00	8.04	0.07	91.75	-0.19	91.81
16MW-18	11/6/1998	100.69	00:00	8.34	0.00	92.35	-0.22	92.35
16MW-19	11/6/1998	100.54	00:00	8.17	0.01	92.37	-0.27	92.38
16MW-20	11/6/1998	100.82	00:00	8.79	0.00	92.03	-0.13	92.03
16MW-21	11/6/1998	99.78	00:00	NM	NA	NA	NA	NA
16MW-22	11/6/1998	102.22	00:00	8.79	0.00	93.43	-1.01	93.43
16MW-04	12/3/1998	101.23	00:00	9.93	0.24	91.30	-0.27	91.50
16MW-13	12/3/1998	100.97	00:00	8.95	0.11	92.02	0.06	92.11
16MW-14	12/3/1998	100.66	00:00	8.71	0.13	91.95	-0.06	92.06
16MW-15	12/3/1998	100.98	00:00	9.27	0.12	91.71	-0.21	91.81
16MW-16	12/3/1998	98.82	00:00	7.24	0.04	91.58	0.01	91.61
16MW-17	12/3/1998	99.79	00:00	7.99	0.05	91.80	0.05	91.84
16MW-18	12/3/1998	100.69	00:00	8.20	0.00	92.49	0.14	92.49
16MW-19	12/3/1998	100.54	00:00	7.95	0.00	92.59	0.22	92.59
16MW-20	12/3/1998	100.82	00:00	9.03	0.06	91.79	-0.24	91.84
16MW-21	12/3/1998	99.78	00:00	8.00	0.00	91.78	-8.00	91.78
C17MW-07	12/3/1998	100.16	00:00	7.96	0.08	92.20	-0.08	92.27
16MW-04	12/30/1998	101.23	00:00	9.40	0.08	91.83	0.53	91.90
16MW-13	12/30/1998	100.97	00:00	9.29	0.20	91.68	-0.34	91.85
16MW-14	12/30/1998	100.66	00:00	9.33	0.14	91.33	-0.62	91.45
16MW-15	12/30/1998	100.98	00:00	8.67	0.11	92.31	0.60	92.40
16MW-16	12/30/1998	98.82	00:00	7.27	0.06	91.55	-0.03	91.60
16MW-17	12/30/1998	99.79	00:00	8.36	0.18	91.43	-0.37	91.58
16MW-18	12/30/1998	100.69	00:00	8.48	0.01	92.21	-0.28	92.21
16MW-19	12/30/1998	100.54	00:00	8.09	0.02	92.45	-0.14	92.46

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
C17MW-07	12/30/1998	100.16	00:00	8.03	0.12	92.13	-0.07	92.23
16MW-04	1/26/1999	101.23	00:00	8.26	0.07	92.97	1.14	93.03
16MW-13	1/26/1999	100.97	00:00	8.10	0.18	92.87	1.19	93.03
16MW-14	1/26/1999	100.66	00:00	7.62	0.15	93.04	1.71	93.17
16MW-15	1/26/1999	100.98	00:00	8.12	0.13	92.86	0.55	92.97
16MW-16	1/26/1999	98.82	00:00	5.89	0.01	92.93	1.38	92.94
16MW-17	1/26/1999	99.79	00:00	6.73	0.08	93.06	1.63	93.12
16MW-18	1/26/1999	100.69	00:00	4.36	0.00	96.33	4.12	96.33
16MW-19	1/26/1999	100.54	00:00	5.81	0.04	94.73	2.28	94.76
16MW-20	1/26/1999	100.82	00:00	7.70	0.03	93.12	1.33	93.14
16MW-21	1/26/1999	99.78	00:00	5.05	0.00	94.73	2.95	94.73
16MW-22	1/26/1999	102.22	00:00	1.81	0.00	100.41	6.98	100.41
16MW-23	1/26/1999	102.58	00:00	8.21	0.00	94.37	0.82	94.37
C17MW-07	1/26/1999	100.16	00:00	6.65	0.10	93.51	1.38	93.59
16MW-04	2/10/1999	101.23	00:00	8.92	0.19	92.31	-0.66	92.47
16MW-13	2/10/1999	100.97	00:00	9.00	0.38	91.97	-0.90	92.29
16MW-14	2/10/1999	100.66	00:00	8.38	0.30	92.28	-0.76	92.53
16MW-15	2/10/1999	100.98	00:00	8.81	0.25	92.17	-0.69	92.38
16MW-16	2/10/1999	98.82	00:00	6.45	0.08	92.37	-0.56	92.44
16MW-17	2/10/1999	99.79	00:00	7.74	0.25	92.05	-1.01	92.26
16MW-18	2/10/1999	100.69	00:00	6.40	0.00	94.29	-2.04	94.29
16MW-20	2/10/1999	100.82	00:00	8.05	0.05	92.77	-0.35	92.81
C17MW-07	2/10/1999	100.16	00:00	7.20	0.17	92.96	-0.55	93.11
16MW-04	3/3/1999	101.23	00:00	8.49	0.06	92.74	0.43	92.79
16MW-13	3/3/1999	100.97	00:00	8.13	0.11	92.84	0.87	92.93
16MW-14	3/3/1999	100.66	00:00	8.41	0.13	92.25	-0.03	92.36
16MW-15	3/3/1999	100.98	00:00	7.77	0.11	93.21	1.04	93.30
16MW-04	3/9/1999	101.23	00:00	8.28	0.02	92.95	0.21	92.97
16MW-13	3/9/1999	100.97	00:00	8.17	0.14	92.80	-0.04	92.92
16MW-14	3/9/1999	100.66	00:00	7.45	0.04	93.21	0.96	93.24
16MW-15	3/9/1999	100.98	00:00	9.50	0.40	91.48	-1.73	91.82
16MW-16	3/9/1999	98.82	00:00	6.21	0.02	92.61	0.24	92.62
16MW-17	3/9/1999	99.79	00:00	7.03	0.06	92.76	0.71	92.81
16MW-18	3/9/1999	100.69	00:00	6.30	0.00	94.39	0.10	94.39
16MW-19	3/9/1999	100.54	00:00	6.52	0.03	94.02	-0.71	94.05
16MW-20	3/9/1999	100.82	00:00	7.95	0.03	92.87	0.10	92.89

1- Change in Water Elevation since last reported measurement

2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-21	3/9/1999	99.78	00:00	6.57	0.00	93.21	-1.52	93.21
16MW-22	3/9/1999	102.22	00:00	3.45	0.00	98.77	-1.64	98.77
16MW-23	3/9/1999	102.58	00:00	8.53	0.00	94.05	-0.32	94.05
C17MW-07	3/9/1999	100.16	00:00	6.95	0.11	93.21	0.25	93.31
16MW-04	3/19/1999	101.23	00:00	8.40	0.12	92.83	-0.12	92.93
16MW-13	3/19/1999	100.97	00:00	7.97	0.16	93.00	0.20	93.13
16MW-14	3/19/1999	100.66	00:00	7.40	0.09	93.26	0.05	93.33
16MW-15	3/19/1999	100.98	00:00	8.21	0.15	92.77	1.29	92.90
16MW-16	3/19/1999	98.82	00:00	5.85	0.01	92.97	0.36	92.97
16MW-17	3/19/1999	99.79	00:00	6.68	0.06	93.11	0.35	93.16
16MW-18	3/19/1999	100.69	00:00	4.80	0.00	95.89	1.50	95.89
16MW-19	3/19/1999	100.54	00:00	6.20	0.05	94.34	0.32	94.38
16MW-20	3/19/1999	100.82	00:00	7.66	0.01	93.16	0.29	93.17
16MW-21	3/19/1999	99.78	00:00	5.56	0.00	94.22	1.01	94.22
16MW-22	3/19/1999	102.22	00:00	8.38	0.00	93.84	-4.93	93.84
16MW-23	3/19/1999	102.58	00:00	8.31	0.00	94.27	0.22	94.27
C17MW-07	3/19/1999	100.16	00:00	6.46	0.08	93.70	0.49	93.77
16MW-04	4/20/1999	101.23	00:00	8.45	0.14	92.78	-0.05	92.90
16MW-13	4/20/1999	100.97	00:00	8.00	0.15	92.97	-0.03	93.09
16MW-14	4/20/1999	100.66	00:00	7.59	0.11	93.07	-0.19	93.17
16MW-15	4/20/1999	100.98	00:00	8.30	0.14	92.68	-0.09	92.80
16MW-16	4/20/1999	98.82	00:00	6.05	0.01	92.77	-0.20	92.78
16MW-17	4/20/1999	99.79	00:00	6.90	0.06	92.89	-0.22	92.94
16MW-19	4/20/1999	100.54	00:00	6.60	0.01	93.94	-0.40	93.95
16MW-20	4/20/1999	100.82	00:00	7.70	0.01	93.12	-0.04	93.12
16MW-21	4/20/1999	99.78	00:00	6.40	0.00	93.38	-0.84	93.38
16MW-22	4/20/1999	102.22	00:00	4.15	0.00	98.07	4.23	98.07
16MW-23	4/20/1999	102.58	00:00	8.32	0.00	94.26	-0.01	94.26
C17MW-07	4/20/1999	100.16	00:00	6.92	0.11	93.24	-0.46	93.33
16MW-04	5/7/1999	101.23	00:00	8.52	0.08	92.71	-0.07	92.78
16MW-13	5/7/1999	100.97	00:00	8.45	0.14	92.52	-0.45	92.64
16MW-14	5/7/1999	100.66	00:00	7.77	0.01	92.89	-0.18	92.90
16MW-16	5/7/1999	98.82	00:00	6.26	0.01	92.56	-0.21	92.57
16MW-17	5/7/1999	99.79	00:00	6.96	0.02	92.83	-0.06	92.85
16MW-18	5/7/1999	100.69	00:00	7.14	0.00	93.55	-2.34	93.55
16MW-19	5/7/1999	100.54	00:00	7.11	0.03	93.43	-0.51	93.45

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

Water Level & Product Thickness Data

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-20	5/7/1999	100.82	00:00	7.91	0.02	92.91	-0.21	92.92
16MW-21	5/7/1999	99.78	11:00	7.05	0.00	92.73	-0.65	92.73
16MW-22	5/7/1999	102.22	00:00	7.05	0.00	95.17	-2.90	95.17
C17MW-07	5/7/1999	100.16	00:00	7.00	0.08	93.16	-0.08	93.22
16MW-14	6/1/1999	100.66	00:00	8.48	0.22	92.18	-0.71	92.36
16MW-15	6/1/1999	100.98	00:00	8.91	0.17	92.07	-0.61	92.22
16MW-16	6/1/1999	98.82	00:00	6.95	0.10	91.87	-0.69	91.95
16MW-17	6/1/1999	99.79	00:00	7.53	0.08	92.26	-0.57	92.33
16MW-18	6/1/1999	100.69	00:00	7.40	0.00	93.29	-0.26	93.29
16MW-19	6/1/1999	100.54	00:00	7.25	0.03	93.29	-0.14	93.31
16MW-20	6/1/1999	100.82	00:00	8.36	0.04	92.46	-0.45	92.49
16MW-21	6/1/1999	99.78	00:00	7.45	0.00	92.33	-0.40	92.33
16MW-22	6/1/1999	102.22	00:00	5.81	0.00	96.41	1.24	96.41
16MW-23	6/1/1999	102.58	00:00	8.80	0.00	93.78	-0.48	93.78
C17MW-07	6/1/1999	100.16	00:00	7.61	0.14	92.55	-0.61	92.67
16MW-04	6/9/1999	101.23	00:01	9.77	0.27	91.46	-1.25	91.69
16MW-13	6/9/1999	100.97	00:01	9.80	0.44	91.17	-1.35	91.55
16MW-14	6/9/1999	100.66	00:01	9.04	0.30	91.62	-0.56	91.88
16MW-15	6/9/1999	100.98	00:01	9.37	0.23	91.61	-0.46	91.80
16MW-16	6/9/1999	98.82	00:01	7.50	0.16	91.32	-0.55	91.46
16MW-17	6/9/1999	99.79	00:01	7.99	0.13	91.80	-0.46	91.91
16MW-18	6/9/1999	100.69	00:01	7.77	0.00	92.92	-0.37	92.92
16MW-19	6/9/1999	100.54	00:01	7.71	0.03	92.83	-0.46	92.86
16MW-20	6/9/1999	100.82	00:01	8.80	0.08	92.02	-0.44	92.09
16MW-21	6/9/1999	99.78	00:01	7.15	0.00	92.63	0.30	92.63
16MW-22	6/9/1999	102.22	00:01	6.11	0.00	96.11	-0.30	96.11
16MW-23	6/9/1999	102.58	00:01	9.01	0.00	93.57	-0.21	93.57
C17MW-07	6/9/1999	100.16	00:01	8.39	0.28	91.77	-0.78	92.00
16MW-13	6/10/1999	100.97	00:00	9.20	0.10	91.77	0.60	91.85
16MW-14	6/10/1999	100.66	00:00	8.50	0.13	92.16	0.54	92.27
16MW-15	6/10/1999	100.98	00:00	9.01	0.11	91.97	0.36	92.06
16MW-16	6/10/1999	98.82	00:00	7.05	0.03	91.77	0.45	91.79
16MW-17	6/10/1999	99.79	00:00	7.74	0.05	92.05	0.25	92.09
16MW-18	6/10/1999	100.69	00:00	7.82	0.00	92.87	-0.05	92.87
16MW-19	6/10/1999	100.54	00:00	7.68	0.00	92.86	0.03	92.86
16MW-20	6/10/1999	100.82	00:00	7.72	0.05	93.10	1.08	93.14

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
C17MW-07	6/10/1999	100.16	00:00	7.93	0.13	92.23	0.46	92.34
16MW-04	6/14/1999	101.23	16:20	9.52	0.19	91.71	0.25	91.87
16MW-13	6/14/1999	100.97	13:05	9.52	0.35	91.45	-0.32	91.75
16MW-14	6/14/1999	100.66	13:10	8.80	0.22	91.86	-0.30	92.04
16MW-15	6/14/1999	100.98	13:15	9.27	0.18	91.71	-0.26	91.86
16MW-16	6/14/1999	98.82	13:40	7.20	0.06	91.62	-0.15	91.67
16MW-17	6/14/1999	99.79	13:30	7.91	0.10	91.88	-0.17	91.97
16MW-18	6/14/1999	100.69	13:25	8.90	0.00	91.79	-1.08	91.79
16MW-19	6/14/1999	100.54	13:20	7.80	0.01	92.74	-0.12	92.75
16MW-20	6/14/1999	100.82	16:40	8.85	0.09	91.97	-1.13	92.05
16MW-21	6/14/1999	99.78	00:00	7.77	0.00	92.01	-0.62	92.01
16MW-22	6/14/1999	102.22	13:45	7.57	0.05	94.65	-1.46	94.69
C17MW-07	6/14/1999	100.16	13:35	8.25	0.22	91.91	-0.32	92.10
16MW-04	6/22/1999	101.23	08:55	9.55	0.19	91.68	-0.03	91.84
16MW-13	6/22/1999	100.97	09:45	9.76	0.41	91.21	-0.24	91.56
16MW-14	6/22/1999	100.66	09:00	8.95	0.25	91.71	-0.15	91.93
16MW-15	6/22/1999	100.98	09:00	9.35	0.21	91.63	-0.08	91.81
16MW-16	6/22/1999	98.82	09:30	7.26	0.10	91.56	-0.06	91.64
16MW-17	6/22/1999	99.79	09:20	8.01	0.11	91.78	-0.10	91.88
16MW-18	6/22/1999	100.69	09:15	8.12	0.00	92.57	0.78	92.57
16MW-19	6/22/1999	100.54	09:10	8.01	0.03	92.53	-0.21	92.55
16MW-20	6/22/1999	100.82	09:35	8.59	0.09	92.23	0.26	92.30
16MW-21	6/22/1999	99.78	09:40	7.00	0.00	92.78	0.77	92.78
16MW-22	6/22/1999	102.22	10:15	7.11	0.00	95.11	0.46	95.11
16MW-23	6/22/1999	102.58	10:00	9.75	0.00	92.83	-0.74	92.83
C17MW-07	6/22/1999	100.16	09:25	8.55	0.32	91.61	-0.30	91.88
16MW-04	7/29/1999	101.23	00:00	10.43	0.21	90.80	-0.88	90.98
16MW-13	7/29/1999	100.97	00:00	10.83	0.49	90.14	-1.07	90.56
16MW-14	7/29/1999	100.66	00:00	10.25	0.38	90.41	-1.30	90.73
16MW-15	7/29/1999	100.98	00:00	10.61	0.33	90.37	-1.26	90.65
16MW-16	7/29/1999	98.82	00:00	8.62	0.23	90.20	-1.36	90.39
16MW-17	7/29/1999	99.79	00:00	9.40	0.27	90.39	-1.39	90.62
16MW-18	7/29/1999	100.69	00:00	9.10	0.00	91.59	-0.98	91.59
16MW-19	7/29/1999	100.54	00:00	9.01	0.05	91.53	-1.00	91.57
16MW-20	7/29/1999	100.82	00:00	9.40	0.00	91.42	-0.81	91.42
16MW-21	7/29/1999	99.78	00:00	8.75	0.00	91.03	-1.75	91.03

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
C17MW-07	7/29/1999	100.16	00:00	10.40	0.60	89.76	-1.85	90.27
16MW-04	8/3/1999	101.23	00:00	10.51	0.20	90.72	-0.08	90.89
16MW-13	8/3/1999	100.97	00:00	10.90	0.48	90.07	-0.07	90.48
16MW-14	8/3/1999	100.66	00:00	10.40	0.40	90.26	-0.15	90.60
16MW-16	8/3/1999	98.82	00:00	8.80	0.25	90.02	-0.18	90.23
16MW-17	8/3/1999	99.79	00:00	9.55	0.28	90.24	-0.15	90.48
16MW-18	8/3/1999	100.69	00:00	9.25	0.00	91.44	-0.15	91.44
16MW-19	8/3/1999	100.54	00:00	9.14	0.06	91.40	-0.13	91.45
16MW-20	8/3/1999	100.82	00:00	10.25	0.19	90.57	-0.85	90.73
16MW-21	8/3/1999	99.78	00:00	8.89	0.00	90.89	-0.14	90.89
16MW-23	8/3/1999	102.58	00:00	10.00	0.00	92.58	-0.25	92.58
C17MW-07	8/3/1999	100.16	00:00	10.62	0.63	89.54	-0.22	90.08
16MW-04	8/13/1999	101.23	00:00	10.62	0.20	90.61	-0.11	90.78
16MW-13	8/13/1999	100.97	00:00	11.03	0.48	89.94	-0.13	90.35
16MW-14	8/13/1999	100.66	00:00	10.46	0.39	90.20	-0.06	90.53
16MW-15	8/13/1999	100.98	00:00	10.98	0.37	90.00	-0.37	90.31
16MW-16	8/13/1999	98.82	00:00	8.97	0.27	89.85	-0.17	90.08
16MW-17	8/13/1999	99.79	00:00	9.70	0.30	90.09	-0.15	90.34
16MW-18	8/13/1999	100.69	00:00	9.38	0.00	91.31	-0.13	91.31
16MW-19	8/13/1999	100.54	00:00	9.05	0.00	91.49	0.09	91.49
C17MW-07	8/13/1999	100.16	00:00	10.96	0.70	89.20	-0.34	89.80
16MW-04	9/3/1999	101.23	00:00	9.80	0.04	91.43	0.82	91.46
16MW-13	9/3/1999	100.97	00:00	9.15	0.03	91.82	1.88	91.85
16MW-14	9/3/1999	100.66	00:00	8.85	0.03	91.81	1.61	91.84
16MW-15	9/3/1999	100.98	00:00	9.44	0.04	91.54	1.54	91.57
16MW-16	9/3/1999	98.82	00:00	8.35	0.20	90.47	0.62	90.64
16MW-17	9/3/1999	99.79	00:00	8.49	0.04	91.30	1.21	91.34
16MW-18	9/3/1999	100.69	00:00	6.50	0.00	94.19	2.88	94.19
16MW-19	9/3/1999	100.54	00:00	9.07	0.14	91.47	-0.02	91.59
16MW-20	9/3/1999	100.82	00:00	9.45	0.02	91.37	0.80	91.38
C17MW-07	9/3/1999	100.16	00:00	8.37	0.04	91.79	2.59	91.83
16MW-04	9/15/1999	101.23	13:35	10.34	0.16	90.89	-0.54	91.03
16MW-13	9/15/1999	100.97	13:30	9.41	0.05	91.56	-0.26	91.60
16MW-14	9/15/1999	100.66	13:40	9.29	0.09	91.37	-0.44	91.45
16MW-15	9/15/1999	100.98	13:45	9.94	0.12	91.04	-0.50	91.14
16MW-16	9/15/1999	98.82	14:20	8.10	0.09	90.72	0.25	90.79

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

Water Level & Product Thickness Data

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-17	9/15/1999	99.79	14:05	8.86	0.11	90.93	-0.37	91.03
16MW-18	9/15/1999	100.69	14:00	8.99	0.00	91.70	-2.49	91.70
16MW-19	9/15/1999	100.54	13:55	8.99	0.02	91.55	0.08	91.57
16MW-20	9/15/1999	100.82	14:30	9.72	0.07	91.10	-0.27	91.16
16MW-21	9/15/1999	99.78	14:35	8.70	0.00	91.08	0.19	91.08
16MW-23	9/15/1999	102.58	15:00	10.11	0.00	92.47	-0.11	92.47
C17MW-07	9/15/1999	100.16	14:15	9.37	0.29	90.79	-1.00	90.82
16MW-04	10/26/1999	101.23	00:00	10.30	0.36	90.93	0.04	91.23
16MW-13	10/26/1999	100.97	00:00	10.24	0.50	90.73	-0.83	91.15
16MW-14	10/26/1999	100.66	00:00	10.20	0.57	90.46	-0.91	90.95
16MW-15	10/26/1999	100.98	00:00	10.65	0.55	90.33	-0.71	90.79
16MW-16	10/26/1999	98.82	00:00	8.00	0.30	90.82	0.10	91.08
16MW-17	10/26/1999	99.79	00:00	9.81	0.63	89.98	-0.95	90.51
16MW-18	10/26/1999	100.69	00:00	7.15	0.01	93.54	1.84	93.55
16MW-19	10/26/1999	100.54	00:00	9.35	0.42	91.19	-0.36	91.54
C17MW-07	10/26/1999	100.16	00:00	11.04	1.02	89.12	-1.67	89.99
16MW-04	11/2/1999	101.23	00:00	10.60	0.39	90.63	-0.30	90.96
16MW-13	11/2/1999	100.97	00:00	10.47	0.52	90.50	-0.23	90.94
16MW-14	11/2/1999	100.66	00:00	10.26	0.53	90.40	-0.06	90.85
16MW-15	11/2/1999	100.98	00:00	10.93	0.57	90.05	-0.28	90.54
16MW-16	11/2/1999	98.82	00:00	8.22	0.31	90.60	-0.22	90.86
16MW-17	11/2/1999	99.79	00:00	9.99	0.64	89.80	-0.18	90.34
16MW-19	11/2/1999	100.54	00:00	9.99	0.47	90.55	-0.64	90.95
16MW-20	11/2/1999	100.82	00:00	10.08	0.32	90.74	-0.36	91.01
C17MW-07	11/2/1999	100.16	00:00	10.99	0.93	89.17	0.05	89.96
16MW-04	11/12/1999	101.23	00:00	10.05	0.21	91.18	0.55	91.36
16MW-13	11/12/1999	100.97	00:00	10.07	0.37	90.90	0.40	91.21
16MW-14	11/12/1999	100.66	00:00	9.60	0.15	91.06	0.66	91.19
16MW-15	11/12/1999	100.98	00:00	9.70	0.34	91.28	1.23	91.57
16MW-16	11/12/1999	98.82	00:00	7.30	0.03	91.52	0.92	91.54
16MW-17	11/12/1999	99.79	00:00	8.31	0.10	91.48	1.68	91.57
16MW-18	11/12/1999	100.69	00:00	8.39	0.02	92.30	-1.24	92.32
16MW-19	11/12/1999	100.54	00:00	8.45	0.01	92.09	1.54	92.10
16MW-20	11/12/1999	100.82	00:00	9.17	0.03	91.65	0.91	91.68
16MW-04	11/18/1999	101.23	00:00	10.39	0.27	90.84	-0.34	91.07
16MW-13	11/18/1999	100.97	00:00	10.36	0.42	90.61	-0.29	90.96

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-14	11/18/1999	100.66	00:00	9.82	0.18	90.84	-0.22	90.99
16MW-15	11/18/1999	100.98	00:00	9.81	0.35	91.17	-0.11	91.47
16MW-16	11/18/1999	98.82	00:00	7.57	0.04	91.25	-0.27	91.29
16MW-17	11/18/1999	99.79	00:00	8.55	0.13	91.24	-0.24	91.35
16MW-18	11/18/1999	100.69	00:00	8.60	0.01	92.09	-0.21	92.10
16MW-19	11/18/1999	100.54	00:00	8.59	0.00	91.95	-0.14	91.95
16MW-20	11/18/1999	100.82	00:00	9.40	0.00	91.42	-0.23	91.42
16MW-21	11/18/1999	99.78	00:00	8.33	0.00	91.45	0.37	91.45
C17MW-07	11/18/1999	100.16	00:00	8.56	0.17	91.60	2.43	91.74
16MW-04	12/1/1999	101.23	00:00	9.60	0.26	91.63	0.79	91.85
16MW-13	12/1/1999	100.97	00:00	10.26	0.43	90.71	0.10	91.07
16MW-14	12/1/1999	100.66	00:00	9.70	0.35	90.96	0.12	91.26
16MW-15	12/1/1999	100.98	00:00	9.60	0.16	91.38	0.21	91.52
16MW-16	12/1/1999	98.82	00:00	7.51	0.08	91.31	0.06	91.38
16MW-17	12/1/1999	99.79	00:00	8.87	0.13	90.92	-0.32	91.03
16MW-18	12/1/1999	100.69	00:00	8.41	0.02	92.28	0.19	92.29
16MW-19	12/1/1999	100.54	00:00	8.35	0.01	92.19	0.24	92.20
16MW-20	12/1/1999	100.82	00:00	9.31	0.08	91.51	0.09	91.58
C17MW-07	12/1/1999	100.16	00:00	8.45	0.19	91.71	0.11	91.87
16MW-04	12/31/1999	101.23	00:00	10.03	0.29	91.20	-0.43	91.45
16MW-13	12/31/1999	100.97	00:00	10.12	0.47	90.85	0.14	91.25
16MW-14	12/31/1999	100.66	00:00	9.50	0.38	91.16	0.20	91.48
16MW-15	12/31/1999	100.98	00:00	9.48	0.21	91.50	0.12	91.68
16MW-16	12/31/1999	98.82	00:00	7.44	0.04	91.38	0.07	91.41
16MW-17	12/31/1999	99.79	00:00	8.21	0.16	91.58	0.66	91.72
16MW-18	12/31/1999	100.69	00:00	7.50	0.28	93.19	0.91	93.42
16MW-19	12/31/1999	100.54	00:00	8.07	0.04	92.47	0.28	92.50
16MW-20	12/31/1999	100.82	00:00	8.84	0.03	91.98	0.47	92.01
C17MW-07	12/31/1999	100.16	00:00	8.30	0.22	91.86	0.15	92.05
16MW-04	1/26/2000	101.23	00:00	10.04	0.22	91.19	-0.01	91.38
16MW-13	1/26/2000	100.97	00:00	10.06	0.38	90.91	0.06	91.24
16MW-14	1/26/2000	100.66	00:00	9.44	0.29	91.22	0.06	91.46
16MW-15	1/26/2000	100.98	00:00	9.50	0.14	91.48	-0.02	91.60
16MW-16	1/26/2000	98.82	00:00	7.37	0.04	91.45	0.07	91.49
16MW-17	1/26/2000	99.79	00:00	8.21	0.09	91.58	0.00	91.66
16MW-18	1/26/2000	100.69	00:00	8.39	0.02	92.30	-0.89	92.32

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-19	1/26/2000	100.54	00:00	8.36	0.01	92.18	-0.29	92.19
16MW-20	1/26/2000	100.82	00:00	9.28	0.09	91.54	-0.44	91.62
C17MW-07	1/26/2000	100.16	00:00	8.20	0.12	91.96	0.10	92.06
16MW-04	2/18/2000	101.23	00:00	9.44	0.15	91.79	0.60	91.92
16MW-13	2/18/2000	100.97	00:00	8.94	0.16	92.03	1.12	92.17
16MW-14	2/18/2000	100.66	00:00	8.93	0.24	91.73	0.51	91.94
16MW-15	2/18/2000	100.98	00:00	8.91	0.07	92.07	0.59	92.13
16MW-16	2/18/2000	98.82	00:00	6.85	0.01	91.97	0.52	91.98
16MW-17	2/18/2000	99.79	00:00	7.57	0.02	92.22	0.64	92.24
16MW-18	2/18/2000	100.69	00:00	6.17	0.03	94.52	2.22	94.55
16MW-19	2/18/2000	100.54	00:00	7.51	0.01	93.03	0.85	93.04
16MW-20	2/18/2000	100.82	00:00	8.82	0.06	92.00	0.46	92.05
16MW-21	2/18/2000	99.78	00:00	7.51	0.00	92.27	0.82	92.27
C17MW-07	2/18/2000	100.16	00:00	7.47	0.03	92.69	0.73	92.72
16MW-04	4/17/2000	101.23	00:00	9.10	0.13	92.13	0.34	92.24
16MW-13	4/17/2000	100.97	00:00	8.87	0.21	92.10	0.07	92.28
16MW-14	4/17/2000	100.66	00:00	8.42	0.17	92.24	0.51	92.38
16MW-15	4/17/2000	100.98	00:00	8.83	0.12	92.15	0.08	92.25
16MW-16	4/17/2000	98.82	00:00	6.59	0.02	92.23	0.26	92.25
16MW-17	4/17/2000	99.79	00:00	7.46	0.05	92.33	0.11	92.38
16MW-18	4/17/2000	100.69	00:00	6.32	0.05	94.37	-0.15	94.41
16MW-19	4/17/2000	100.54	00:00	7.52	0.00	93.02	-0.01	93.02
16MW-20	4/17/2000	100.82	00:00	9.21	0.27	91.61	-0.39	91.84
16MW-21	4/17/2000	99.78	00:00	7.35	0.00	92.43	0.16	92.43
16MW-23	4/17/2000	102.58	00:00	NM	NA	NA	NA	NA
C17MW-07	4/17/2000	100.16	00:00	7.38	0.08	92.78	0.09	92.85
16MW-04	5/4/2000	101.23	00:00	8.42	0.16	92.81	0.68	92.95
16MW-13	5/4/2000	100.97	00:00	7.94	0.10	93.03	0.93	93.12
16MW-14	5/4/2000	100.66	00:00	NM	NA	NA	NA	NA
16MW-15	5/4/2000	100.98	00:00	8.25	0.07	92.73	0.58	92.79
16MW-17	5/4/2000	99.79	00:00	7.14	0.03	92.65	0.32	92.67
16MW-18	5/4/2000	100.69	00:00	6.81	0.00	93.88	-0.49	93.88
16MW-19	5/4/2000	100.54	00:00	7.22	0.06	93.32	0.30	93.37
16MW-20	5/4/2000	100.82	00:00	8.05	0.22	92.77	1.16	92.96
16MW-21	5/4/2000	99.78	00:00	7.20	0.00	92.58	0.15	92.58
16MW-22	5/4/2000	102.22	00:00	8.86	0.00	93.36	-1.75	93.36

1- Change in Water Elevation since last reported measurement

2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-23	5/4/2000	102.58	00:00	D	NA	NA	NA	NA
C17MW-07	5/4/2000	100.16	00:00	7.92	0.06	92.24	-0.54	92.29
16MW-04	8/9/2000	101.23	00:00	10.00	0.42	91.23	-1.58	91.59
16MW-13	8/9/2000	100.97	00:00	8.68	0.25	92.29	-0.74	92.50
16MW-14	8/9/2000	100.66	00:00	8.40	0.22	92.26	-8.40	92.45
16MW-15	8/9/2000	100.98	00:00	9.17	0.27	91.81	-0.92	92.04
16MW-16	8/9/2000	98.82	00:00	6.46	0.17	92.36	0.13	92.51
16MW-17	8/9/2000	99.79	00:00	8.40	0.42	91.39	-1.26	91.75
16MW-18	8/9/2000	100.69	00:00	5.26	0.01	95.43	1.55	95.44
16MW-19	8/9/2000	100.54	00:00	7.30	0.22	93.24	-0.08	93.42
16MW-20	8/9/2000	100.82	00:00	8.32	0.02	92.50	-0.27	92.52
16MW-21	8/9/2000	99.78	00:00	6.20	0.00	93.58	1.00	93.58
C17MW-07	8/9/2000	100.16	00:00	7.07	0.06	93.09	0.85	93.14
16MW-04	8/24/2000	101.23	00:00	9.91	0.26	91.32	0.09	91.54
16MW-13	8/24/2000	100.97	00:00	8.71	0.08	92.26	-0.03	92.33
16MW-14	8/24/2000	100.66	00:00	5.56	0.01	95.10	2.84	95.11
16MW-15	8/24/2000	100.98	13:50	9.05	0.09	91.93	0.12	92.00
16MW-16	8/24/2000	98.82	13:50	O	NA	NA	NA	NA
16MW-17	8/24/2000	99.79	00:00	7.85	0.06	91.94	0.55	91.99
16MW-18	8/24/2000	100.69	14:00	7.31	0.03	93.38	-2.05	93.40
16MW-19	8/24/2000	100.54	13:55	8.00	0.06	92.54	-0.70	92.59
16MW-20	8/24/2000	100.82	14:15	7.70	0.00	93.12	0.62	93.12
16MW-21	8/24/2000	99.78	14:20	7.88	0.00	91.90	-1.68	91.90
C17MW-07	8/24/2000	100.16	00:00	7.50	0.02	92.66	-0.43	92.68
16MW-13	10/26/2000	100.97	00:00	9.03	0.07	91.94	-0.32	92.00
16MW-14	10/26/2000	100.66	00:00	8.83	0.07	91.83	-3.27	91.89
16MW-15	10/26/2000	100.98	00:00	9.35	0.08	91.63	-0.30	91.69
16MW-16	10/26/2000	98.82	00:00	7.40	0.13	91.42	-7.40	91.53
16MW-17	10/26/2000	99.79	00:00	8.09	0.02	91.70	-0.24	91.72
16MW-18	10/26/2000	100.69	00:00	8.35	0.01	92.34	-1.04	92.35
16MW-19	10/26/2000	100.54	00:00	8.77	0.09	91.77	-0.77	91.84
16MW-20	10/26/2000	100.82	00:00	9.21	0.04	91.61	-1.51	91.64
16MW-21	10/26/2000	99.78	00:00	8.30	0.00	91.48	-0.42	91.48
C17MW-07	10/26/2000	100.16	00:00	8.08	0.06	92.08	-0.58	92.13
16MW-04	11/28/2000	101.23	00:00	9.30	0.07	91.93	0.61	91.99
16MW-13	11/28/2000	100.97	00:00	9.80	0.10	91.17	-0.77	91.26

1- Change in Water Elevation since last reported measurement

2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-14	11/28/2000	100.66	00:00	9.35	0.19	91.31	-0.52	91.47
16MW-15	11/28/2000	100.98	00:00	8.90	0.10	92.08	0.45	92.17
16MW-16	11/28/2000	98.82	00:00	8.57	0.29	90.25	-1.17	90.49
16MW-17	11/28/2000	99.79	00:00	8.48	0.25	91.31	-0.39	91.53
16MW-18	11/28/2000	100.69	00:00	7.05	0.01	93.64	1.30	93.65
16MW-19	11/28/2000	100.54	00:00	8.32	0.06	92.22	0.45	92.27
C17MW-07	11/28/2000	100.16	00:00	8.00	0.16	92.16	0.08	92.30
16MW-04	1/16/2001	101.23	00:00	9.10	0.04	92.13	0.20	92.16
16MW-13	1/16/2001	100.97	00:00	9.03	0.17	91.94	0.77	92.09
16MW-14	1/16/2001	100.66	00:00	9.30	0.29	91.36	0.05	91.61
16MW-15	1/16/2001	100.98	00:00	9.00	0.09	91.98	-0.10	92.06
16MW-16	1/16/2001	98.82	00:00	6.99	0.03	91.83	1.58	91.85
16MW-17	1/16/2001	99.79	00:00	7.90	0.10	91.89	0.58	91.98
16MW-18	1/16/2001	100.69	00:00	7.72	0.01	92.97	-0.67	92.97
16MW-19	1/16/2001	100.54	00:00	8.60	0.18	91.94	-0.28	92.09
16MW-20	1/16/2001	100.82	00:00	9.15	0.16	91.67	0.06	91.81
16MW-21	1/16/2001	99.78	00:00	7.80	0.00	91.98	0.50	91.98
C17MW-07	1/16/2001	100.16	00:00	8.10	0.20	92.06	-0.10	92.23
16MW-04	2/27/2001	101.23	00:00	8.61	0.00	92.62	0.49	92.62
16MW-13	2/27/2001	100.97	00:00	8.05	0.04	92.92	0.98	92.95
16MW-14	2/27/2001	100.66	00:00	7.62	0.01	93.04	1.68	93.04
16MW-15	2/27/2001	100.98	00:00	8.17	0.00	92.81	0.83	92.81
16MW-16	2/27/2001	98.82	00:00	6.26	0.00	92.56	0.73	92.56
16MW-17	2/27/2001	99.79	00:00	7.05	0.00	92.74	0.85	92.74
16MW-18	2/27/2001	100.69	00:00	6.40	0.00	94.29	1.32	94.29
16MW-19	2/27/2001	100.54	00:00	7.37	0.00	93.17	1.23	93.17
16MW-20	2/27/2001	100.82	00:00	8.40	0.10	92.42	0.75	92.50
16MW-21	2/27/2001	99.78	00:00	7.27	0.00	92.51	0.53	92.51
C17MW-07	2/27/2001	100.16	00:00	6.42	0.01	93.74	1.68	93.74
16MW-04	3/27/2001	101.23	00:00	8.25	0.30	92.98	0.36	93.24
16MW-13	3/27/2001	100.97	00:00	8.09	0.26	92.88	-0.04	93.10
16MW-15	3/27/2001	100.98	00:00	7.65	0.06	93.33	0.52	93.38
16MW-16	3/27/2001	98.82	00:00	5.90	0.00	92.92	0.36	92.92
16MW-17	3/27/2001	99.79	00:00	6.40	0.03	93.39	0.65	93.41
16MW-18	3/27/2001	100.69	00:00	5.20	0.00	95.49	1.20	95.49
16MW-19	3/27/2001	100.54	00:00	6.20	0.08	94.34	1.17	94.41

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

Water Level & Product Thickness Data

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-20	3/27/2001	100.82	00:00	7.80	0.13	93.02	0.60	93.13
16MW-21	3/27/2001	99.78	00:00	5.65	0.00	94.13	1.62	94.13
16MW-24	3/27/2001	102.06	00:00	8.15	0.00	93.91	NA	93.91
16MW-25	3/27/2001	100.92	00:00	8.01	0.00	92.91	NA	92.91
16MW-26	3/27/2001	101.67	00:00	8.52	0.01	93.15	NA	93.15
16MW-27	3/27/2001	100.80	00:00	10.22	0.58	90.58	NA	91.07
16MW-28	3/27/2001	100.62	00:00	7.46	0.00	93.16	NA	93.16
C17MW-07	3/27/2001	100.16	00:00	6.25	0.04	93.91	0.17	93.95
16MW-04	4/19/2001	101.23	00:00	9.17	0.44	92.06	-0.92	92.44
16MW-13	4/19/2001	100.97	00:00	9.61	0.75	91.36	-1.52	92.00
16MW-14	4/19/2001	100.66	00:00	7.05	0.04	93.61	0.57	93.64
16MW-15	4/19/2001	100.98	00:00	7.98	0.21	93.00	-0.33	93.18
16MW-17	4/19/2001	99.79	00:00	6.55	0.10	93.24	-0.15	93.33
16MW-18	4/19/2001	100.69	00:00	5.43	0.00	95.26	-0.23	95.26
16MW-19	4/19/2001	100.54	00:00	6.40	0.11	94.14	-0.20	94.23
16MW-20	4/19/2001	100.82	00:00	7.77	0.17	93.05	0.03	93.20
16MW-21	4/19/2001	99.78	00:00	5.70	0.00	94.08	-0.05	94.08
16MW-24	4/19/2001	102.06	00:00	7.83	0.00	94.23	0.32	94.23
16MW-25	4/19/2001	100.92	00:00	6.20	0.00	94.72	1.81	94.72
16MW-26	4/19/2001	101.67	00:00	5.82	0.00	95.85	2.70	95.85
16MW-27	4/19/2001	100.80	00:00	9.53	0.79	91.27	0.69	91.95
16MW-28	4/19/2001	100.62	00:00	7.85	0.01	92.77	-0.39	92.78
C17MW-07	4/19/2001	100.16	00:00	6.44	0.14	93.72	-0.19	93.84
16MW-04	5/11/2001	101.23	00:00	9.76	0.45	91.47	-0.59	91.86
16MW-13	5/11/2001	100.97	00:00	10.28	0.78	90.69	-0.67	91.36
16MW-14	5/11/2001	100.66	00:00	9.17	0.33	91.49	-2.12	91.77
16MW-15	5/11/2001	100.98	00:00	9.33	0.41	91.65	-1.35	92.00
16MW-16	5/11/2001	98.82	00:00	6.38	0.05	92.44	-0.48	92.48
16MW-17	5/11/2001	99.79	00:00	7.42	0.13	92.37	-0.87	75.90
16MW-18	5/11/2001	100.69	00:00	7.06	0.00	93.63	-1.63	93.63
16MW-19	5/11/2001	100.54	00:00	7.48	0.12	93.06	-1.08	93.16
16MW-20	5/11/2001	100.82	00:00	8.88	0.34	91.94	-1.11	92.23
16MW-21	5/11/2001	99.78	00:00	6.95	0.00	92.83	-1.25	92.83
16MW-24	5/11/2001	102.06	00:00	8.49	0.00	93.57	-0.66	93.57
16MW-26	5/11/2001	101.67	00:00	8.41	0.01	93.26	-2.59	93.26
16MW-27	5/11/2001	100.80	00:00	9.63	0.66	91.17	-0.10	91.73
16MW-28	5/11/2001	100.62	00:00	7.16	0.66	93.46	0.69	94.02

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

Water Level & Product Thickness Data

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV. (feet)	EQUIV. FRESH WATER HEAD (feet)
C17MW-07	5/11/2001	100.16	00:00	7.19	0.15	92.97	-0.75	93.10
16MW-04	6/6/2001	101.23	00:00	9.89	0.41	91.34	-0.13	91.69
16MW-13	6/6/2001	100.97	00:00	10.18	0.69	90.79	0.10	91.38
16MW-14	6/6/2001	100.66	00:00	9.84	0.52	90.82	-0.67	91.26
16MW-15	6/6/2001	100.98	00:00	10.06	0.55	90.92	-0.73	91.39
16MW-16	6/6/2001	98.82	00:00	6.54	0.04	92.28	-0.16	92.31
16MW-17	6/6/2001	99.79	00:00	8.00	0.25	91.79	-0.58	74.26
16MW-18	6/6/2001	100.69	00:00	7.68	0.00	93.01	-0.62	93.01
16MW-19	6/6/2001	100.54	00:00	7.57	0.10	92.97	-0.09	93.05
16MW-20	6/6/2001	100.82	00:00	9.85	0.52	90.97	-0.97	91.41
16MW-21	6/6/2001	99.78	00:00	7.19	0.00	92.59	-0.24	92.59
16MW-24	6/6/2001	102.06	00:00	8.78	0.00	93.28	-0.29	93.28
16MW-25	6/6/2001	100.92	00:00	7.37	0.00	93.55	-1.17	93.55
16MW-26	6/6/2001	101.67	00:00	7.45	0.00	94.22	0.96	94.22
16MW-27	6/6/2001	100.80	00:00	9.23	0.55	91.57	0.40	92.04
16MW-28	6/6/2001	100.62	00:00	7.28	0.00	93.34	-0.12	93.34
C17MW-07	6/6/2001	100.16	00:00	7.57	0.19	92.59	-0.38	92.75
16MW-04	8/14/2001	101.23	00:00	9.33	0.05	91.90	0.56	91.94
16MW-13	8/14/2001	100.97	00:00	9.67	0.33	91.30	0.51	91.58
16MW-14	8/14/2001	100.66	00:00	9.82	0.23	90.84	0.02	91.04
16MW-15	8/14/2001	100.98	00:00	9.19	0.10	91.79	0.87	91.88
16MW-16	8/14/2001	98.82	00:00	7.56	0.12	91.26	-1.02	91.36
16MW-17	8/14/2001	99.79	00:00	9.27	0.41	90.52	-1.27	90.87
16MW-18	8/14/2001	100.69	00:00	8.21	0.03	92.48	-0.53	92.50
16MW-19	8/14/2001	100.54	00:00	7.30	0.05	93.24	0.27	93.28
16MW-20	8/14/2001	100.82	00:00	10.59	0.53	90.23	-0.74	90.68
16MW-21	8/14/2001	99.78	00:00	8.00	0.00	91.78	-0.81	91.78
16MW-24	8/14/2001	102.06	00:00	9.48	0.00	92.58	-0.70	92.58
16MW-25	8/14/2001	100.92	00:00	8.48	0.02	92.44	-1.11	92.45
16MW-26	8/14/2001	101.67	00:00	9.22	0.00	92.45	-1.77	92.45
16MW-27	8/14/2001	100.80	00:00	9.22	0.25	91.58	0.01	91.79
16MW-28	8/14/2001	100.62	00:00	8.27	0.00	92.35	-0.99	92.35
C17MW-07	8/14/2001	100.16	00:00	8.96	0.37	91.20	-1.39	91.52
16MW-04	9/14/2001	101.23	00:00	10.08	0.14	91.15	-0.75	91.27
16MW-13	9/14/2001	100.97	00:00	9.48	0.15	91.49	0.19	91.62
16MW-14	9/14/2001	100.66	00:00	9.67	0.05	90.99	0.15	91.03

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-15	9/14/2001	100.98	00:00	9.80	0.15	91.18	-0.61	91.30
16MW-16	9/14/2001	98.82	00:00	8.22	0.17	90.60	-0.66	90.75
16MW-17	9/14/2001	99.79	00:00	8.70	0.11	91.09	0.57	91.18
16MW-18	9/14/2001	100.69	00:00	8.91	0.01	91.78	-0.70	91.79
16MW-19	9/14/2001	100.54	00:00	9.12	0.12	91.42	-1.82	91.52
16MW-20	9/14/2001	100.82	00:00	10.80	0.44	90.02	-0.21	90.40
16MW-21	9/14/2001	99.78	00:00	8.51	0.00	91.27	-0.51	91.27
16MW-24	9/14/2001	102.06	00:00	9.93	0.00	92.13	-0.45	92.13
16MW-25	9/14/2001	100.92	00:00	8.91	0.01	92.01	-0.43	92.02
16MW-26	9/14/2001	101.67	00:00	9.90	0.00	91.77	-0.68	91.77
16MW-27	9/14/2001	100.80	00:00	9.67	0.25	91.13	-0.45	91.34
16MW-28	9/14/2001	100.62	00:00	8.62	0.00	92.00	-0.35	92.00
C17MW-07	9/14/2001	100.16	00:00	8.76	0.18	91.40	0.20	91.55
16MW-04	10/11/2001	101.23	00:00	9.97	0.06	91.26	0.11	91.31
16MW-13	10/11/2001	100.97	00:00	9.41	0.09	91.56	0.07	91.63
16MW-14	10/11/2001	100.66	00:00	9.74	0.03	90.92	-0.07	90.95
16MW-15	10/11/2001	100.98	00:00	9.72	0.09	91.26	0.08	91.33
16MW-16	10/11/2001	98.82	00:00	7.35	0.17	91.47	0.87	91.62
16MW-17	10/11/2001	99.79	00:00	8.44	0.02	91.35	0.26	91.36
16MW-18	10/11/2001	100.69	00:00	8.48	0.00	92.21	0.43	92.21
16MW-19	10/11/2001	100.54	00:00	8.97	0.04	91.57	0.15	91.60
16MW-20	10/11/2001	100.82	00:00	9.62	0.07	91.20	1.18	91.26
16MW-21	10/11/2001	99.78	00:00	8.59	0.00	91.19	-0.08	91.19
16MW-24	10/11/2001	102.06	00:00	10.12	0.00	91.94	-0.19	91.94
16MW-25	10/11/2001	100.92	00:00	9.08	0.02	91.84	-0.17	91.85
16MW-26	10/11/2001	101.67	00:00	9.08	0.00	92.59	0.82	92.59
16MW-27	10/11/2001	100.80	00:00	9.48	0.15	91.32	0.19	91.45
16MW-28	10/11/2001	100.62	00:00	8.81	0.00	91.81	-0.19	91.81
C17MW-07	10/11/2001	100.16	00:00	8.36	0.04	91.80	0.40	91.83
16MW-04	11/13/2001	101.23	00:00	10.27	0.10	90.96	-0.30	91.05
16MW-13	11/13/2001	100.97	00:00	9.45	0.04	91.52	-0.04	91.56
16MW-14	11/13/2001	100.66	00:00	9.94	0.03	90.72	-0.20	90.75
16MW-15	11/13/2001	100.98	00:00	10.28	0.21	90.70	-0.56	90.88
16MW-16	11/13/2001	98.82	00:00	8.91	0.32	89.91	-1.56	90.18
16MW-17	11/13/2001	99.79	00:00	9.22	0.00	90.57	-0.78	90.57
16MW-19	11/13/2001	100.54	00:00	9.10	0.03	91.44	-0.13	91.47
16MW-20	11/13/2001	100.82	00:00	9.73	0.06	91.09	-0.11	91.14

1- Change in Water Elevation since last reported measurement

2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-21	11/13/2001	99.78	00:00	8.74	0.00	91.04	-0.15	91.04
16MW-24	11/13/2001	102.06	00:00	10.31	0.00	91.75	-0.19	91.75
16MW-25	11/13/2001	100.92	00:00	9.23	0.01	91.69	-0.15	91.70
16MW-26	11/13/2001	101.67	00:00	10.38	0.00	91.29	-1.30	91.29
16MW-27	11/13/2001	100.80	00:00	10.26	0.33	90.54	-0.78	90.82
16MW-28	11/13/2001	100.62	00:00	8.94	0.00	91.68	-0.13	91.68
C17MW-07	11/13/2001	100.16	00:00	8.91	0.15	91.25	-0.55	91.38
16MW-04	12/13/2001	101.23	00:00	9.76	0.03	91.47	0.51	91.49
16MW-13	12/13/2001	100.97	00:00	9.34	0.05	91.63	0.11	91.67
16MW-14	12/13/2001	100.66	00:00	9.88	0.05	90.78	0.06	90.82
16MW-15	12/13/2001	100.98	00:00	10.07	0.19	90.91	0.21	91.07
16MW-16	12/13/2001	98.82	00:00	7.57	0.04	91.25	1.34	91.28
16MW-17	12/13/2001	99.79	00:00	8.45	0.03	91.34	0.77	91.36
16MW-18	12/13/2001	100.69	00:00	8.51	0.04	92.18	-0.03	92.22
16MW-19	12/13/2001	100.54	00:00	8.97	0.04	91.57	0.13	91.60
16MW-20	12/13/2001	100.82	00:00	9.67	0.08	91.15	0.06	91.21
16MW-21	12/13/2001	99.78	00:00	8.58	0.00	91.20	0.16	91.20
16MW-24	12/13/2001	102.06	00:00	10.23	0.00	91.83	0.08	91.83
16MW-25	12/13/2001	100.92	00:00	9.18	0.01	91.74	0.05	91.75
16MW-26	12/13/2001	101.67	00:00	9.97	0.01	91.70	0.41	91.70
16MW-27	12/13/2001	100.80	00:00	9.79	0.22	91.01	0.47	91.19
16MW-28	12/13/2001	100.62	00:00	8.87	0.00	91.75	0.07	91.75
C17MW-07	12/13/2001	100.16	00:00	8.93	0.21	91.23	-0.02	91.41
16MW-13	1/8/2002	100.97	00:00	9.35	0.01	91.62	-0.01	91.63
16MW-14	1/8/2002	100.66	00:00	10.31	0.22	90.35	-0.43	90.53
16MW-15	1/8/2002	100.98	00:00	9.82	0.15	91.16	0.25	91.29
16MW-16	1/8/2002	98.82	00:00	7.77	0.10	91.05	-0.20	91.13
16MW-17	1/8/2002	99.79	00:00	8.51	0.08	91.28	-0.06	91.35
16MW-18	1/8/2002	100.69	00:00	7.95	0.06	92.74	0.56	92.79
16MW-19	1/8/2002	100.54	00:00	8.93	0.06	91.61	0.04	91.66
16MW-20	1/8/2002	100.82	00:00	9.81	0.16	91.01	-0.14	91.15
16MW-21	1/8/2002	99.78	00:00	8.41	0.00	91.37	0.17	91.37
16MW-24	1/8/2002	102.06	00:00	10.13	0.00	91.93	0.10	91.93
16MW-25	1/8/2002	100.92	00:00	9.07	0.01	91.85	0.11	91.85
16MW-27	1/8/2002	100.80	00:00	10.55	0.40	90.25	-0.76	90.59
16MW-28	1/8/2002	100.62	00:00	9.00	0.00	91.62	-0.13	91.62
C17MW-07	1/8/2002	100.16	00:00	9.38	0.38	90.78	-0.45	91.11

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-21	1/22/2002	99.78	00:00	7.06	0.00	92.72	1.35	92.72
16MW-13	1/23/2002	100.97	00:00	9.35	0.06	91.62	0.00	91.67
16MW-14	1/23/2002	100.66	00:00	9.72	0.04	90.94	0.59	90.98
16MW-15	1/23/2002	100.98	00:00	9.50	0.04	91.48	0.32	91.51
16MW-16	1/23/2002	98.82	00:00	7.60	0.04	91.22	0.17	91.25
16MW-17	1/23/2002	99.79	00:00	8.40	0.03	91.39	0.11	91.42
16MW-18	1/23/2002	100.69	00:00	8.50	0.06	92.19	-0.55	92.24
16MW-19	1/23/2002	100.54	00:00	8.82	0.02	91.72	0.11	91.73
16MW-20	1/23/2002	100.82	00:00	9.63	0.10	91.19	0.18	91.28
16MW-21	1/23/2002	99.78	00:00	8.46	0.00	91.32	-1.40	91.32
16MW-24	1/23/2002	102.06	00:00	10.19	0.00	91.87	-0.06	91.87
16MW-25	1/23/2002	100.92	00:00	9.11	0.00	91.81	-0.04	91.81
16MW-27	1/23/2002	100.80	00:00	10.14	0.32	90.66	0.41	90.93
16MW-28	1/23/2002	100.62	00:00	8.84	0.00	91.78	0.16	91.78
C17MW-07	1/23/2002	100.16	00:00	9.70	0.47	90.46	-0.32	90.86
16MW-04	2/28/2002	101.23	00:00	10.11	0.06	91.12	-0.35	91.17
16MW-13	2/28/2002	100.97	00:00	9.51	0.05	91.46	-0.16	91.50
16MW-14	2/28/2002	100.66	00:00	9.87	0.01	90.79	-0.15	90.80
16MW-15	2/28/2002	100.98	00:00	9.65	0.03	91.33	-0.15	91.36
16MW-16	2/28/2002	98.82	00:00	7.75	0.01	91.07	-0.15	91.07
16MW-17	2/28/2002	99.79	00:00	8.51	0.01	91.28	-0.11	91.29
16MW-18	2/28/2002	100.69	00:00	8.83	0.00	91.86	-0.33	91.86
16MW-19	2/28/2002	100.54	00:00	8.98	0.00	91.56	-0.16	91.56
16MW-20	2/28/2002	100.82	00:00	9.69	0.05	91.13	-0.06	91.17
16MW-21	2/28/2002	99.78	00:00	8.69	0.00	91.09	-0.23	91.09
16MW-24	2/28/2002	102.06	00:00	10.34	0.00	91.72	-0.15	91.72
16MW-25	2/28/2002	100.92	00:00	9.28	0.00	91.64	-0.17	91.64
16MW-27	2/28/2002	100.80	00:00	10.40	0.35	90.40	-0.26	90.70
16MW-28	2/28/2002	100.62	00:00	9.01	0.00	91.61	-0.17	91.61
C17MW-07	2/28/2002	100.16	00:00	9.21	0.26	90.95	0.49	91.17
16MW-04	3/28/2002	101.23	00:00	9.27	0.04	91.96	0.84	91.99
16MW-13	3/28/2002	100.97	00:00	9.04	0.14	91.93	0.47	92.05
16MW-14	3/28/2002	100.66	00:00	9.65	0.19	91.01	0.22	91.17
16MW-15	3/28/2002	100.98	00:00	8.80	0.05	92.18	0.85	92.22
16MW-16	3/28/2002	98.82	00:00	6.75	0.01	92.07	1.00	92.08
16MW-17	3/28/2002	99.79	00:00	7.64	0.02	92.15	0.87	92.16

1- Change in Water Elevation since last reported measurement

2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-18	3/28/2002	100.69	00:00	6.03	0.00	94.66	2.80	94.66
16MW-19	3/28/2002	100.54	00:00	8.00	0.09	92.54	0.98	92.62
16MW-20	3/28/2002	100.82	00:00	8.75	0.01	92.07	0.94	92.07
16MW-21	3/28/2002	99.78	00:00	5.86	0.00	93.92	2.83	93.92
16MW-24	3/28/2002	102.06	00:00	9.62	0.00	92.44	0.72	92.44
16MW-25	3/28/2002	100.92	00:00	8.50	0.01	92.42	0.78	92.43
16MW-27	3/28/2002	100.80	00:00	9.56	0.32	91.24	0.84	91.51
16MW-28	3/28/2002	100.62	00:00	8.30	0.00	92.32	0.71	92.32
C17MW-07	3/28/2002	100.16	00:00	8.30	0.38	91.86	0.91	92.18
16MW-04	4/23/2002	101.23	00:00	9.63	0.05	91.60	-0.36	91.64
16MW-13	4/23/2002	100.97	00:00	10.12	0.36	90.85	-1.08	91.16
16MW-14	4/23/2002	100.66	00:00	10.91	0.45	89.75	-1.26	90.13
16MW-15	4/23/2002	100.98	00:00	9.49	0.11	91.49	-0.69	91.58
16MW-16	4/23/2002	98.82	00:00	7.38	0.28	91.44	-0.63	91.68
16MW-17	4/23/2002	99.79	00:00	8.09	0.02	91.70	-0.45	91.72
16MW-18	4/23/2002	100.69	00:00	8.23	0.00	92.46	-2.20	92.46
16MW-19	4/23/2002	100.54	00:00	8.58	0.03	91.96	-0.58	91.98
16MW-20	4/23/2002	100.82	00:00	9.30	0.07	91.52	-0.55	91.58
16MW-21	4/23/2002	99.78	00:00	8.22	0.00	91.56	-2.36	91.56
16MW-24	4/23/2002	102.06	00:00	9.88	0.00	92.18	-0.26	92.18
16MW-25	4/23/2002	100.92	00:00	8.84	0.01	92.08	-0.34	92.09
16MW-27	4/23/2002	100.80	00:00	9.92	0.34	90.88	-0.36	91.17
16MW-28	4/23/2002	100.62	00:00	8.56	0.00	92.06	-0.26	92.06
C17MW-07	4/23/2002	100.16	00:00	8.70	0.28	91.46	-0.40	91.70
16MW-04	5/15/2002	101.23	00:00	9.30	0.03	91.93	0.33	91.96
16MW-13	5/15/2002	100.97	00:00	9.98	0.40	90.99	0.14	91.33
16MW-14	5/15/2002	100.66	00:00	9.64	0.16	91.02	1.27	91.16
16MW-15	5/15/2002	100.98	00:00	9.28	0.13	91.70	0.21	91.81
16MW-16	5/15/2002	98.82	00:00	7.09	0.03	91.73	0.29	91.76
16MW-17	5/15/2002	99.79	00:00	7.83	0.05	91.96	0.26	92.00
16MW-18	5/15/2002	100.69	00:00	6.43	0.00	94.26	1.80	94.26
16MW-19	5/15/2002	100.54	00:00	8.20	0.06	92.34	0.38	92.39
16MW-20	5/15/2002	100.82	00:00	9.14	0.12	91.68	0.16	91.78
16MW-21	5/15/2002	99.78	00:00	6.17	0.00	93.61	2.05	93.61
16MW-24	5/15/2002	102.06	00:00	9.63	0.00	92.43	0.25	92.43
16MW-25	5/15/2002	100.92	00:00	8.57	0.01	92.35	0.27	92.36
16MW-27	5/15/2002	100.80	00:00	9.25	0.22	91.55	0.67	91.74

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-28	5/15/2002	100.62	00:00	8.29	0.00	92.33	0.27	92.33
C17MW-07	5/15/2002	100.16	00:00	8.50	0.34	91.66	0.20	91.95
16MW-04	6/8/2002	101.23	00:00	9.48	0.00	91.75	-0.18	91.75
16MW-13	6/8/2002	100.97	00:00	9.40	0.15	91.57	0.58	91.70
16MW-14	6/8/2002	100.66	00:00	9.63	0.07	91.03	0.01	91.09
16MW-15	6/8/2002	100.98	00:00	9.40	0.08	91.58	-0.12	91.64
16MW-16	6/8/2002	98.82	00:00	7.35	0.01	91.47	-0.26	91.48
16MW-17	6/8/2002	99.79	00:00	8.08	0.01	91.71	-0.25	91.72
16MW-18	6/8/2002	100.69	00:00	8.91	0.01	91.78	-2.48	91.79
16MW-19	6/8/2002	100.54	00:00	8.55	0.03	91.99	-0.35	92.01
16MW-20	6/8/2002	100.82	00:00	9.19	0.03	91.63	-0.05	91.65
16MW-21	6/8/2002	99.78	00:00	8.26	0.00	91.52	-2.09	91.52
16MW-24	6/8/2002	102.06	00:00	9.88	0.00	92.18	-0.25	92.18
16MW-25	6/8/2002	100.92	00:00	8.81	0.02	92.11	-0.24	92.12
16MW-26	6/8/2002	101.67	00:00	7.50	0.00	94.17	2.47	94.17
16MW-27	6/8/2002	100.80	00:00	9.15	0.11	91.65	0.10	91.75
16MW-28	6/8/2002	100.62	00:00	8.55	0.00	92.07	-0.26	92.07
C17MW-07	6/8/2002	100.16	00:00	8.80	0.34	91.36	-0.30	91.65
16MW-04	6/27/2002	101.23	00:00	9.73	0.08	91.50	-0.25	91.56
16MW-13	6/27/2002	100.97	00:00	9.70	0.25	91.27	-0.30	91.48
16MW-14	6/27/2002	100.66	00:00	9.36	0.00	91.30	0.27	91.30
16MW-15	6/27/2002	100.98	00:00	9.35	0.06	91.63	0.05	91.68
16MW-16	6/27/2002	98.82	00:00	7.50	0.05	91.32	-0.15	91.36
16MW-17	6/27/2002	99.79	00:00	8.20	0.04	91.59	-0.12	91.62
16MW-18	6/27/2002	100.69	00:00	8.93	0.02	91.76	-0.02	91.77
16MW-19	6/27/2002	100.54	00:00	8.57	0.02	91.97	-0.02	91.99
16MW-20	6/27/2002	100.82	00:00	9.45	0.11	91.37	-0.26	91.47
16MW-21	6/27/2002	99.78	00:00	8.05	0.00	91.73	0.21	91.73
16MW-24	6/27/2002	102.06	00:00	9.84	0.00	92.22	0.04	92.22
16MW-25	6/27/2002	100.92	00:00	8.85	0.03	92.07	-0.04	92.09
16MW-26	6/27/2002	101.67	00:00	6.40	0.00	95.27	1.10	95.27
16MW-27	6/27/2002	100.80	00:00	9.00	0.08	91.80	0.15	91.86
C17MW-07	6/27/2002	100.16	00:00	8.80	0.35	91.36	0.00	91.66
16MW-04	7/16/2002	101.23	00:00	10.06	0.01	91.17	-0.33	91.17
16MW-13	7/16/2002	100.97	00:00	9.66	0.06	91.31	0.04	91.36
16MW-14	7/16/2002	100.66	00:00	10.34	0.11	90.32	-0.98	90.41

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-15	7/16/2002	100.98	00:00	9.89	0.04	91.09	-0.54	91.12
16MW-17	7/16/2002	99.79	00:00	8.77	0.02	91.02	-0.57	91.04
16MW-18	7/16/2002	100.69	00:00	9.30	0.13	91.39	-0.37	91.50
16MW-19	7/16/2002	100.54	00:00	9.26	0.02	91.28	-0.69	91.29
16MW-20	7/16/2002	100.82	00:00	9.75	0.00	91.07	-0.30	91.07
16MW-21	7/16/2002	99.78	00:00	9.00	0.00	90.78	-0.95	90.78
16MW-24	7/16/2002	102.06	00:00	10.43	0.00	91.63	-0.59	91.63
16MW-25	7/16/2002	100.92	00:00	10.47	0.03	90.45	-1.62	90.47
16MW-27	7/16/2002	100.80	00:00	10.36	0.33	90.44	-1.36	90.72
16MW-28	7/16/2002	100.62	00:00	9.11	0.00	91.51	-0.56	91.51
C17MW-07	7/16/2002	100.16	00:00	8.65	0.03	91.51	0.15	91.53
16MW-04	8/15/2002	101.23	00:00	10.90	0.53	90.33	-0.84	90.78
16MW-13	8/15/2002	100.97	00:00	9.98	0.19	90.99	-0.32	91.15
16MW-14	8/15/2002	100.66	00:00	10.51	0.19	90.15	-0.17	90.31
16MW-15	8/15/2002	100.98	00:00	10.23	0.12	90.75	-0.34	90.85
16MW-16	8/15/2002	98.82	00:00	8.51	0.12	90.31	-1.01	90.41
16MW-17	8/15/2002	99.79	00:00	9.88	0.96	89.91	-1.11	90.73
16MW-18	8/15/2002	100.69	00:00	9.65	0.00	91.04	-0.35	91.04
16MW-19	8/15/2002	100.54	00:00	9.52	0.00	91.02	-0.26	91.02
16MW-20	8/15/2002	100.82	00:00	10.13	0.01	90.69	-0.38	90.70
16MW-21	8/15/2002	99.78	00:00	9.36	0.00	90.42	-0.36	90.42
16MW-24	8/15/2002	102.06	00:00	10.81	0.00	91.25	-0.38	91.25
16MW-25	8/15/2002	100.92	00:00	9.76	0.03	91.16	0.71	91.19
16MW-26	8/15/2002	101.67	00:00	10.21	0.00	91.46	-3.81	91.46
16MW-27	8/15/2002	100.80	00:00	10.72	1.22	90.08	-0.36	91.12
16MW-28	8/15/2002	100.62	00:00	9.48	0.00	91.14	-0.37	91.14
C17MW-07	8/15/2002	100.16	00:00	9.53	0.70	90.63	-0.88	91.23
16MW-04	9/10/2002	101.23	00:00	9.76	0.00	91.47	1.14	91.47
16MW-13	9/10/2002	100.97	00:00	9.74	0.00	91.23	0.24	91.23
16MW-14	9/10/2002	100.66	00:00	10.69	0.33	89.97	-0.18	90.25
16MW-15	9/10/2002	100.98	00:00	10.31	0.32	90.67	-0.08	90.94
16MW-16	9/10/2002	98.82	00:00	7.51	0.03	91.31	1.00	91.34
16MW-17	9/10/2002	99.79	00:00	8.80	0.18	90.99	1.08	91.14
16MW-18	9/10/2002	100.69	00:00	8.42	0.01	92.27	1.23	92.27
16MW-19	9/10/2002	100.54	00:00	8.70	0.01	91.84	0.82	91.85
16MW-20	9/10/2002	100.82	00:00	9.60	0.07	91.22	0.53	91.28
16MW-21	9/10/2002	99.78	00:00	7.78	0.00	92.00	1.58	92.00

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-25	9/10/2002	100.92	00:00	9.12	0.03	91.80	0.64	91.83
16MW-27	9/10/2002	100.80	00:00	7.35	0.00	93.45	3.37	93.45
16MW-28	9/10/2002	100.62	00:00	8.75	0.00	91.87	0.73	91.87
C17MW-07	9/10/2002	100.16	00:00	8.10	0.04	92.06	1.43	92.10
16MW-04	10/18/2002	101.23	00:00	8.65	0.55	92.58	1.11	93.05
16MW-13	10/18/2002	100.97	00:00	9.00	0.21	91.97	0.74	92.15
16MW-14	10/18/2002	100.66	00:00	8.00	0.00	92.66	2.69	92.66
16MW-15	10/18/2002	100.98	00:00	8.75	0.07	92.23	1.56	92.29
16MW-16	10/18/2002	98.82	00:00	7.10	0.01	91.72	0.41	91.73
16MW-17	10/18/2002	99.79	00:00	7.13	0.01	92.66	1.67	92.67
16MW-18	10/18/2002	100.69	00:00	5.91	0.00	94.78	2.51	94.78
16MW-19	10/18/2002	100.54	00:00	6.91	0.00	93.63	1.79	93.63
16MW-20	10/18/2002	100.82	00:00	5.70	0.00	95.12	3.90	95.12
16MW-21	10/18/2002	99.78	00:00	5.75	0.08	94.03	2.03	94.09
16MW-25	10/18/2002	100.92	00:00	8.10	0.01	92.82	1.02	92.83
16MW-26	10/18/2002	101.57	00:00	6.00	0.00	95.57	4.11	95.57
16MW-27	10/18/2002	100.80	00:00	8.65	0.14	92.15	-1.30	92.27
16MW-28	10/18/2002	100.62	00:00	7.80	0.00	92.82	0.95	92.82
C17MW-07	10/18/2002	100.16	00:00	7.18	0.04	92.98	0.92	93.02
16MW-04	11/14/2002	101.23	00:00	9.07	0.06	92.16	-0.42	92.21
16MW-13	11/14/2002	100.97	00:00	9.40	0.05	91.57	-0.40	91.61
16MW-14	11/14/2002	100.66	00:00	8.05	0.03	92.61	-0.05	92.63
16MW-15	11/14/2002	100.98	00:00	9.15	0.16	91.83	-0.40	91.97
16MW-16	11/14/2002	98.82	00:00	6.76	0.02	92.06	0.34	92.08
16MW-17	11/14/2002	99.79	00:00	9.30	0.53	90.49	-2.17	90.94
16MW-18	11/14/2002	100.69	00:00	6.91	0.00	93.78	-1.00	93.78
16MW-19	11/14/2002	100.54	00:00	7.57	0.01	92.97	-0.66	92.97
16MW-20	11/14/2002	100.82	00:00	8.60	0.00	92.22	-2.90	92.22
16MW-21	11/14/2002	99.78	00:00	6.17	0.01	93.61	-0.42	93.61
16MW-25	11/14/2002	100.92	00:00	8.40	0.03	92.52	-0.30	92.54
16MW-26	11/14/2002	101.57	00:00	6.09	0.00	95.48	-0.09	95.48
16MW-27	11/14/2002	100.80	00:00	8.80	0.15	92.00	-0.15	92.12
16MW-28	11/14/2002	100.62	00:00	7.85	0.00	92.77	-0.05	92.77
C17MW-07	11/14/2002	100.16	00:00	7.60	0.10	92.56	-0.42	92.65
16MW-04	11/26/2002	101.23	00:00	8.90	0.05	92.33	0.17	92.37
16MW-13	11/26/2002	100.97	00:00	9.90	0.52	91.07	-0.50	91.52

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-14	11/26/2002	100.66	00:00	8.34	0.02	92.32	-0.29	92.34
16MW-15	11/26/2002	100.98	00:00	10.45	0.61	90.53	-1.30	91.05
16MW-16	11/26/2002	98.82	00:00	5.17	0.01	93.65	1.59	93.65
16MW-17	11/26/2002	99.79	00:00	7.20	0.23	92.59	2.10	92.78
16MW-18	11/26/2002	100.69	00:00	6.21	0.00	94.48	0.70	94.48
16MW-19	11/26/2002	100.54	00:00	7.18	0.00	93.36	0.39	93.36
16MW-20	11/26/2002	100.82	00:00	8.40	0.03	92.42	0.20	92.44
16MW-21	11/26/2002	99.78	00:00	6.31	0.00	93.47	-0.14	93.47
16MW-25	11/26/2002	100.92	00:00	7.95	0.04	92.97	0.45	93.00
16MW-26	11/26/2002	101.57	00:00	6.11	0.00	95.46	-0.02	95.46
16MW-27	11/26/2002	100.80	00:00	8.70	0.21	92.10	0.10	92.28
16MW-28	11/26/2002	100.62	00:00	7.60	0.00	93.02	0.25	93.02
C17MW-07	11/26/2002	100.16	00:00	7.12	0.04	93.04	0.48	93.08
16MW-04	12/16/2002	101.23	00:00	8.90	0.13	92.33	0.00	92.44
16MW-13	12/16/2002	100.97	00:00	9.87	0.61	91.10	0.03	91.62
16MW-14	12/16/2002	100.66	00:00	7.40	0.20	93.26	0.94	93.43
16MW-15	12/16/2002	100.98	00:00	9.75	0.49	91.23	0.70	91.65
16MW-16	12/16/2002	98.82	00:00	6.33	0.04	92.49	-1.16	92.52
16MW-17	12/16/2002	99.79	00:00	7.50	0.18	92.29	-0.30	92.45
16MW-18	12/16/2002	100.69	00:00	5.91	0.00	94.78	0.30	94.78
16MW-19	12/16/2002	100.54	00:00	6.90	0.03	93.64	0.28	93.66
16MW-20	12/16/2002	100.82	00:00	8.30	0.06	92.52	0.10	92.57
16MW-21	12/16/2002	99.78	00:00	5.80	0.00	93.98	0.51	93.98
16MW-25	12/16/2002	100.92	00:00	7.70	0.04	93.22	0.25	93.25
16MW-26	12/16/2002	101.67	00:00	5.56	0.00	96.11	0.65	96.11
16MW-27	12/16/2002	100.80	00:00	NM	NA	NA	NA	NA
16MW-28	12/16/2002	100.62	00:00	7.30	0.00	93.32	0.30	93.32
C17MW-07	12/16/2002	100.16	00:00	6.55	0.03	93.61	0.57	93.63
16MW-04	1/28/2003	101.23	00:00	8.55	0.01	92.68	0.35	92.69
16MW-13	1/28/2003	100.97	00:00	9.00	0.33	91.97	0.87	92.25
16MW-14	1/28/2003	100.66	00:00	8.20	0.00	92.46	-0.80	92.46
16MW-15	1/28/2003	100.98	00:00	8.60	0.11	92.38	1.15	92.48
16MW-16	1/28/2003	98.82	00:00	6.40	0.03	92.42	-0.07	92.44
16MW-17	1/28/2003	99.79	00:00	7.26	0.04	92.53	0.24	92.56
16MW-18	1/28/2003	100.69	00:00	7.28	0.00	93.41	-1.37	93.41
16MW-19	1/28/2003	100.54	00:00	7.31	0.00	93.23	-0.41	93.23
16MW-20	1/28/2003	100.82	00:00	8.23	0.03	92.59	0.07	92.62

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-21	1/28/2003	99.78	00:00	7.21	0.00	92.57	-1.41	92.57
16MW-25	1/28/2003	100.92	00:00	7.85	0.01	93.07	-0.15	93.08
16MW-26	1/28/2003	101.67	00:00	7.55	0.00	94.12	-1.99	94.12
16MW-27	1/28/2003	100.80	00:00	7.65	0.05	93.15	-7.65	93.19
16MW-28	1/28/2003	100.62	00:00	7.40	0.00	93.22	-0.10	93.22
C17MW-07	1/28/2003	100.16	00:00	7.75	0.30	92.41	-1.20	92.67
16MW-04	2/26/2003	101.23	00:00	8.30	0.10	92.93	0.25	93.01
16MW-13	2/26/2003	100.97	00:00	8.00	0.30	92.97	1.00	93.23
16MW-14	2/26/2003	100.66	00:00	7.55	0.07	93.11	0.65	93.17
16MW-15	2/26/2003	100.98	00:00	8.07	0.14	92.91	0.53	93.03
16MW-16	2/26/2003	98.82	00:00	4.99	0.01	93.83	1.41	93.84
16MW-17	2/26/2003	99.79	00:00	6.54	0.03	93.25	0.72	93.27
16MW-18	2/26/2003	100.69	00:00	5.56	0.00	95.13	1.72	95.13
16MW-19	2/26/2003	100.54	00:00	6.43	0.06	94.11	0.88	94.16
16MW-20	2/26/2003	100.82	00:00	7.76	0.07	93.06	0.47	93.12
16MW-21	2/26/2003	99.78	00:00	5.79	0.00	93.99	1.42	93.99
16MW-25	2/26/2003	100.92	00:00	7.29	0.05	93.63	0.56	93.67
16MW-26	2/26/2003	101.67	00:00	NM	NA	NA	NA	NA
16MW-27	2/26/2003	100.80	00:00	7.95	0.29	92.85	-0.30	93.10
16MW-28	2/26/2003	100.62	00:00	7.00	0.00	93.62	0.40	93.62
C17MW-07	2/26/2003	100.16	00:00	6.33	0.02	93.83	1.42	93.85
16MW-04	3/31/2003	101.23	00:00	7.90	0.02	93.33	0.40	93.35
16MW-13	3/31/2003	100.97	00:00	7.15	0.03	93.82	0.85	93.85
16MW-14	3/31/2003	100.66	00:00	7.60	0.03	93.06	-0.05	93.08
16MW-15	3/31/2003	100.98	00:00	7.60	0.03	93.38	0.47	93.40
16MW-16	3/31/2003	98.82	00:00	5.31	0.01	93.51	-0.32	93.52
16MW-17	3/31/2003	99.79	00:00	6.50	0.04	93.29	0.04	93.32
16MW-18	3/31/2003	100.69	00:00	5.86	0.00	94.83	-0.30	94.83
16MW-19	3/31/2003	100.54	00:00	6.25	0.01	94.29	0.18	94.30
16MW-20	3/31/2003	100.82	00:00	7.51	0.03	93.31	0.25	93.34
16MW-21	3/31/2003	99.78	00:00	4.60	0.00	95.18	1.19	95.18
16MW-25	3/31/2003	100.92	00:00	6.98	0.02	93.94	0.31	93.96
16MW-27	3/31/2003	100.80	00:00	7.25	0.07	93.55	0.70	93.61
16MW-28	3/31/2003	100.62	00:00	6.85	0.00	93.77	0.15	93.77
C17MW-07	3/31/2003	100.16	00:00	6.03	0.01	94.13	0.30	94.13
16MW-04	4/29/2003	101.23	00:00	7.92	0.07	93.31	-0.02	93.37

1- Change in Water Elevation since last reported measurement  
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PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-13	4/29/2003	100.97	00:00	7.80	0.25	93.17	-0.65	93.38
16MW-14	4/29/2003	100.66	00:00	6.61	0.00	94.05	0.99	94.05
16MW-15	4/29/2003	100.98	00:00	7.51	0.04	93.47	0.09	93.50
16MW-16	4/29/2003	98.82	00:00	4.98	0.01	93.84	0.33	93.85
16MW-17	4/29/2003	99.79	00:00	6.35	0.02	93.44	0.15	93.45
16MW-18	4/29/2003	100.69	00:00	6.00	0.00	94.69	-0.14	94.69
16MW-19	4/29/2003	100.54	00:00	6.32	0.02	94.22	-0.07	94.23
16MW-20	4/29/2003	100.82	00:00	7.98	0.19	92.84	-0.47	93.00
16MW-21	4/29/2003	99.78	00:00	4.70	0.00	95.08	-0.10	95.08
16MW-25	4/29/2003	100.92	00:00	6.86	0.00	94.06	0.12	94.06
16MW-27	4/29/2003	100.80	00:00	7.10	0.05	93.70	0.15	93.74
16MW-28	4/29/2003	100.62	00:00	6.65	0.00	93.97	0.20	93.97
C17MW-07	4/29/2003	100.16	00:00	5.80	0.01	94.36	0.23	94.36
16MW-04	5/23/2003	101.23	00:00	8.20	0.02	93.03	-0.28	93.04
16MW-13	5/23/2003	100.97	00:00	7.90	0.13	93.07	-0.10	93.18
16MW-14	5/23/2003	100.66	00:00	7.90	0.03	92.76	-1.29	92.78
16MW-15	5/23/2003	100.98	00:00	8.02	0.05	92.96	-0.51	93.00
16MW-16	5/23/2003	98.82	00:00	5.97	0.01	92.85	-0.99	92.85
16MW-17	5/23/2003	99.79	00:00	7.03	0.07	92.76	-0.68	92.82
16MW-18	5/23/2003	100.69	00:00	7.05	0.00	93.64	-1.05	93.64
16MW-19	5/23/2003	100.54	00:00	7.08	0.03	93.46	-0.76	93.48
16MW-20	5/23/2003	100.82	00:00	8.10	0.10	92.72	-0.12	92.81
16MW-21	5/23/2003	99.78	00:00	6.88	0.00	92.90	-2.18	92.90
16MW-25	5/23/2003	100.92	00:00	7.26	0.03	93.66	-0.40	93.68
16MW-26	5/23/2003	101.67	00:00	8.10	0.00	93.57	-8.10	93.57
16MW-27	5/23/2003	100.80	00:00	7.46	0.10	93.34	-0.36	93.43
16MW-28	5/23/2003	100.62	00:00	7.25	0.00	93.37	-0.60	93.37
C17MW-07	5/23/2003	100.16	00:00	6.47	0.02	93.69	-0.67	93.70
16MW-13	6/26/2003	100.97	09:15	7.16	0.23	93.81	0.74	94.00
16MW-14	6/26/2003	100.66	10:30	7.20	0.08	93.46	0.70	93.52
16MW-15	6/26/2003	100.98	09:45	7.40	0.15	93.58	0.62	93.70
16MW-16	6/26/2003	98.82	11:15	4.00	0.01	94.82	1.97	94.83
16MW-17	6/26/2003	99.79	10:55	5.80	0.03	93.99	1.23	94.01
16MW-18	6/26/2003	100.69	10:50	4.91	0.00	95.78	2.14	95.78
16MW-19	6/26/2003	100.54	10:40	5.56	0.00	94.98	1.52	94.98
16MW-20	6/26/2003	100.82	11:45	6.91	0.03	93.91	1.19	93.93
16MW-21	6/26/2003	99.78	11:50	NM	NA	NA	NA	NA

1- Change in Water Elevation since last reported measurement

2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-25	6/26/2003	100.92	10:15	6.46	0.01	94.46	0.80	94.47
16MW-26	6/26/2003	101.67	09:30	4.16	0.00	97.51	3.94	97.51
16MW-27	6/26/2003	100.80	09:00	6.51	0.10	94.29	0.95	94.38
C17MW-07	6/26/2003	100.16	11:05	5.20	0.02	94.96	1.27	94.97
16MW-04	8/1/2003	101.23	11:55	8.88	0.15	92.35	-0.68	92.48
16MW-13	8/1/2003	100.97	12:15	8.21	0.15	92.76	-1.05	92.89
16MW-14	8/1/2003	100.66	11:35	8.48	0.08	92.18	-1.28	92.24
16MW-15	8/1/2003	100.98	11:30	8.42	0.11	92.56	-1.02	92.65
16MW-16	8/1/2003	98.82	11:25	6.20	0.01	92.62	-2.20	92.63
16MW-17	8/1/2003	99.79	11:10	7.38	0.11	92.41	-1.58	92.51
16MW-18	8/1/2003	100.69	11:00	7.02	0.00	93.67	-2.11	93.67
16MW-19	8/1/2003	100.54	10:50	7.28	0.05	93.26	-1.72	93.30
16MW-20	8/1/2003	100.82	10:30	8.15	0.06	92.67	-1.24	92.72
16MW-21	8/1/2003	99.78	10:25	7.00	0.00	92.78	-7.00	92.78
16MW-25	8/1/2003	100.92	11:40	7.70	0.04	93.22	-1.24	93.26
16MW-26	8/1/2003	101.67	12:10	7.10	0.00	94.57	-2.94	94.57
16MW-27	8/1/2003	100.80	12:35	8.16	0.25	92.64	-1.65	92.85
C17MW-07	8/1/2003	100.16	11:20	6.52	0.02	93.64	-1.32	93.66
16MW-04	8/26/2003	101.23	11:50	9.12	0.16	92.11	-0.24	92.24
16MW-13	8/26/2003	100.97	11:00	8.60	0.19	92.37	-0.39	92.53
16MW-14	8/26/2003	100.66	11:40	8.61	0.04	92.05	-0.13	92.09
16MW-15	8/26/2003	100.98	12:05	7.80	0.15	93.18	0.62	93.31
16MW-16	8/26/2003	98.82	12:40	6.40	0.01	92.42	-0.20	92.43
16MW-17	8/26/2003	99.79	12:30	7.61	0.10	92.18	-0.23	92.27
16MW-18	8/26/2003	100.69	12:25	7.49	0.00	93.20	-0.47	93.20
16MW-19	8/26/2003	100.54	12:20	7.37	0.01	93.17	-0.09	93.17
16MW-20	8/26/2003	100.82	12:45	8.70	0.13	92.12	-0.55	92.23
16MW-21	8/26/2003	99.78	12:55	7.30	0.00	92.48	-0.30	92.48
16MW-25	8/26/2003	100.92	11:30	8.00	0.05	92.92	-0.30	92.96
16MW-26	8/26/2003	101.67	12:00	6.80	0.00	94.87	0.30	94.87
16MW-27	8/26/2003	100.80	11:20	8.10	0.09	92.70	0.06	92.78
C17MW-07	8/26/2003	100.16	12:35	6.73	0.03	93.43	-0.21	93.45
16MW-04	9/17/2003	101.23	00:00	8.69	0.00	92.54	0.43	92.54
16MW-13	9/17/2003	100.97	00:00	8.41	0.10	92.56	0.19	92.65
16MW-14	9/17/2003	100.66	00:00	8.47	0.02	92.19	0.14	92.20
16MW-15	9/17/2003	100.98	00:00	8.74	0.12	92.24	-0.94	92.34

1- Change in Water Elevation since last reported measurement  
2- Measurements based on mean sea level.

PERIOD: From 08/20/1997 thru 10/28/2003 - Inclusive

SITE	DATE	MP ELEVATION (feet)	TIME	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	WATER ELEV. (feet)	DELTA WATER ELEV (feet)	EQUIV. FRESH WATER HEAD (feet)
16MW-17	9/17/2003	99.79	00:00	7.49	0.05	92.30	0.12	92.34
16MW-18	9/17/2003	100.69	00:00	7.29	0.00	93.40	0.20	93.40
16MW-19	9/17/2003	100.54	00:00	7.65	0.00	92.89	-0.28	92.89
16MW-20	9/17/2003	100.82	00:00	8.68	0.00	92.14	0.02	92.14
16MW-21	9/17/2003	99.78	00:00	7.28	0.00	92.50	0.02	92.50
16MW-25	9/17/2003	100.92	00:00	7.68	0.02	93.24	0.32	93.25
16MW-26	9/17/2003	101.67	00:00	6.29	0.00	95.38	0.51	95.38
16MW-27	9/17/2003	100.80	00:00	7.94	0.02	92.86	0.16	92.88
16MW-28	9/17/2003	100.62	00:00	7.78	0.00	92.84	-0.53	92.84
C17MW-07	9/17/2003	100.16	00:00	6.71	0.01	93.45	0.02	93.46
16MW-04	10/28/2003	101.23	00:00	8.90	0.00	92.33	-0.21	92.33
16MW-13	10/28/2003	100.97	00:00	8.55	0.08	92.42	-0.14	92.48
16MW-14	10/28/2003	100.66	00:00	8.60	0.03	92.06	-0.13	92.08
16MW-15	10/28/2003	100.98	00:00	8.72	0.06	92.26	0.02	92.31
16MW-17	10/28/2003	99.79	00:00	7.49	0.00	92.30	0.00	92.30
16MW-18	10/28/2003	100.69	00:00	7.84	0.00	92.85	-0.55	92.85
16MW-19	10/28/2003	100.54	00:00	8.12	0.08	92.42	-0.47	92.48
16MW-20	10/28/2003	100.82	00:00	8.45	0.01	92.37	0.23	92.38
16MW-21	10/28/2003	99.78	00:00	7.61	0.00	92.17	-0.33	92.17
16MW-25	10/28/2003	100.92	00:00	8.18	0.00	92.74	-0.50	92.74
16MW-26	10/28/2003	101.67	00:00	7.65	0.00	94.02	-1.36	94.02
16MW-27	10/28/2003	100.80	00:00	8.25	0.11	92.55	-0.31	92.65
C17MW-07	10/28/2003	100.16	00:00	7.20	0.03	92.96	-0.49	92.98

1- Change in Water Elevation since last reported measurement

2- Measurements based on mean sea level.

APPENDIX C  
ANALYTICAL SUMMARY TABLES FOR AIR DISCHARGES  
AND ASSOCIATED DATA

U.S. Navy RAC Contract No. N62472-99-D-0032  
 Naval Weapons Station-Earle: Bioslurper Unit No. 1  
 Analytical Results of Air Samples

**Bioslurper Unit #1**

<b>SAMPLE NO.</b> 16(A)VD(03)-55 <b>Sample Date:</b> 9/30/2003									
<b>Compound</b>	<b>Molecular Weight (lbs/lbs-mol)</b>	<b>Conversion Constant (cu. ft/lbs-mol)</b>	<b>Time Conversion (min/hr)</b>	<b>Weekly Flow Rate (cu. ft/min)</b>	<b>Compound Conc. (ppm(v))</b>	<b>Compound Emission Limit ppm(v)</b>	<b>Output Rate (lbs/hr)</b>	<b>Emission Limits (lbs/hr)</b>	
Acetone	58.1	384.6	60.0	35.0	0.000	N/A	0.00E+00		
Benzene	78.0	384.6	60.0	35.0	0.000	7.0	0.00E+00	8.00E-03	
Toluene	92.0	384.6	60.0	35.0	0.000	N/A	0.00E+00		
Ethylbenzene	106.0	384.6	60.0	35.0	0.000	N/A	0.00E+00		
m,p-Xylenes	106.0	384.6	60.0	35.0	0.000	N/A	0.00E+00		
o-Xylene	106.0	384.6	60.0	35.0	0.000	N/A	0.00E+00		
1,3,5-Trimethylbenzene	120.0	384.6	60.0	35.0	0.000	N/A	0.00E+00		
1,2,4-Trimethylbenzene	120.0	384.6	60.0	35.0	0.000	N/A	0.00E+00		
<b>Total Emissions:</b>					<b>0.00</b>	<b>27.5</b>	<b>0.00E+00</b>	<b>3.50E-02</b>	

**Formula:** Output Rate per Compound =  $\frac{(\text{Mol. Wt.}) \times (\text{Time Conv.}) \times (\text{Concentration}) \times (\text{Flow Rate})}{(\text{Conv. Constant}) \times 10^6}$

Note: Sample collected after carbon treatment.

U.S. Navy RAC Contract No. N62472-99-D-0032  
 Naval Weapons Station-Earle: Bioslurper Unit No. 2  
 Analytical Results of Air Samples

**Bioslurper Unit #2**

<b>SAMPLE NO.</b> 16(B)VD(03)-26 <b>Sample Date:</b> 9/30/2003								
<b>Compound</b>	<b>Molecular Weight (lbs/lbs-mol)</b>	<b>Conversion Constant (cu. ft/lbs-mol)</b>	<b>Time Conversion (min/hr)</b>	<b>Weekly Flow Rate (cu. ft/min)</b>	<b>Compound Conc. (ppm(v))</b>	<b>Compound Emission Limit ppm(v)</b>	<b>Output Rate (lbs/hr)</b>	<b>Emission Limits (lbs/hr)</b>
Acetone	58.1	384.6	60.0	48.0	0.025	N/A	1.09E-05	
Benzene	78.0	384.6	60.0	48.0	<b>0.030</b>	<b>7.0</b>	<b>1.75E-05</b>	<b>8.00E-03</b>
Toluene	92.0	384.6	60.0	48.0	0.010	N/A	6.89E-06	
Ethylbenzene	106.0	384.6	60.0	48.0	0.120	N/A	9.53E-05	
m,p-Xylenes	106.0	384.6	60.0	48.0	0.360	N/A	2.86E-04	
o-Xylene	106.0	384.6	60.0	48.0	0.120	N/A	9.53E-05	
<b>Vinyl Chloride</b>	62.5	384.6	60.0	48.0	0.070	N/A	3.28E-05	
<b>cis 1-2 Dichlorethene</b>	96.9	384.6	60.0	48.0	0.002	N/A	1.74E-06	
1,3,5-Trimethylbenzene	120.0	384.6	60.0	48.0	0.240	N/A	2.16E-04	
1,2,4-Trimethylbenzene	120.0	384.6	60.0	48.0	<u>0.610</u>	N/A	<u>5.48E-04</u>	
<b>Total Emissions:</b>					<b>1.59</b>	<b>27.5</b>	<b>1.31E-03</b>	<b>3.50E-02</b>

**Formula:** Output Rate per Compound =  $\frac{(\text{Mol. Wt.}) \times (\text{Time Conv.}) \times (\text{Concentration}) \times (\text{Flow Rate})}{(\text{Conv. Constant}) \times 10^6}$

Note: Sample collected after carbon treatment.

U.S. Navy RAC Contract No. N62472-99-D-0032  
 Naval Weapons Station-Earle: Bioslurper Unit No. 1  
 Analytical Results of Air Samples

**Bioslurper Unit #1**

<b>SAMPLE NO.</b> 16(A)VD(03)-57 <b>Sample Date:</b> 10/22/2003								
<b>Compound</b>	<b>Molecular Weight (lbs/lbs-mol)</b>	<b>Conversion Constant (cu. ft/lbs-mol)</b>	<b>Time Conversion (min/hr)</b>	<b>Weekly Flow Rate (cu. ft/min)</b>	<b>Compound Conc. (ppm(v))</b>	<b>Compound Emission Limit ppm(v)</b>	<b>Output Rate (lbs/hr)</b>	<b>Emission Limits (lbs/hr)</b>
Acetone	58.1	384.6	60.0	35.0	0.010	N/A	3.08E-06	
Benzene	78.0	384.6	60.0	35.0	0.001	7.0	3.19E-07	8.00E-03
Toluene	92.0	384.6	60.0	35.0	0.000	N/A	0.00E+00	
Ethylbenzene	106.0	384.6	60.0	35.0	0.000	N/A	0.00E+00	
m,p-Xylenes	106.0	384.6	60.0	35.0	0.001	N/A	6.37E-07	
o-Xylene	106.0	384.6	60.0	35.0	0.000	N/A	0.00E+00	
1,3,5-Trimethylbenzene	120.0	384.6	60.0	35.0	0.000	N/A	0.00E+00	
1,2,4-Trimethylbenzene	120.0	384.6	60.0	35.0	0.000	N/A	0.00E+00	
<b>Total Emissions:</b>					<b>0.01</b>	<b>27.5</b>	<b>4.03E-06</b>	<b>3.50E-02</b>

**Formula:** Output Rate per Compound =  $\frac{(\text{Mol. Wt.}) \times (\text{Time Conv.}) \times (\text{Concentration}) \times (\text{Flow Rate})}{(\text{Conv. Constant}) \times 10^6}$

Note: Sample collected after carbon treatment.

U.S. Navy RAC Contract No. N62472-99-D-0032  
 Naval Weapons Station-Earle: Bioslurper Unit No. 2  
 Analytical Results of Air Samples

**Bioslurper Unit #2**

<b>SAMPLE NO.</b> 16(B)VD(03)-26 <b>Sample Date:</b> 10/22/2003								
<b>Compound</b>	<b>Molecular Weight (lbs/lbs-mol)</b>	<b>Conversion Constant (cu. ft/lbs-mol)</b>	<b>Time Conversion (min/hr)</b>	<b>Weekly Flow Rate (cu. ft/min)</b>	<b>Compound Conc. (ppm(v))</b>	<b>Compound Emission Limit ppm(v)</b>	<b>Output Rate (lbs/hr)</b>	<b>Emission Limits (lbs/hr)</b>
Acetone	58.1	384.6	60.0	48.0	0.02	N/A	7.83E-06	
Benzene	78.0	384.6	60.0	48.0	<b>0.008</b>	<b>7.0</b>	<b>4.85E-06</b>	<b>8.00E-03</b>
Toluene	92.0	384.6	60.0	48.0	0.004	N/A	2.48E-06	
Ethylbenzene	106.0	384.6	60.0	48.0	0.020	N/A	1.59E-05	
m,p-Xylenes	106.0	384.6	60.0	48.0	0.061	N/A	4.84E-05	
o-Xylene	106.0	384.6	60.0	48.0	0.019	N/A	1.51E-05	
<b>Vinyl Chloride</b>	62.5	384.6	60.0	48.0	0.054	N/A	2.53E-05	
<b>cis 1-2 Dichlorethene</b>	96.9	384.6	60.0	48.0	0.002	N/A	1.52E-06	
1,3,5-Trimethylbenzene	120.0	384.6	60.0	48.0	0.059	N/A	5.30E-05	
1,2,4-Trimethylbenzene	120.0	384.6	60.0	48.0	0.180	N/A	1.62E-04	
<b>Total Emissions:</b>					<b>0.43</b>	<b>27.5</b>	<b>3.35E-04</b>	<b>3.50E-02</b>

**Formula:** Output Rate per Compound =  $\frac{(\text{Mol. Wt.}) \times (\text{Time Conv.}) \times (\text{Concentration}) \times (\text{Flow Rate})}{(\text{Conv. Constant}) \times 10^6}$

Note: Sample collected after carbon treatment.

U.S. Navy RAC Contract No. N62472-99-D-0032  
 Naval Weapons Station-Earle: Bioslurper Unit No. 1  
 Analytical Results of Air Samples

**Bioslurper Unit #1**

<b>SAMPLE NO.</b> 16(A)VD(03)-59 <b>Sample Date:</b> 12/8/2003									
<b>Compound</b>	<b>Molecular Weight (lbs/lbs-mol)</b>	<b>Conversion Constant (cu. ft/lbs-mol)</b>	<b>Time Conversion (min/hr)</b>	<b>Weekly Flow Rate (cu. ft/min)</b>	<b>Compound Conc. (ppm(v))</b>	<b>Compound Emission Limit ppm(v)</b>	<b>Output Rate (lbs/hr)</b>	<b>Emission Limits (lbs/hr)</b>	
Acetone	58.1	384.6	60.0	35.0	0.000	N/A	0.00E+00		
Benzene	78.0	384.6	60.0	35.0	0.000	7.0	0.00E+00	8.00E-03	
Toluene	92.0	384.6	60.0	35.0	0.000	N/A	0.00E+00		
Ethylbenzene	106.0	384.6	60.0	35.0	0.000	N/A	0.00E+00		
m,p-Xylenes	106.0	384.6	60.0	35.0	0.000	N/A	0.00E+00		
o-Xylene	106.0	384.6	60.0	35.0	0.000	N/A	0.00E+00		
1,3,5-Trimethylbenzene	120.0	384.6	60.0	35.0	0.000	N/A	0.00E+00		
1,2,4-Trimethylbenzene	120.0	384.6	60.0	35.0	0.000	N/A	0.00E+00		
<b>Total Emissions:</b>					<b>0.00</b>	<b>27.5</b>	<b>0.00E+00</b>	<b>3.50E-02</b>	

**Formula:** Output Rate per Compound =  $\frac{(\text{Mol. Wt.}) \times (\text{Time Conv.}) \times (\text{Concentration}) \times (\text{Flow Rate})}{(\text{Conv. Constant}) \times 10^6}$

Note: Sample collected after carbon treatment.

U.S. Navy RAC Contract No. N62472-99-D-0032  
 Naval Weapons Station-Earle: Bioslurper Unit No. 2  
 Analytical Results of Air Samples

**Bioslurper Unit #2**

<b>SAMPLE NO.</b> 16(B)VD(03)-28 <b>Sample Date:</b> 12/8/2003									
<b>Compound</b>	<b>Molecular Weight (lbs/lbs-mol)</b>	<b>Conversion Constant (cu. ft/lbs-mol)</b>	<b>Time Conversion (min/hr)</b>	<b>Weekly Flow Rate (cu. ft/min)</b>	<b>Compound Conc. (ppm(v))</b>	<b>Compound Emission Limit ppm(v)</b>	<b>Output Rate (lbs/hr)</b>	<b>Emission Limits (lbs/hr)</b>	
Acetone	58.1	384.6	60.0	48.0	0.000	N/A	0.00E+00		
Benzene	78.0	384.6	60.0	48.0	0.023	7.0	1.34E-05	8.00E-03	
Toluene	92.0	384.6	60.0	48.0	0.048	N/A	3.31E-05		
Ethylbenzene	106.0	384.6	60.0	48.0	1.200	N/A	9.53E-04		
m,p-Xylenes	106.0	384.6	60.0	48.0	4.100	N/A	3.25E-03		
o-Xylene	106.0	384.6	60.0	48.0	0.990	N/A	7.86E-04		
<b>Vinyl Chloride</b>	62.5	384.6	60.0	48.0	0.059	N/A	2.76E-05		
<b>cis 1-2 Dichlorethene</b>	96.9	384.6	60.0	48.0	0.000	N/A	0.00E+00		
1,3,5-Trimethylbenzene	120.0	384.6	60.0	48.0	1.100	N/A	9.88E-04		
1,2,4-Trimethylbenzene	120.0	384.6	60.0	48.0	3.300	N/A	2.97E-03		
<b>Total Emissions:</b>					<b>10.82</b>	<b>27.5</b>	<b>8.99E-03</b>	<b>3.50E-02</b>	

**Formula:** Output Rate per Compound =  $\frac{(\text{Mol. Wt.}) \times (\text{Time Conv.}) \times (\text{Concentration}) \times (\text{Flow Rate})}{(\text{Conv. Constant}) \times 10^6}$

Note: Sample collected after carbon treatment.

NWS-EARLE  
 BIOSLURPER UNIT #1 AND #2  
 TPH REMOVED VIA VAPOR EXTRACTION

<b>BIOSLURPER UNIT 1</b>	
OPERATED (hours):	75.5
AVERAGE FLOW RATE (cfm):	35
TPH CONCENTRATION (mg/m <sup>3</sup> ):	1.8
(as per analytical)	9/30/2003
	0.02 = POUNDS OF TPH

<b>BIOSLURPER UNIT 2</b>	
OPERATED (hours):	38
AVERAGE FLOW RATE (cfm):	48
TPH CONCENTRATION (mg/m <sup>3</sup> ):	0.086
(as per analytical)	9/30/2003
	0.00 = POUNDS OF TPH

POUNDS OF TPH= \_\_\_\_\_  
**AVERAGE FLOW RATE** (cfm) \* 0.02832m<sup>3</sup>/ft<sup>3</sup> \* **TPH CONC**(mg/m<sup>3</sup>) \* 0.001g/mg \* 0.002205 lbs/g \* 60 min/hr \* **OPERATED** (hours)

NWS-EARLE  
 BIOSLURPER UNIT #1 AND #2  
 TPH REMOVED VIA VAPOR EXTRACTION

<b>BIOSLURPER UNIT 1</b>	
OPERATED (hours):	106.5
AVERAGE FLOW RATE (cfm):	35
TPH CONCENTRATION (mg/m <sup>3</sup> ):	3.3
(as per analytical)	10/22/2003
	0.05 = POUNDS OF TPH

<b>BIOSLURPER UNIT 2</b>	
OPERATED (hours):	22.5
AVERAGE FLOW RATE (cfm):	48
TPH CONCENTRATION (mg/m <sup>3</sup> ):	0.085
(as per analytical)	10/22/2003
	0.00 = POUNDS OF TPH

POUNDS OF TPH= \_\_\_\_\_  
**AVERAGE FLOW RATE** (cfm) \* 0.02832m<sup>3</sup>/ft<sup>3</sup> \* **TPH CONC**(mg/m<sup>3</sup>) \* 0.001g/mg \* 0.002205 lbs/g \* 60 min/hr \* **OPERATED** (hours)

NWS-EARLE  
 BIOSLURPER UNIT #1 AND #2  
 TPH REMOVED VIA VAPOR EXTRACTION

<b>BIOSLURPER UNIT 1</b>	
OPERATED (hours):	31
AVERAGE FLOW RATE (cfm):	35
TPH CONCENTRATION (mg/m <sup>3</sup> ):	8.7
(as per analytical)	12/8/2003
	0.04 = POUNDS OF TPH

<b>BIOSLURPER UNIT 2</b>	
OPERATED (hours):	8
AVERAGE FLOW RATE (cfm):	48
TPH CONCENTRATION (mg/m <sup>3</sup> ):	0
(as per analytical)	12/8/2003
	0.00 = POUNDS OF TPH

POUNDS OF TPH= \_\_\_\_\_  
**AVERAGE FLOW RATE** (cfm) \* 0.02832m<sup>3</sup>/ft<sup>3</sup> \* **TPH CONC**(mg/m<sup>3</sup>) \* 0.001g/mg \* 0.002205 lbs/g \* 60 min/hr \* **OPERATED** (hours)

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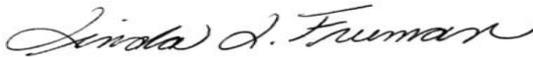
AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0310028A

### Work Order Summary

<b>CLIENT:</b>	Mr. Mike Heffron Tetra Tech FW/Foster Wheeler 1 Oxford Valley #200 2300 Lincoln Highway Langhorne, PA 19047	<b>BILL TO:</b>	Ms. Sonya Staten Tetra Tech FW/Foster Wheeler 1 Oxford Valley #200 2300 Lincoln Highway Langhorne, PA 19047
<b>PHONE:</b>	215-702-4000	<b>P.O. #</b>	044014
<b>FAX:</b>	215-702-4045	<b>PROJECT #</b>	NWS EARLE
<b>DATE RECEIVED:</b>	10/1/03	<b>CONTACT:</b>	Betty Chu
<b>DATE COMPLETED:</b>	10/6/03		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	26AS54	Modified TO-14A	1.4 psi
01AA	26AS54 Duplicate	Modified TO-14A	1.4 psi
02A	26AS55	Modified TO-14A	1.0 "Hg
03A	16A(VO)03-54	Modified TO-14A	0.0 "Hg
04A	16A(VO)03-55	Modified TO-14A	0.0 "Hg
05A	16B(VO)03-26	Modified TO-14A	5.0 "Hg
06A	Lab Blank	Modified TO-14A	NA
07A	CCV	Modified TO-14A	NA
08A	LCS	Modified TO-14A	NA

CERTIFIED BY: 

DATE: 10/06/03

Laboratory Director

Certification numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/03, Expiration date: 06/30/04

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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**LABORATORY NARRATIVE**  
**Modified TO-14A**  
**Foster Wheeler Environmental Corporation**  
**Workorder# 0310028A**

Five 6 Liter Summa Canister samples were received on October 01 and 02, 2003. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-14A</i>	<i>ATL Modifications</i>
Continuing Calibration criteria	<= 30% Difference	<= 30% Difference with two allowed out to <= 40% Difference; flag and narrate outliers
Initial Calibration criteria	RSD<30%	RSD<=30%, two compounds allowed up to 40%.
Moisture control	Nafion Dryer	Multisorbent trap
Blank acceptance criteria	<0.20 ppbv	<Reporting Limit
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106
Dilutions for Initial Calibration	Dynamic dilutions or static using canisters	Syringe dilutions
BFB absolute abundance criteria	Within 10% of that from previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40% D
Sample Load Volume	400 mL	Varied to 200 mL

**Receiving Notes**

NELAP Chapter 5 Section 5.12.1(a) and 5.12.4 specify that a legal Chain of Custody (COC) must accompany samples when they arrive at the laboratory. In this case a COC was not received with sample 26A54. The discrepancy was noted in the Login email.

**Analytical Notes**

The daily calibration standard (CCV) analyzed on 10-03-03 did not meet laboratory required acceptance criteria of 70-130% recovery for Chloroethane. Recovery was high and no hits were detected in the associated samples. There was no impact on sample results.

The recovery of surrogate 4-Bromofluorobenzene in sample 16B(VO)03-26 was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B - Compound present in laboratory blank greater than reporting limit (background subtraction no

performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

# AIR TOXICS LTD.

SAMPLE NAME: 26AS54

ID#: 0310028A-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	<b>i100315</b>	<b>Date of Collection:</b>	<b>9/30/03</b>
<b>Dil. Factor:</b>	<b>1.22</b>	<b>Date of Analysis:</b>	<b>10/3/03 06:44 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (ppbv)</b>	<b>Amount (uG/m3)</b>
Freon 12	0.61	3.1	Not Detected	Not Detected
Freon 114	0.61	4.3	Not Detected	Not Detected
Vinyl Chloride	0.61	1.6	Not Detected	Not Detected
Bromomethane	0.61	2.4	Not Detected	Not Detected
Chloroethane	0.61	1.6	Not Detected	Not Detected
Freon 11	0.61	3.5	Not Detected	Not Detected
1,1-Dichloroethene	0.61	2.4	Not Detected	Not Detected
Freon 113	0.61	4.8	Not Detected	Not Detected
Methylene Chloride	0.61	2.2	Not Detected	Not Detected
1,1-Dichloroethane	0.61	2.5	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.61	2.4	7.6	31
Chloroform	0.61	3.0	2.0	10
1,1,1-Trichloroethane	0.61	3.4	Not Detected	Not Detected
Carbon Tetrachloride	0.61	3.9	Not Detected	Not Detected
Benzene	0.61	2.0	Not Detected	Not Detected
1,2-Dichloroethane	0.61	2.5	Not Detected	Not Detected
Trichloroethene	0.61	3.3	13	70
1,2-Dichloropropane	0.61	2.9	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.61	2.8	Not Detected	Not Detected
Toluene	0.61	2.3	Not Detected	Not Detected
trans-1,3-Dichloropropene	0.61	2.8	Not Detected	Not Detected
1,1,2-Trichloroethane	0.61	3.4	Not Detected	Not Detected
Tetrachloroethene	0.61	4.2	9.2	64
1,2-Dibromoethane (EDB)	0.61	4.8	Not Detected	Not Detected
Chlorobenzene	0.61	2.8	Not Detected	Not Detected
Ethyl Benzene	0.61	2.7	Not Detected	Not Detected
m,p-Xylene	0.61	2.7	Not Detected	Not Detected
o-Xylene	0.61	2.7	Not Detected	Not Detected
Styrene	0.61	2.6	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.61	4.2	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.61	3.0	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.61	3.0	Not Detected	Not Detected
1,3-Dichlorobenzene	0.61	3.7	Not Detected	Not Detected
1,4-Dichlorobenzene	0.61	3.7	Not Detected	Not Detected
alpha-Chlorotoluene	0.61	3.2	Not Detected	Not Detected
1,2-Dichlorobenzene	0.61	3.7	Not Detected	Not Detected
1,3-Butadiene	0.61	1.4	Not Detected	Not Detected
Hexane	0.61	2.2	Not Detected	Not Detected
Cyclohexane	0.61	2.1	Not Detected	Not Detected
Heptane	0.61	2.5	Not Detected	Not Detected
Bromodichloromethane	0.61	4.2	Not Detected	Not Detected
Dibromochloromethane	0.61	5.3	Not Detected	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: 26AS54

ID#: 0310028A-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	<b>i100315</b>	<b>Date of Collection:</b> 9/30/03
<b>Dil. Factor:</b>	<b>1.22</b>	<b>Date of Analysis:</b> 10/3/03 06:44 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (ppbv)</b>	<b>Amount (uG/m3)</b>
Cumene	0.61	3.0	Not Detected	Not Detected
Propylbenzene	0.61	3.0	Not Detected	Not Detected
Chloromethane	2.4	5.1	Not Detected	Not Detected
1,2,4-Trichlorobenzene	2.4	18	Not Detected	Not Detected
Hexachlorobutadiene	2.4	26	Not Detected	Not Detected
Acetone	2.4	5.9	Not Detected	Not Detected
Carbon Disulfide	2.4	7.7	Not Detected	Not Detected
2-Propanol	2.4	6.1	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.4	9.8	Not Detected	Not Detected
Vinyl Acetate	2.4	8.7	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.4	7.3	Not Detected	Not Detected
Tetrahydrofuran	2.4	7.3	Not Detected	Not Detected
1,4-Dioxane	2.4	8.9	Not Detected	Not Detected
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	2.4	10	Not Detected	Not Detected
2-Hexanone	2.4	10	Not Detected	Not Detected
Bromoform	2.4	26	Not Detected	Not Detected
4-Ethyltoluene	2.4	12	Not Detected	Not Detected
Methyl tert-butyl ether	2.4	8.9	Not Detected	Not Detected
Ethanol	2.4	4.7	Not Detected	Not Detected

**Container Type: 6 Liter Summa Canister**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

SAMPLE NAME: 26AS54 Duplicate

ID#: 0310028A-01AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	i100316	Date of Collection:	9/30/03
Dil. Factor:	1.22	Date of Analysis:	10/3/03 08:01 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.61	3.1	Not Detected	Not Detected
Freon 114	0.61	4.3	Not Detected	Not Detected
Vinyl Chloride	0.61	1.6	Not Detected	Not Detected
Bromomethane	0.61	2.4	Not Detected	Not Detected
Chloroethane	0.61	1.6	Not Detected	Not Detected
Freon 11	0.61	3.5	Not Detected	Not Detected
1,1-Dichloroethene	0.61	2.4	Not Detected	Not Detected
Freon 113	0.61	4.8	Not Detected	Not Detected
Methylene Chloride	0.61	2.2	Not Detected	Not Detected
1,1-Dichloroethane	0.61	2.5	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.61	2.4	7.6	31
Chloroform	0.61	3.0	2.1	10
1,1,1-Trichloroethane	0.61	3.4	Not Detected	Not Detected
Carbon Tetrachloride	0.61	3.9	Not Detected	Not Detected
Benzene	0.61	2.0	Not Detected	Not Detected
1,2-Dichloroethane	0.61	2.5	Not Detected	Not Detected
Trichloroethene	0.61	3.3	13	72
1,2-Dichloropropane	0.61	2.9	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.61	2.8	Not Detected	Not Detected
Toluene	0.61	2.3	Not Detected	Not Detected
trans-1,3-Dichloropropene	0.61	2.8	Not Detected	Not Detected
1,1,2-Trichloroethane	0.61	3.4	Not Detected	Not Detected
Tetrachloroethene	0.61	4.2	9.5	66
1,2-Dibromoethane (EDB)	0.61	4.8	Not Detected	Not Detected
Chlorobenzene	0.61	2.8	Not Detected	Not Detected
Ethyl Benzene	0.61	2.7	Not Detected	Not Detected
m,p-Xylene	0.61	2.7	Not Detected	Not Detected
o-Xylene	0.61	2.7	Not Detected	Not Detected
Styrene	0.61	2.6	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.61	4.2	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.61	3.0	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.61	3.0	Not Detected	Not Detected
1,3-Dichlorobenzene	0.61	3.7	Not Detected	Not Detected
1,4-Dichlorobenzene	0.61	3.7	Not Detected	Not Detected
alpha-Chlorotoluene	0.61	3.2	Not Detected	Not Detected
1,2-Dichlorobenzene	0.61	3.7	Not Detected	Not Detected
1,3-Butadiene	0.61	1.4	Not Detected	Not Detected
Hexane	0.61	2.2	Not Detected	Not Detected
Cyclohexane	0.61	2.1	Not Detected	Not Detected
Heptane	0.61	2.5	Not Detected	Not Detected
Bromodichloromethane	0.61	4.2	Not Detected	Not Detected
Dibromochloromethane	0.61	5.3	Not Detected	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: 26AS54 Duplicate

ID#: 0310028A-01AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	i100316	Date of Collection: 9/30/03
Dil. Factor:	1.22	Date of Analysis: 10/3/03 08:01 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Cumene	0.61	3.0	Not Detected	Not Detected
Propylbenzene	0.61	3.0	Not Detected	Not Detected
Chloromethane	2.4	5.1	Not Detected	Not Detected
1,2,4-Trichlorobenzene	2.4	18	Not Detected	Not Detected
Hexachlorobutadiene	2.4	26	Not Detected	Not Detected
Acetone	2.4	5.9	Not Detected	Not Detected
Carbon Disulfide	2.4	7.7	Not Detected	Not Detected
2-Propanol	2.4	6.1	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.4	9.8	Not Detected	Not Detected
Vinyl Acetate	2.4	8.7	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.4	7.3	Not Detected	Not Detected
Tetrahydrofuran	2.4	7.3	Not Detected	Not Detected
1,4-Dioxane	2.4	8.9	Not Detected	Not Detected
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	2.4	10	Not Detected	Not Detected
2-Hexanone	2.4	10	Not Detected	Not Detected
Bromoform	2.4	26	Not Detected	Not Detected
4-Ethyltoluene	2.4	12	Not Detected	Not Detected
Methyl tert-butyl ether	2.4	8.9	Not Detected	Not Detected
Ethanol	2.4	4.7	Not Detected	Not Detected

**Container Type: 6 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

SAMPLE NAME: 26AS55

ID#: 0310028A-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	<b>i100314</b>	<b>Date of Collection:</b>	<b>9/30/03</b>
<b>Dil. Factor:</b>	<b>1.39</b>	<b>Date of Analysis:</b>	<b>10/3/03 05:57 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (ppbv)</b>	<b>Amount (uG/m3)</b>
Freon 12	0.70	3.5	Not Detected	Not Detected
Freon 114	0.70	4.9	Not Detected	Not Detected
Vinyl Chloride	0.70	1.8	Not Detected	Not Detected
Bromomethane	0.70	2.7	Not Detected	Not Detected
Chloroethane	0.70	1.9	Not Detected	Not Detected
Freon 11	0.70	4.0	Not Detected	Not Detected
1,1-Dichloroethene	0.70	2.8	Not Detected	Not Detected
Freon 113	0.70	5.4	Not Detected	Not Detected
Methylene Chloride	0.70	2.4	Not Detected	Not Detected
1,1-Dichloroethane	0.70	2.8	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.70	2.8	Not Detected	Not Detected
Chloroform	0.70	3.4	Not Detected	Not Detected
1,1,1-Trichloroethane	0.70	3.8	Not Detected	Not Detected
Carbon Tetrachloride	0.70	4.4	Not Detected	Not Detected
Benzene	0.70	2.2	Not Detected	Not Detected
1,2-Dichloroethane	0.70	2.8	Not Detected	Not Detected
Trichloroethene	0.70	3.8	Not Detected	Not Detected
1,2-Dichloropropane	0.70	3.3	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.70	3.2	Not Detected	Not Detected
Toluene	0.70	2.7	Not Detected	Not Detected
trans-1,3-Dichloropropene	0.70	3.2	Not Detected	Not Detected
1,1,2-Trichloroethane	0.70	3.8	Not Detected	Not Detected
Tetrachloroethene	0.70	4.8	Not Detected	Not Detected
1,2-Dibromoethane (EDB)	0.70	5.4	Not Detected	Not Detected
Chlorobenzene	0.70	3.2	Not Detected	Not Detected
Ethyl Benzene	0.70	3.1	Not Detected	Not Detected
m,p-Xylene	0.70	3.1	Not Detected	Not Detected
o-Xylene	0.70	3.1	Not Detected	Not Detected
Styrene	0.70	3.0	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.70	4.8	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.70	3.5	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.70	3.5	Not Detected	Not Detected
1,3-Dichlorobenzene	0.70	4.2	Not Detected	Not Detected
1,4-Dichlorobenzene	0.70	4.2	Not Detected	Not Detected
alpha-Chlorotoluene	0.70	3.6	Not Detected	Not Detected
1,2-Dichlorobenzene	0.70	4.2	Not Detected	Not Detected
1,3-Butadiene	0.70	1.6	Not Detected	Not Detected
Hexane	0.70	2.5	Not Detected	Not Detected
Cyclohexane	0.70	2.4	Not Detected	Not Detected
Heptane	0.70	2.9	Not Detected	Not Detected
Bromodichloromethane	0.70	4.7	Not Detected	Not Detected
Dibromochloromethane	0.70	6.0	Not Detected	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: 26AS55

ID#: 0310028A-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	i100314	Date of Collection: 9/30/03
Dil. Factor:	1.39	Date of Analysis: 10/3/03 05:57 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Cumene	0.70	3.5	Not Detected	Not Detected
Propylbenzene	0.70	3.5	Not Detected	Not Detected
Chloromethane	2.8	5.8	Not Detected	Not Detected
1,2,4-Trichlorobenzene	2.8	21	Not Detected	Not Detected
Hexachlorobutadiene	2.8	30	Not Detected	Not Detected
Acetone	2.8	6.7	9.4	22
Carbon Disulfide	2.8	8.8	29	93
2-Propanol	2.8	6.9	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.8	11	Not Detected	Not Detected
Vinyl Acetate	2.8	9.9	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.8	8.3	Not Detected	Not Detected
Tetrahydrofuran	2.8	8.3	Not Detected	Not Detected
1,4-Dioxane	2.8	10	Not Detected	Not Detected
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	2.8	12	Not Detected	Not Detected
2-Hexanone	2.8	12	Not Detected	Not Detected
Bromoform	2.8	29	Not Detected	Not Detected
4-Ethyltoluene	2.8	14	Not Detected	Not Detected
Methyl tert-butyl ether	2.8	10	Not Detected	Not Detected
Ethanol	2.8	5.3	6.6	13

**Container Type: 6 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VO)03-54

ID#: 0310028A-03A

## MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	<b>i100313</b>	<b>Date of Collection:</b>	<b>9/30/03</b>
<b>Dil. Factor:</b>	<b>107</b>	<b>Date of Analysis:</b>	<b>10/3/03 04:25 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (ppbv)</b>	<b>Amount (uG/m3)</b>
Freon 12	54	270	Not Detected	Not Detected
Freon 114	54	380	Not Detected	Not Detected
Vinyl Chloride	54	140	Not Detected	Not Detected
Bromomethane	54	210	Not Detected	Not Detected
Chloroethane	54	140	Not Detected	Not Detected
Freon 11	54	300	Not Detected	Not Detected
1,1-Dichloroethene	54	220	Not Detected	Not Detected
Freon 113	54	420	Not Detected	Not Detected
Methylene Chloride	54	190	Not Detected	Not Detected
1,1-Dichloroethane	54	220	Not Detected	Not Detected
cis-1,2-Dichloroethene	54	220	Not Detected	Not Detected
Chloroform	54	260	Not Detected	Not Detected
1,1,1-Trichloroethane	54	300	Not Detected	Not Detected
Carbon Tetrachloride	54	340	Not Detected	Not Detected
Benzene	54	170	2500	8100
1,2-Dichloroethane	54	220	Not Detected	Not Detected
Trichloroethene	54	290	Not Detected	Not Detected
1,2-Dichloropropane	54	250	Not Detected	Not Detected
cis-1,3-Dichloropropene	54	250	Not Detected	Not Detected
Toluene	54	200	260	1000
trans-1,3-Dichloropropene	54	250	Not Detected	Not Detected
1,1,2-Trichloroethane	54	300	Not Detected	Not Detected
Tetrachloroethene	54	370	Not Detected	Not Detected
1,2-Dibromoethane (EDB)	54	420	Not Detected	Not Detected
Chlorobenzene	54	250	Not Detected	Not Detected
Ethyl Benzene	54	240	1700	7400
m,p-Xylene	54	240	5400	24000
o-Xylene	54	240	870	3800
Styrene	54	230	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	54	370	Not Detected	Not Detected
1,3,5-Trimethylbenzene	54	270	1300	6700
1,2,4-Trimethylbenzene	54	270	4200	21000
1,3-Dichlorobenzene	54	330	Not Detected	Not Detected
1,4-Dichlorobenzene	54	330	Not Detected	Not Detected
alpha-Chlorotoluene	54	280	Not Detected	Not Detected
1,2-Dichlorobenzene	54	330	Not Detected	Not Detected
1,3-Butadiene	54	120	Not Detected	Not Detected
Hexane	54	190	9800	35000
Cyclohexane	54	190	1800	6300
Heptane	54	220	3100	13000
Bromodichloromethane	54	360	Not Detected	Not Detected
Dibromochloromethane	54	460	Not Detected	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VO)03-54

ID#: 0310028A-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	i100313	<b>Date of Collection:</b>	9/30/03
<b>Dil. Factor:</b>	107	<b>Date of Analysis:</b>	10/3/03 04:25 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Cumene	54	270	380	1900
Propylbenzene	54	270	760	3800
Chloromethane	210	450	Not Detected	Not Detected
1,2,4-Trichlorobenzene	210	1600	Not Detected	Not Detected
Hexachlorobutadiene	210	2300	Not Detected	Not Detected
Acetone	210	520	270	660
Carbon Disulfide	210	680	Not Detected	Not Detected
2-Propanol	210	530	Not Detected	Not Detected
trans-1,2-Dichloroethene	210	860	Not Detected	Not Detected
Vinyl Acetate	210	760	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	210	640	Not Detected	Not Detected
Tetrahydrofuran	210	640	Not Detected	Not Detected
1,4-Dioxane	210	780	Not Detected	Not Detected
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	210	890	Not Detected	Not Detected
2-Hexanone	210	890	Not Detected	Not Detected
Bromoform	210	2200	Not Detected	Not Detected
4-Ethyltoluene	210	1100	2800	14000
Methyl tert-butyl ether	210	780	Not Detected	Not Detected
Ethanol	210	410	Not Detected	Not Detected

**Container Type: 6 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	107	70-130

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VO)03-55

ID#: 0310028A-04A

## MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	<b>i100311</b>	<b>Date of Collection:</b>	<b>9/30/03</b>
<b>Dil. Factor:</b>	<b>1.34</b>	<b>Date of Analysis:</b>	<b>10/3/03 02:45 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (ppbv)</b>	<b>Amount (uG/m3)</b>
Freon 12	0.67	3.4	Not Detected	Not Detected
Freon 114	0.67	4.8	Not Detected	Not Detected
Vinyl Chloride	0.67	1.7	Not Detected	Not Detected
Bromomethane	0.67	2.6	Not Detected	Not Detected
Chloroethane	0.67	1.8	Not Detected	Not Detected
Freon 11	0.67	3.8	Not Detected	Not Detected
1,1-Dichloroethene	0.67	2.7	Not Detected	Not Detected
Freon 113	0.67	5.2	Not Detected	Not Detected
Methylene Chloride	0.67	2.4	Not Detected	Not Detected
1,1-Dichloroethane	0.67	2.8	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.67	2.7	Not Detected	Not Detected
Chloroform	0.67	3.3	Not Detected	Not Detected
1,1,1-Trichloroethane	0.67	3.7	Not Detected	Not Detected
Carbon Tetrachloride	0.67	4.3	Not Detected	Not Detected
Benzene	0.67	2.2	Not Detected	Not Detected
1,2-Dichloroethane	0.67	2.8	Not Detected	Not Detected
Trichloroethene	0.67	3.6	Not Detected	Not Detected
1,2-Dichloropropane	0.67	3.1	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.67	3.1	Not Detected	Not Detected
Toluene	0.67	2.6	Not Detected	Not Detected
trans-1,3-Dichloropropene	0.67	3.1	Not Detected	Not Detected
1,1,2-Trichloroethane	0.67	3.7	Not Detected	Not Detected
Tetrachloroethene	0.67	4.6	Not Detected	Not Detected
1,2-Dibromoethane (EDB)	0.67	5.2	Not Detected	Not Detected
Chlorobenzene	0.67	3.1	Not Detected	Not Detected
Ethyl Benzene	0.67	3.0	Not Detected	Not Detected
m,p-Xylene	0.67	3.0	Not Detected	Not Detected
o-Xylene	0.67	3.0	Not Detected	Not Detected
Styrene	0.67	2.9	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.67	4.7	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.67	3.3	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.67	3.3	Not Detected	Not Detected
1,3-Dichlorobenzene	0.67	4.1	Not Detected	Not Detected
1,4-Dichlorobenzene	0.67	4.1	Not Detected	Not Detected
alpha-Chlorotoluene	0.67	3.5	Not Detected	Not Detected
1,2-Dichlorobenzene	0.67	4.1	Not Detected	Not Detected
1,3-Butadiene	0.67	1.5	Not Detected	Not Detected
Hexane	0.67	2.4	Not Detected	Not Detected
Cyclohexane	0.67	2.3	Not Detected	Not Detected
Heptane	0.67	2.8	Not Detected	Not Detected
Bromodichloromethane	0.67	4.6	Not Detected	Not Detected
Dibromochloromethane	0.67	5.8	Not Detected	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VO)03-55

ID#: 0310028A-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	i100311	<b>Date of Collection:</b>	9/30/03
<b>Dil. Factor:</b>	1.34	<b>Date of Analysis:</b>	10/3/03 02:45 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Cumene	0.67	3.3	Not Detected	Not Detected
Propylbenzene	0.67	3.3	Not Detected	Not Detected
Chloromethane	2.7	5.6	Not Detected	Not Detected
1,2,4-Trichlorobenzene	2.7	20	Not Detected	Not Detected
Hexachlorobutadiene	2.7	29	Not Detected	Not Detected
Acetone	2.7	6.5	Not Detected	Not Detected
Carbon Disulfide	2.7	8.5	Not Detected	Not Detected
2-Propanol	2.7	6.7	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.7	11	Not Detected	Not Detected
Vinyl Acetate	2.7	9.6	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.7	8.0	Not Detected	Not Detected
Tetrahydrofuran	2.7	8.0	Not Detected	Not Detected
1,4-Dioxane	2.7	9.8	Not Detected	Not Detected
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	2.7	11	Not Detected	Not Detected
2-Hexanone	2.7	11	Not Detected	Not Detected
Bromoform	2.7	28	Not Detected	Not Detected
4-Ethyltoluene	2.7	13	Not Detected	Not Detected
Methyl tert-butyl ether	2.7	9.8	Not Detected	Not Detected
Ethanol	2.7	5.1	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

SAMPLE NAME: 16B(VO)03-26

ID#: 0310028A-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	<b>i100310</b>	<b>Date of Collection:</b> 9/30/03
<b>Dil. Factor:</b>	<b>3.22</b>	<b>Date of Analysis:</b> 10/3/03 01:25 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (ppbv)</b>	<b>Amount (uG/m3)</b>
Freon 12	1.6	8.1	Not Detected	Not Detected
Freon 114	1.6	11	Not Detected	Not Detected
Vinyl Chloride	1.6	4.2	70	180
Bromomethane	1.6	6.4	Not Detected	Not Detected
Chloroethane	1.6	4.3	Not Detected	Not Detected
Freon 11	1.6	9.2	420	2400
1,1-Dichloroethene	1.6	6.5	Not Detected	Not Detected
Freon 113	1.6	12	Not Detected	Not Detected
Methylene Chloride	1.6	5.7	Not Detected	Not Detected
1,1-Dichloroethane	1.6	6.6	Not Detected	Not Detected
cis-1,2-Dichloroethene	1.6	6.5	2.4	9.7
Chloroform	1.6	8.0	Not Detected	Not Detected
1,1,1-Trichloroethane	1.6	8.9	Not Detected	Not Detected
Carbon Tetrachloride	1.6	10	Not Detected	Not Detected
Benzene	1.6	5.2	30	99
1,2-Dichloroethane	1.6	6.6	Not Detected	Not Detected
Trichloroethene	1.6	8.8	Not Detected	Not Detected
1,2-Dichloropropane	1.6	7.6	Not Detected	Not Detected
cis-1,3-Dichloropropene	1.6	7.4	Not Detected	Not Detected
Toluene	1.6	6.2	10	40
trans-1,3-Dichloropropene	1.6	7.4	Not Detected	Not Detected
1,1,2-Trichloroethane	1.6	8.9	Not Detected	Not Detected
Tetrachloroethene	1.6	11	Not Detected	Not Detected
1,2-Dibromoethane (EDB)	1.6	12	Not Detected	Not Detected
Chlorobenzene	1.6	7.5	Not Detected	Not Detected
Ethyl Benzene	1.6	7.1	120	510
m,p-Xylene	1.6	7.1	360	1600
o-Xylene	1.6	7.1	120	520
Styrene	1.6	7.0	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	1.6	11	Not Detected	Not Detected
1,3,5-Trimethylbenzene	1.6	8.0	240	1200
1,2,4-Trimethylbenzene	1.6	8.0	610	3000
1,3-Dichlorobenzene	1.6	9.8	Not Detected	Not Detected
1,4-Dichlorobenzene	1.6	9.8	Not Detected	Not Detected
alpha-Chlorotoluene	1.6	8.5	Not Detected	Not Detected
1,2-Dichlorobenzene	1.6	9.8	Not Detected	Not Detected
1,3-Butadiene	1.6	3.6	Not Detected	Not Detected
Hexane	1.6	5.8	24	87
Cyclohexane	1.6	5.6	40	140
Heptane	1.6	6.7	55	230
Bromodichloromethane	1.6	11	Not Detected	Not Detected
Dibromochloromethane	1.6	14	Not Detected	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: 16B(VO)03-26

ID#: 0310028A-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	i100310	Date of Collection: 9/30/03
Dil. Factor:	3.22	Date of Analysis: 10/3/03 01:25 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Cumene	1.6	8.0	54	270
Propylbenzene	1.6	8.0	100	500
Chloromethane	6.4	14	Not Detected	Not Detected
1,2,4-Trichlorobenzene	6.4	48	Not Detected	Not Detected
Hexachlorobutadiene	6.4	70	Not Detected	Not Detected
Acetone	6.4	16	25	61
Carbon Disulfide	6.4	20	Not Detected	Not Detected
2-Propanol	6.4	16	Not Detected	Not Detected
trans-1,2-Dichloroethene	6.4	26	Not Detected	Not Detected
Vinyl Acetate	6.4	23	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	6.4	19	Not Detected	Not Detected
Tetrahydrofuran	6.4	19	13	38
1,4-Dioxane	6.4	24	Not Detected	Not Detected
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	6.4	27	Not Detected	Not Detected
2-Hexanone	6.4	27	Not Detected	Not Detected
Bromoform	6.4	68	Not Detected	Not Detected
4-Ethyltoluene	6.4	32	430	2100
Methyl tert-butyl ether	6.4	24	Not Detected	Not Detected
Ethanol	6.4	12	Not Detected	Not Detected

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

**Container Type: 6 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	164 Q	70-130

# AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0310028A-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	i100308	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/3/03 11:51 AM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.50	2.5	Not Detected	Not Detected
Freon 114	0.50	3.6	Not Detected	Not Detected
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Bromomethane	0.50	2.0	Not Detected	Not Detected
Chloroethane	0.50	1.3	Not Detected	Not Detected
Freon 11	0.50	2.8	Not Detected	Not Detected
1,1-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Freon 113	0.50	3.9	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Carbon Tetrachloride	0.50	3.2	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
1,2-Dichloropropane	0.50	2.3	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.50	2.3	Not Detected	Not Detected
Toluene	0.50	1.9	Not Detected	Not Detected
trans-1,3-Dichloropropene	0.50	2.3	Not Detected	Not Detected
1,1,2-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
1,2-Dibromoethane (EDB)	0.50	3.9	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
Ethyl Benzene	0.50	2.2	Not Detected	Not Detected
m,p-Xylene	0.50	2.2	Not Detected	Not Detected
o-Xylene	0.50	2.2	Not Detected	Not Detected
Styrene	0.50	2.2	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.50	3.5	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.50	2.5	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.50	2.5	Not Detected	Not Detected
1,3-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,3-Butadiene	0.50	1.1	Not Detected	Not Detected
Hexane	0.50	1.8	Not Detected	Not Detected
Cyclohexane	0.50	1.7	Not Detected	Not Detected
Heptane	0.50	2.1	Not Detected	Not Detected
Bromodichloromethane	0.50	3.4	Not Detected	Not Detected
Dibromochloromethane	0.50	4.3	Not Detected	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0310028A-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	i100308	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/3/03 11:51 AM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Cumene	0.50	2.5	Not Detected	Not Detected
Propylbenzene	0.50	2.5	Not Detected	Not Detected
Chloromethane	2.0	4.2	Not Detected	Not Detected
1,2,4-Trichlorobenzene	2.0	15	Not Detected	Not Detected
Hexachlorobutadiene	2.0	22	Not Detected	Not Detected
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
2-Propanol	2.0	5.0	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
Vinyl Acetate	2.0	7.2	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Tetrahydrofuran	2.0	6.0	Not Detected	Not Detected
1,4-Dioxane	2.0	7.3	Not Detected	Not Detected
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	2.0	8.3	Not Detected	Not Detected
2-Hexanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
4-Ethyltoluene	2.0	10	Not Detected	Not Detected
Methyl tert-butyl ether	2.0	7.3	Not Detected	Not Detected
Ethanol	2.0	3.8	Not Detected	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0310028A-07A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	i100302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/3/03 07:34 AM

Compound	%Recovery
Freon 12	107
Freon 114	108
Vinyl Chloride	108
Bromomethane	88
Chloroethane	132 Q
Freon 11	106
1,1-Dichloroethene	103
Freon 113	104
Methylene Chloride	96
1,1-Dichloroethane	107
cis-1,2-Dichloroethene	107
Chloroform	108
1,1,1-Trichloroethane	108
Carbon Tetrachloride	112
Benzene	106
1,2-Dichloroethane	104
Trichloroethene	108
1,2-Dichloropropane	108
cis-1,3-Dichloropropene	108
Toluene	105
trans-1,3-Dichloropropene	106
1,1,2-Trichloroethane	109
Tetrachloroethene	107
1,2-Dibromoethane (EDB)	110
Chlorobenzene	107
Ethyl Benzene	106
m,p-Xylene	107
o-Xylene	108
Styrene	109
1,1,2,2-Tetrachloroethane	108
1,3,5-Trimethylbenzene	107
1,2,4-Trimethylbenzene	106
1,3-Dichlorobenzene	101
1,4-Dichlorobenzene	100
alpha-Chlorotoluene	99
1,2-Dichlorobenzene	97
1,3-Butadiene	99
Hexane	102
Cyclohexane	109
Heptane	106
Bromodichloromethane	112
Dibromochloromethane	114

# AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0310028A-07A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	i100302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/3/03 07:34 AM

Compound	%Recovery
Cumene	108
Propylbenzene	112
Chloromethane	100
1,2,4-Trichlorobenzene	79
Hexachlorobutadiene	79
Acetone	98
Carbon Disulfide	97
2-Propanol	97
trans-1,2-Dichloroethene	99
Vinyl Acetate	97
2-Butanone (Methyl Ethyl Ketone)	102
Tetrahydrofuran	101
1,4-Dioxane	101
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	104
2-Hexanone	103
Bromoform	105
4-Ethyltoluene	102
Methyl tert-butyl ether	96
Ethanol	106

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0310028A-08A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	i100303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/3/03 08:21 AM

Compound	%Recovery
Freon 12	117
Freon 114	119
Vinyl Chloride	119
Bromomethane	110
Chloroethane	133 Q
Freon 11	107
1,1-Dichloroethene	104
Freon 113	105
Methylene Chloride	98
1,1-Dichloroethane	98
cis-1,2-Dichloroethene	111
Chloroform	108
1,1,1-Trichloroethane	106
Carbon Tetrachloride	116
Benzene	118
1,2-Dichloroethane	111
Trichloroethene	118
1,2-Dichloropropane	110
cis-1,3-Dichloropropene	111
Toluene	111
trans-1,3-Dichloropropene	113
1,1,2-Trichloroethane	114
Tetrachloroethene	118
1,2-Dibromoethane (EDB)	106
Chlorobenzene	113
Ethyl Benzene	111
m,p-Xylene	107
o-Xylene	106
Styrene	125
1,1,2,2-Tetrachloroethane	110
1,3,5-Trimethylbenzene	102
1,2,4-Trimethylbenzene	97
1,3-Dichlorobenzene	107
1,4-Dichlorobenzene	100
alpha-Chlorotoluene	122
1,2-Dichlorobenzene	103
1,3-Butadiene	118
Hexane	103
Cyclohexane	108
Heptane	104
Bromodichloromethane	104
Dibromochloromethane	111

# AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0310028A-08A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	i100303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/3/03 08:21 AM

Compound	%Recovery
Cumene	117
Propylbenzene	90
Chloromethane	100
1,2,4-Trichlorobenzene	108
Hexachlorobutadiene	107
Acetone	98
Carbon Disulfide	101
2-Propanol	101
trans-1,2-Dichloroethene	107
Vinyl Acetate	99
2-Butanone (Methyl Ethyl Ketone)	104
Tetrahydrofuran	104
1,4-Dioxane	106
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	104
2-Hexanone	99
Bromoform	91
4-Ethyltoluene	87
Methyl tert-butyl ether	97
Ethanol	92

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

## **Air Toxics Ltd. Introduces the Electronic Report**

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This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

**WORK ORDER #: 0310028B**

Work Order Summary

**CLIENT:** Mr. Mike Heffron  
Tetra Tech FW/Foster Wheeler  
1 Oxford Valley #200  
2300 Lincoln Highway  
Langhorne, PA 19047

**BILL TO:** Ms. Sonya Staten  
Tetra Tech FW/Foster Wheeler  
1 Oxford Valley #200  
2300 Lincoln Highway  
Langhorne, PA 19047

**PHONE:** 215-702-4000      **P.O. #** 044014

**FAX:** 215-702-4045      **PROJECT #** NWS EARLE

**DATE RECEIVED:** 10/1/2003      **CONTACT:** Betty Chu

**DATE COMPLETED:** 10/6/2003

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
03A	16A(VO)03-54	Modified TO-3	0.0 "Hg
04A	16A(VO)03-55	Modified TO-3	0.0 "Hg
05A	16B(VO)03-26	Modified TO-3	5.0 "Hg
06A	Lab Blank	Modified TO-3	NA
07A	LCS	Modified TO-3	NA

CERTIFIED BY: *Sinda S. Fruman*      DATE: 10/06/03

Laboratory Director

Certification numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/03, Expiration date: 06/30/04

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**Modified TO-3**  
**Foster Wheeler Environmental Corporation**  
**Workorder# 0310028B**

Three 6 Liter Summa Canister samples were received on October 01, 2003. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline and correspond to the range of hydrocarbons from C5 to C10. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L. See the data sheets for the reporting limits for TPH (Gasoline Range).

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-3</i>	<i>ATL Modifications</i>
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch <math>\leq 20</math> samples
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation $DL = A + 3.3S$ , where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

There were no analytical discrepancies.

**Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B - Compound present in laboratory blank greater than reporting limit.
- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.  
M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VO)03-54

ID#: 0310028B-03A

MODIFIED EPA METHOD TO-3

<b>File Name:</b>	<b>d100324</b>	<b>Date of Collection:</b>	<b>9/30/03</b>
<b>Dil. Factor:</b>	<b>53.6</b>	<b>Date of Analysis:</b>	<b>10/3/03 06:46 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppmv)</b>	<b>Rpt. Limit (uG/L)</b>	<b>Amount (ppmv)</b>	<b>Amount (uG/L)</b>
TPH (Gasoline Range)	1.3	5.6	440	1800

**Container Type: 6 Liter Summa Canister**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	141	75-150

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VO)03-55

ID#: 0310028B-04A

MODIFIED EPA METHOD TO-3

<b>File Name:</b>	<b>d100325</b>	<b>Date of Collection:</b>	<b>9/30/03</b>
<b>Dil. Factor:</b>	<b>1.34</b>	<b>Date of Analysis:</b>	<b>10/3/03 07:27 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppmv)</b>	<b>Rpt. Limit (uG/L)</b>	<b>Amount (ppmv)</b>	<b>Amount (uG/L)</b>
TPH (Gasoline Range)	0.034	0.14	Not Detected	Not Detected

**Container Type: 6 Liter Summa Canister**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	93	75-150

# AIR TOXICS LTD.

SAMPLE NAME: 16B(VO)03-26

ID#: 0310028B-05A

MODIFIED EPA METHOD TO-3

<b>File Name:</b>	<b>d100327</b>	<b>Date of Collection:</b>	<b>9/30/03</b>
<b>Dil. Factor:</b>	<b>6.44</b>	<b>Date of Analysis:</b>	<b>10/3/03 08:41 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppmv)</b>	<b>Rpt. Limit (uG/L)</b>	<b>Amount (ppmv)</b>	<b>Amount (uG/L)</b>
TPH (Gasoline Range)	0.16	0.67	20	86

**Container Type: 6 Liter Summa Canister**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	94	75-150

# AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0310028B-06A

MODIFIED EPA METHOD TO-3

File Name:	d100306	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/3/03 05:30 AM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.025	0.10	Not Detected	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	91	75-150

# AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0310028B-07A

MODIFIED EPA METHOD TO-3

<b>File Name:</b>	<b>d100330</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/3/03 10:24 PM</b>

<b>Compound</b>	<b>%Recovery</b>
TPH (Gasoline Range)	108

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	108	75-150

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This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

**WORK ORDER #: 0310460B**

Work Order Summary

**CLIENT:** Ms. Chris Joblon  
Tetra Tech FW/Foster Wheeler  
1 Oxford Valley #200  
2300 Lincoln Highway  
Langhorne, PA 19047

**BILL TO:** Ms. Sonya Staten  
Tetra Tech FW/Foster Wheeler  
1 Oxford Valley #200  
2300 Lincoln Highway  
Langhorne, PA 19047

**PHONE:** 215-702-4000      **P.O. #** 044014

**FAX:** 215-702-4045      **PROJECT #** NWS EARLE

**DATE RECEIVED:** 10/23/2003      **CONTACT:** Betty Chu

**DATE COMPLETED:** 11/5/2003

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	16A(VD)03-56	Modified TO-3	0.0 "Hg
02A	16A(VD)03-57	Modified TO-3	1.0 "Hg
03A	16B(VD)03-26	Modified TO-3	2.0 "Hg
04A	Lab Blank	Modified TO-3	NA
04B	Lab Blank	Modified TO-3	NA
05A	LCS	Modified TO-3	NA
05B	LCS	Modified TO-3	NA

CERTIFIED BY: *Sinda S. Truman*      DATE: 11/05/03  
Laboratory Director

Certification numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/03, Expiration date: 06/30/04

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**Modified TO-3**  
**Foster Wheeler Environmental Corporation**  
**Workorder# 0310460B**

Three 6 Liter Summa Canister samples were received on October 23, 2003. The laboratory performed analysis via modified EPA Method TO-3 for Total Petroleum Hydrocarbons (TPH). TPH was analyzed via GC/FID. The TPH results are calculated using the response of Gasoline. A molecular weight of 100 is used to convert the TPH ppmv result to ug/L. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. See the data sheets for the reporting limits for TPH.

<i>Requirement</i>	<i>TO-3</i>	<i>ATL Modifications</i>
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch <=/= 20 samples.
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation $DL = A + 3.3S$ , where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

There were no analytical discrepancies.

**Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B - Compound present in laboratory blank greater than reporting limit.
- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the detection limit.
- M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VD)03-56

ID#: 0310460B-01A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d102914	Date of Collection:	10/22/03
Dil. Factor:	59.6	Date of Analysis:	10/29/03 06:44 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (C5+ Hydrocarbons) ref. to Gasoline	1.5	6.2	800	3300

Q = Exceeds Quality Control limits, possibly due to matrix effects.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	161 Q	75-150

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VD)03-57

ID#: 0310460B-02A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d102913	Date of Collection:	10/22/03
Dil. Factor:	1.39	Date of Analysis:	10/29/03 05:56 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.035	0.14	0.47	2.0

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	97	75-150

# AIR TOXICS LTD.

SAMPLE NAME: 16B(VD)03-26

ID#: 0310460B-03A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d110505	Date of Collection:	10/22/03
Dil. Factor:	5.76	Date of Analysis:	11/5/03 11:48 AM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.14	0.60	20	85

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	93	75-150

# AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0310460B-04A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d102911	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/29/03 04:29 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.025	0.10	Not Detected	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	95	75-150

# AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0310460B-04B

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d110504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/5/03 11:00 AM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.025	0.10	Not Detected	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	93	75-150

# AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0310460B-05A

MODIFIED EPA METHOD TO-3 GC/FID

<b>File Name:</b>	<b>d102916</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/29/03 08:25 PM</b>

<b>Compound</b>	<b>%Recovery</b>
TPH (C5+ Hydrocarbons) ref. to Gasoline	108

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	112	75-150

# AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0310460B-05B

MODIFIED EPA METHOD TO-3 GC/FID

<b>File Name:</b>	<b>d110506</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 11/5/03 12:33 PM</b>

<b>Compound</b>	<b>%Recovery</b>
TPH (C5+ Hydrocarbons) ref. to Gasoline	105

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	111	75-150

## **Air Toxics Ltd. Introduces the Electronic Report**

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- Work order Summary;
- Laboratory Narrative;
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- Chain of Custody (copy).

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**E-mail to:samplereceiving@airtoxics.com**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0310460A

### Work Order Summary

<b>CLIENT:</b>	Ms. Chris Joblon Tetra Tech FW/Foster Wheeler 1 Oxford Valley #200 2300 Lincoln Highway Langhorne, PA 19047	<b>BILL TO:</b>	Ms. Sonya Staten Tetra Tech FW/Foster Wheeler 1 Oxford Valley #200 2300 Lincoln Highway Langhorne, PA 19047
<b>PHONE:</b>	215-702-4000	<b>P.O. #</b>	044014
<b>FAX:</b>	215-702-4045	<b>PROJECT #</b>	NWS EARLE
<b>DATE RECEIVED:</b>	10/23/03	<b>CONTACT:</b>	Betty Chu
<b>DATE COMPLETED:</b>	10/28/03		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	16A(VD)03-56	Modified TO-14A	0.0 "Hg
02A	16A(VD)03-57	Modified TO-14A	1.0 "Hg
03A	16B(VD)03-26	Modified TO-14A	2.0 "Hg
04A	Lab Blank	Modified TO-14A	NA
05A	CCV	Modified TO-14A	NA
06A	LCS	Modified TO-14A	NA

CERTIFIED BY:  DATE: 10/28/03

Laboratory Director

Certification numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892  
 Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/03, Expiration date: 06/30/04  
 Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards  
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**LABORATORY NARRATIVE**  
**Modified TO-14A**  
**Foster Wheeler Environmental Corporation**  
**Workorder# 0310460A**

Three 6 Liter Summa Canister samples were received on October 23, 2003. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-14A</i>	<i>ATL Modifications</i>
Continuing Calibration criteria	<= 30% Difference	<= 30% Difference with two allowed out to <= 40% Difference; flag and narrate outliers
Initial Calibration criteria	RSD<30%	RSD<=30%, two compounds allowed up to 40%.
Moisture control	Nafion Dryer	Multisorbent trap
Blank acceptance criteria	<0.20 ppbv	<Reporting Limit
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106
Dilutions for Initial Calibration	Dynamic dilutions or static using canisters	Syringe dilutions
BFB absolute abundance criteria	Within 10% of that from previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40% D
Sample Load Volume	400 mL	Varied to 200 mL

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

The following compounds, Chloroethane and Methyl tert-butyl ether, indicated low bias (less than 70% expected recovery) in the daily CCV analyzed on October 27, 2003. Associated non-detects in samples 16A(VD)03-56, 16A(VD)03-57 and 16B(VD)03-26 were flagged to indicate estimated results with low bias.

Dilution was performed on samples 16A(VD)03-56 and 16B(VD)03-26 due to the presence of high level non-target species.

The early eluting compound, Vinyl Chloride, in sample 16B(VD)03-26 had a retention time shift due to matrix interference. Spectra were confirmed by a check against the NIST library.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VD)03-56

ID#: 0310460A-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	<b>d102724</b>	<b>Date of Collection:</b>	<b>10/22/03</b>
<b>Dil. Factor:</b>	<b>383</b>	<b>Date of Analysis:</b>	<b>10/28/03 07:49 AM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (ppbv)</b>	<b>Amount (uG/m3)</b>
Freon 12	190	960	Not Detected	Not Detected
Freon 114	190	1400	Not Detected	Not Detected
Vinyl Chloride	190	500	Not Detected	Not Detected
Bromomethane	190	760	Not Detected	Not Detected
Chloroethane	190	510	Not Detected U J	Not Detected U J
Freon 11	190	1100	Not Detected	Not Detected
1,1-Dichloroethene	190	770	Not Detected	Not Detected
Freon 113	190	1500	Not Detected	Not Detected
Methylene Chloride	190	680	Not Detected	Not Detected
1,1-Dichloroethane	190	790	Not Detected	Not Detected
cis-1,2-Dichloroethene	190	770	Not Detected	Not Detected
Chloroform	190	950	Not Detected	Not Detected
1,1,1-Trichloroethane	190	1100	Not Detected	Not Detected
Carbon Tetrachloride	190	1200	Not Detected	Not Detected
Benzene	190	620	4700	15000
1,2-Dichloroethane	190	790	Not Detected	Not Detected
Trichloroethene	190	1000	Not Detected	Not Detected
1,2-Dichloropropane	190	900	Not Detected	Not Detected
cis-1,3-Dichloropropene	190	880	Not Detected	Not Detected
Toluene	190	730	430	1600
trans-1,3-Dichloropropene	190	880	Not Detected	Not Detected
1,1,2-Trichloroethane	190	1100	Not Detected	Not Detected
Tetrachloroethene	190	1300	Not Detected	Not Detected
1,2-Dibromoethane (EDB)	190	1500	Not Detected	Not Detected
Chlorobenzene	190	900	Not Detected	Not Detected
Ethyl Benzene	190	840	2600	12000
m,p-Xylene	190	840	8600	38000
o-Xylene	190	840	1300	5800
Styrene	190	830	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	190	1300	Not Detected	Not Detected
1,3,5-Trimethylbenzene	190	960	1700	8500
1,2,4-Trimethylbenzene	190	960	5500	28000
1,3-Dichlorobenzene	190	1200	Not Detected	Not Detected
1,4-Dichlorobenzene	190	1200	Not Detected	Not Detected
alpha-Chlorotoluene	190	1000	Not Detected	Not Detected
1,2-Dichlorobenzene	190	1200	Not Detected	Not Detected
1,3-Butadiene	190	430	Not Detected	Not Detected
Hexane	190	680	19000	68000
Cyclohexane	190	670	3200	11000
Heptane	190	800	6600	27000
Bromodichloromethane	190	1300	Not Detected	Not Detected
Dibromochloromethane	190	1600	Not Detected	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VD)03-56

ID#: 0310460A-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d102724	Date of Collection:	10/22/03
Dil. Factor:	383	Date of Analysis:	10/28/03 07:49 AM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Cumene	190	960	540	2700
Propylbenzene	190	960	1000	5300
Chloromethane	770	1600	Not Detected	Not Detected
1,2,4-Trichlorobenzene	770	5800	Not Detected	Not Detected
Hexachlorobutadiene	770	8300	Not Detected	Not Detected
Acetone	770	1800	Not Detected	Not Detected
Carbon Disulfide	770	2400	Not Detected	Not Detected
2-Propanol	770	1900	Not Detected	Not Detected
trans-1,2-Dichloroethene	770	3100	Not Detected	Not Detected
Vinyl Acetate	770	2700	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	770	2300	Not Detected	Not Detected
Tetrahydrofuran	770	2300	Not Detected	Not Detected
1,4-Dioxane	770	2800	Not Detected	Not Detected
4-Methyl-2-pentanone	770	3200	Not Detected	Not Detected
2-Hexanone	770	3200	Not Detected	Not Detected
Bromoform	770	8000	Not Detected	Not Detected
4-Ethyltoluene	770	3800	4300	22000
Methyl tert-butyl ether	770	2800	Not Detected U J	Not Detected U J
Ethanol	770	1500	Not Detected	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VD)03-57

ID#: 0310460A-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d102709	Date of Collection:	10/22/03
Dil. Factor:	1.39	Date of Analysis:	10/27/03 05:23 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.70	3.5	Not Detected	Not Detected
Freon 114	0.70	4.9	Not Detected	Not Detected
Vinyl Chloride	0.70	1.8	Not Detected	Not Detected
Bromomethane	0.70	2.7	Not Detected	Not Detected
Chloroethane	0.70	1.9	Not Detected U J	Not Detected U J
Freon 11	0.70	4.0	Not Detected	Not Detected
1,1-Dichloroethene	0.70	2.8	Not Detected	Not Detected
Freon 113	0.70	5.4	Not Detected	Not Detected
Methylene Chloride	0.70	2.4	1.0	3.7
1,1-Dichloroethane	0.70	2.8	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.70	2.8	Not Detected	Not Detected
Chloroform	0.70	3.4	Not Detected	Not Detected
1,1,1-Trichloroethane	0.70	3.8	Not Detected	Not Detected
Carbon Tetrachloride	0.70	4.4	Not Detected	Not Detected
Benzene	0.70	2.2	0.75	2.4
1,2-Dichloroethane	0.70	2.8	Not Detected	Not Detected
Trichloroethene	0.70	3.8	Not Detected	Not Detected
1,2-Dichloropropane	0.70	3.3	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.70	3.2	Not Detected	Not Detected
Toluene	0.70	2.7	Not Detected	Not Detected
trans-1,3-Dichloropropene	0.70	3.2	Not Detected	Not Detected
1,1,2-Trichloroethane	0.70	3.8	Not Detected	Not Detected
Tetrachloroethene	0.70	4.8	Not Detected	Not Detected
1,2-Dibromoethane (EDB)	0.70	5.4	Not Detected	Not Detected
Chlorobenzene	0.70	3.2	Not Detected	Not Detected
Ethyl Benzene	0.70	3.1	Not Detected	Not Detected
m,p-Xylene	0.70	3.1	1.1	4.8
o-Xylene	0.70	3.1	Not Detected	Not Detected
Styrene	0.70	3.0	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.70	4.8	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.70	3.5	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.70	3.5	Not Detected	Not Detected
1,3-Dichlorobenzene	0.70	4.2	Not Detected	Not Detected
1,4-Dichlorobenzene	0.70	4.2	Not Detected	Not Detected
alpha-Chlorotoluene	0.70	3.6	Not Detected	Not Detected
1,2-Dichlorobenzene	0.70	4.2	Not Detected	Not Detected
1,3-Butadiene	0.70	1.6	Not Detected	Not Detected
Hexane	0.70	2.5	2.5	9.0
Cyclohexane	0.70	2.4	Not Detected	Not Detected
Heptane	0.70	2.9	0.93	3.9
Bromodichloromethane	0.70	4.7	Not Detected	Not Detected
Dibromochloromethane	0.70	6.0	Not Detected	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VD)03-57

ID#: 0310460A-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	d102709	<b>Date of Collection:</b>	10/22/03
<b>Dil. Factor:</b>	1.39	<b>Date of Analysis:</b>	10/27/03 05:23 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Cumene	0.70	3.5	Not Detected	Not Detected
Propylbenzene	0.70	3.5	Not Detected	Not Detected
Chloromethane	2.8	5.8	Not Detected	Not Detected
1,2,4-Trichlorobenzene	2.8	21	Not Detected	Not Detected
Hexachlorobutadiene	2.8	30	Not Detected	Not Detected
Acetone	2.8	6.7	9.7	23
Carbon Disulfide	2.8	8.8	Not Detected	Not Detected
2-Propanol	2.8	6.9	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.8	11	Not Detected	Not Detected
Vinyl Acetate	2.8	9.9	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.8	8.3	Not Detected	Not Detected
Tetrahydrofuran	2.8	8.3	Not Detected	Not Detected
1,4-Dioxane	2.8	10	Not Detected	Not Detected
4-Methyl-2-pentanone	2.8	12	Not Detected	Not Detected
2-Hexanone	2.8	12	Not Detected	Not Detected
Bromoform	2.8	29	Not Detected	Not Detected
4-Ethyltoluene	2.8	14	Not Detected	Not Detected
Methyl tert-butyl ether	2.8	10	Not Detected U J	Not Detected U J
Ethanol	2.8	5.3	Not Detected	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

SAMPLE NAME: 16B(VD)03-26

ID#: 0310460A-03A

## MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	<b>d102710</b>	<b>Date of Collection:</b>	<b>10/22/03</b>
<b>Dil. Factor:</b>	<b>2.88</b>	<b>Date of Analysis:</b>	<b>10/27/03 06:04 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (ppbv)</b>	<b>Amount (uG/m3)</b>
Freon 12	1.4	7.2	Not Detected	Not Detected
Freon 114	1.4	10	Not Detected	Not Detected
Vinyl Chloride	1.4	3.7	54	140
Bromomethane	1.4	5.7	Not Detected	Not Detected
Chloroethane	1.4	3.9	Not Detected U J	Not Detected U J
Freon 11	1.4	8.2	200	1100
1,1-Dichloroethene	1.4	5.8	Not Detected	Not Detected
Freon 113	1.4	11	Not Detected	Not Detected
Methylene Chloride	1.4	5.1	Not Detected	Not Detected
1,1-Dichloroethane	1.4	5.9	Not Detected	Not Detected
cis-1,2-Dichloroethene	1.4	5.8	2.1	8.6
Chloroform	1.4	7.1	1.4 J	7.1 J
1,1,1-Trichloroethane	1.4	8.0	Not Detected	Not Detected
Carbon Tetrachloride	1.4	9.2	Not Detected	Not Detected
Benzene	1.4	4.7	8.3	27
1,2-Dichloroethane	1.4	5.9	Not Detected	Not Detected
Trichloroethene	1.4	7.9	Not Detected	Not Detected
1,2-Dichloropropane	1.4	6.8	Not Detected	Not Detected
cis-1,3-Dichloropropene	1.4	6.6	Not Detected	Not Detected
Toluene	1.4	5.5	3.6	14
trans-1,3-Dichloropropene	1.4	6.6	Not Detected	Not Detected
1,1,2-Trichloroethane	1.4	8.0	Not Detected	Not Detected
Tetrachloroethene	1.4	9.9	Not Detected	Not Detected
1,2-Dibromoethane (EDB)	1.4	11	Not Detected	Not Detected
Chlorobenzene	1.4	6.7	Not Detected	Not Detected
Ethyl Benzene	1.4	6.4	20	87
m,p-Xylene	1.4	6.4	61	270
o-Xylene	1.4	6.4	19	85
Styrene	1.4	6.2	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	1.4	10	Not Detected	Not Detected
1,3,5-Trimethylbenzene	1.4	7.2	59	290
1,2,4-Trimethylbenzene	1.4	7.2	180	930
1,3-Dichlorobenzene	1.4	8.8	Not Detected	Not Detected
1,4-Dichlorobenzene	1.4	8.8	Not Detected	Not Detected
alpha-Chlorotoluene	1.4	7.6	Not Detected	Not Detected
1,2-Dichlorobenzene	1.4	8.8	Not Detected	Not Detected
1,3-Butadiene	1.4	3.2	Not Detected	Not Detected
Hexane	1.4	5.2	21	74
Cyclohexane	1.4	5.0	27	96
Heptane	1.4	6.0	37	150
Bromodichloromethane	1.4	9.8	Not Detected	Not Detected
Dibromochloromethane	1.4	12	Not Detected	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: 16B(VD)03-26

ID#: 0310460A-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	d102710	<b>Date of Collection:</b>	10/22/03
<b>Dil. Factor:</b>	2.88	<b>Date of Analysis:</b>	10/27/03 06:04 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Cumene	1.4	7.2	11	53
Propylbenzene	1.4	7.2	20	100
Chloromethane	5.8	12	Not Detected	Not Detected
1,2,4-Trichlorobenzene	5.8	43	Not Detected	Not Detected
Hexachlorobutadiene	5.8	62	Not Detected	Not Detected
Acetone	5.8	14	18	43
Carbon Disulfide	5.8	18	Not Detected	Not Detected
2-Propanol	5.8	14	Not Detected	Not Detected
trans-1,2-Dichloroethene	5.8	23	Not Detected	Not Detected
Vinyl Acetate	5.8	21	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.8	17	Not Detected	Not Detected
Tetrahydrofuran	5.8	17	Not Detected	Not Detected
1,4-Dioxane	5.8	21	Not Detected	Not Detected
4-Methyl-2-pentanone	5.8	24	Not Detected	Not Detected
2-Hexanone	5.8	24	Not Detected	Not Detected
Bromoform	5.8	60	Not Detected	Not Detected
4-Ethyltoluene	5.8	29	110	530
Methyl tert-butyl ether	5.8	21	Not Detected U J	Not Detected U J
Ethanol	5.8	11	Not Detected	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	120	70-130

# AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0310460A-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d102706	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/27/03 02:52 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.50	2.5	Not Detected	Not Detected
Freon 114	0.50	3.6	Not Detected	Not Detected
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Bromomethane	0.50	2.0	Not Detected	Not Detected
Chloroethane	0.50	1.3	Not Detected U J	Not Detected U J
Freon 11	0.50	2.8	Not Detected	Not Detected
1,1-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Freon 113	0.50	3.9	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Carbon Tetrachloride	0.50	3.2	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
1,2-Dichloropropane	0.50	2.3	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.50	2.3	Not Detected	Not Detected
Toluene	0.50	1.9	Not Detected	Not Detected
trans-1,3-Dichloropropene	0.50	2.3	Not Detected	Not Detected
1,1,2-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
1,2-Dibromoethane (EDB)	0.50	3.9	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
Ethyl Benzene	0.50	2.2	Not Detected	Not Detected
m,p-Xylene	0.50	2.2	Not Detected	Not Detected
o-Xylene	0.50	2.2	Not Detected	Not Detected
Styrene	0.50	2.2	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.50	3.5	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.50	2.5	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.50	2.5	Not Detected	Not Detected
1,3-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,3-Butadiene	0.50	1.1	Not Detected	Not Detected
Hexane	0.50	1.8	Not Detected	Not Detected
Cyclohexane	0.50	1.7	Not Detected	Not Detected
Heptane	0.50	2.1	Not Detected	Not Detected
Bromodichloromethane	0.50	3.4	Not Detected	Not Detected
Dibromochloromethane	0.50	4.3	Not Detected	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0310460A-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d102706	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/27/03 02:52 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Cumene	0.50	2.5	Not Detected	Not Detected
Propylbenzene	0.50	2.5	Not Detected	Not Detected
Chloromethane	2.0	4.2	Not Detected	Not Detected
1,2,4-Trichlorobenzene	2.0	15	Not Detected	Not Detected
Hexachlorobutadiene	2.0	22	Not Detected	Not Detected
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
2-Propanol	2.0	5.0	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
Vinyl Acetate	2.0	7.2	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Tetrahydrofuran	2.0	6.0	Not Detected	Not Detected
1,4-Dioxane	2.0	7.3	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
2-Hexanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
4-Ethyltoluene	2.0	10	Not Detected	Not Detected
Methyl tert-butyl ether	2.0	7.3	Not Detected U J	Not Detected U J
Ethanol	2.0	3.8	Not Detected	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0310460A-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d102703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/27/03 11:05 AM

Compound	%Recovery
Freon 12	89
Freon 114	104
Vinyl Chloride	82
Bromomethane	106
Chloroethane	67 Q
Freon 11	86
1,1-Dichloroethene	85
Freon 113	79
Methylene Chloride	93
1,1-Dichloroethane	84
cis-1,2-Dichloroethene	87
Chloroform	85
1,1,1-Trichloroethane	86
Carbon Tetrachloride	106
Benzene	87
1,2-Dichloroethane	96
Trichloroethene	82
1,2-Dichloropropane	94
cis-1,3-Dichloropropene	97
Toluene	87
trans-1,3-Dichloropropene	103
1,1,2-Trichloroethane	91
Tetrachloroethene	92
1,2-Dibromoethane (EDB)	92
Chlorobenzene	87
Ethyl Benzene	88
m,p-Xylene	88
o-Xylene	86
Styrene	86
1,1,2,2-Tetrachloroethane	96
1,3,5-Trimethylbenzene	82
1,2,4-Trimethylbenzene	83
1,3-Dichlorobenzene	83
1,4-Dichlorobenzene	85
alpha-Chlorotoluene	88
1,2-Dichlorobenzene	80
1,3-Butadiene	85
Hexane	84
Cyclohexane	82
Heptane	115
Bromodichloromethane	98
Dibromochloromethane	104

# AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0310460A-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d102703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/27/03 11:05 AM

Compound	%Recovery
Cumene	88
Propylbenzene	88
Chloromethane	102
1,2,4-Trichlorobenzene	92
Hexachlorobutadiene	85
Acetone	95
Carbon Disulfide	82
2-Propanol	96
trans-1,2-Dichloroethene	79
Vinyl Acetate	79
2-Butanone (Methyl Ethyl Ketone)	104
Tetrahydrofuran	104
1,4-Dioxane	90
4-Methyl-2-pentanone	120
2-Hexanone	124
Bromoform	109
4-Ethyltoluene	92
Methyl tert-butyl ether	67 Q
Ethanol	85

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

# AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0310460A-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d102705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/27/03 12:56 PM

Compound	%Recovery
Freon 12	107
Freon 114	123
Vinyl Chloride	100
Bromomethane	122
Chloroethane	75
Freon 11	94
1,1-Dichloroethene	90
Freon 113	87
Methylene Chloride	103
1,1-Dichloroethane	82
cis-1,2-Dichloroethene	97
Chloroform	92
1,1,1-Trichloroethane	92
Carbon Tetrachloride	118
Benzene	97
1,2-Dichloroethane	104
Trichloroethene	92
1,2-Dichloropropane	98
cis-1,3-Dichloropropene	101
Toluene	95
trans-1,3-Dichloropropene	107
1,1,2-Trichloroethane	96
Tetrachloroethene	101
1,2-Dibromoethane (EDB)	88
Chlorobenzene	94
Ethyl Benzene	92
m,p-Xylene	87
o-Xylene	86
Styrene	98
1,1,2,2-Tetrachloroethane	96
1,3,5-Trimethylbenzene	77
1,2,4-Trimethylbenzene	74
1,3-Dichlorobenzene	85
1,4-Dichlorobenzene	82
alpha-Chlorotoluene	100
1,2-Dichlorobenzene	81
1,3-Butadiene	103
Hexane	89
Cyclohexane	89
Heptane	116
Bromodichloromethane	94
Dibromochloromethane	106

# AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0310460A-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d102705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/27/03 12:56 PM

Compound	%Recovery
Cumene	97
Propylbenzene	72
Chloromethane	124
1,2,4-Trichlorobenzene	83
Hexachlorobutadiene	84
Acetone	98
Carbon Disulfide	89
2-Propanol	100
trans-1,2-Dichloroethene	91
Vinyl Acetate	67
2-Butanone (Methyl Ethyl Ketone)	110
Tetrahydrofuran	111
1,4-Dioxane	96
4-Methyl-2-pentanone	120
2-Hexanone	119
Bromoform	101
4-Ethyltoluene	78
Methyl tert-butyl ether	63
Ethanol	109

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130

## **Air Toxics Ltd. Introduces the Electronic Report**

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

**180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630**

**(916) 985-1000 .FAX (916) 985-1020**

**Hours 8:00 A.M to 6:00 P.M. Pacific**

**E-mail to:samplereceiving@airtoxics.com**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0312176A

### Work Order Summary

<b>CLIENT:</b>	Ms. Chris Joblon Tetra Tech FW/Foster Wheeler 1 Oxford Valley #200 2300 Lincoln Highway Langhorne, PA 19047	<b>BILL TO:</b>	Ms. Sonya Staten Tetra Tech FW/Foster Wheeler 1 Oxford Valley #200 2300 Lincoln Highway Langhorne, PA 19047
<b>PHONE:</b>	215-702-4000	<b>P.O. #</b>	044014
<b>FAX:</b>	215-702-4045	<b>PROJECT #</b>	NWS EARLE
<b>DATE RECEIVED:</b>	12/9/03	<b>CONTACT:</b>	Betty Chu
<b>DATE COMPLETED:</b>	12/12/03		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	16A(VD)03-58	Modified TO-14A	0.4 psi
02A	16A(VD)03-59	Modified TO-14A	0.0 "Hg
03A	16B(VD)03-28	Modified TO-14A	0.4 psi
04A	Lab Blank	Modified TO-14A	NA
05A	CCV	Modified TO-14A	NA
06A	LCS	Modified TO-14A	NA

CERTIFIED BY: 

DATE: 12/12/03

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/03, Expiration date: 06/30/04

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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

**LABORATORY NARRATIVE**  
**Modified TO-14A**  
**Foster Wheeler Environmental Corporation**  
**Workorder# 0312176A**

Three 6 Liter Summa Canister samples were received on December 09, 2003. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-14A</i>	<i>ATL Modifications</i>
Continuing Calibration criteria	</= 30% Difference	</= 30% Difference with two allowed out to </= 40% Difference; flag and narrate outliers
Initial Calibration criteria	RSD<30%	RSD</=30%, two compounds allowed up to 40%.
Moisture control	Nafion Dryer	Multisorbent trap
Blank acceptance criteria	<0.20 ppbv	<Reporting Limit
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106
Dilutions for Initial Calibration	Dynamic dilutions or static using canisters	Syringe dilutions
BFB absolute abundance criteria	Within 10% of that from previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40% D
Sample Load Volume	400 mL	Varied to 200 mL

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

The following compounds, Chloroethane and Methyl tert-butyl ether, indicated low bias (less than 70% expected recovery) in the daily CCV analyzed on December 11, 2003. Associated non-detects in samples 16A(VD)03-58, 16A(VD)03-59 and 16B(VD)03-28 were flagged to indicate estimated results with low bias.

Dilution was performed on samples 16A(VD)03-58 and 16A(VD)03-59 due to the presence of high level non-target species.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no performed).

J - Estimated value.

- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VD)03-58

ID#: 0312176A-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	b121115	Date of Collection:	12/8/03
Dil. Factor:	2.60	Date of Analysis:	12/11/03 08:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.3	Not Detected	6.5	Not Detected
Freon 114	1.3	Not Detected	9.2	Not Detected
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
Bromomethane	1.3	Not Detected	5.1	Not Detected
Chloroethane	1.3	Not Detected U J	3.5	Not Detected U J
Freon 11	1.3	Not Detected	7.4	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Freon 113	1.3	Not Detected	10	Not Detected
Methylene Chloride	1.3	Not Detected	4.6	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.3	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Chloroform	1.3	Not Detected	6.4	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.3	Not Detected
Benzene	1.3	14	4.2	47
1,2-Dichloroethane	1.3	Not Detected	5.3	Not Detected
Trichloroethene	1.3	Not Detected	7.1	Not Detected
1,2-Dichloropropane	1.3	Not Detected	6.1	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	6.0	Not Detected
Toluene	1.3	1.4	5.0	5.4
trans-1,3-Dichloropropene	1.3	Not Detected	6.0	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Tetrachloroethene	1.3	Not Detected	9.0	Not Detected
1,2-Dibromoethane (EDB)	1.3	Not Detected	10	Not Detected
Chlorobenzene	1.3	Not Detected	6.1	Not Detected
Ethyl Benzene	1.3	1.6	5.7	7.2
m,p-Xylene	1.3	5.0	5.7	22
o-Xylene	1.3	Not Detected	5.7	Not Detected
Styrene	1.3	Not Detected	5.6	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	9.1	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.5	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.5	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
alpha-Chlorotoluene	1.3	Not Detected	6.8	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
1,3-Butadiene	1.3	Not Detected	2.9	Not Detected
Hexane	1.3	130	4.6	470
Cyclohexane	1.3	38	4.5	130
Heptane	1.3	42	5.4	170
Bromodichloromethane	1.3	Not Detected	8.8	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VD)03-58

ID#: 0312176A-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	<b>b121115</b>	<b>Date of Collection:</b>	<b>12/8/03</b>
<b>Dil. Factor:</b>	<b>2.60</b>	<b>Date of Analysis:</b>	<b>12/11/03 08:02 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Cumene	1.3	Not Detected	6.5	Not Detected
Propylbenzene	1.3	Not Detected	6.5	Not Detected
Chloromethane	5.2	Not Detected	11	Not Detected
1,2,4-Trichlorobenzene	5.2	Not Detected	39	Not Detected
Hexachlorobutadiene	5.2	Not Detected	56	Not Detected
Acetone	5.2	5.4	12	13
Carbon Disulfide	5.2	Not Detected	16	Not Detected
2-Propanol	5.2	Not Detected	13	Not Detected
trans-1,2-Dichloroethene	5.2	Not Detected	21	Not Detected
Vinyl Acetate	5.2	Not Detected	19	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.2	Not Detected	16	Not Detected
Tetrahydrofuran	5.2	Not Detected	16	Not Detected
1,4-Dioxane	5.2	Not Detected	19	Not Detected
4-Methyl-2-pentanone	5.2	Not Detected	22	Not Detected
2-Hexanone	5.2	Not Detected	22	Not Detected
Bromoform	5.2	Not Detected	55	Not Detected
4-Ethyltoluene	5.2	Not Detected	26	Not Detected
Methyl tert-butyl ether	5.2	Not Detected U J	19	Not Detected U J
Ethanol	5.2	Not Detected	10	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

## Container Type: 6 Liter Summa Canister

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VD)03-59

ID#: 0312176A-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	b121116	Date of Collection:	12/8/03
Dil. Factor:	10.7	Date of Analysis:	12/11/03 08:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	5.4	Not Detected	27	Not Detected
Freon 114	5.4	Not Detected	38	Not Detected
Vinyl Chloride	5.4	Not Detected	14	Not Detected
Bromomethane	5.4	Not Detected	21	Not Detected
Chloroethane	5.4	Not Detected U J	14	Not Detected U J
Freon 11	5.4	Not Detected	30	Not Detected
1,1-Dichloroethene	5.4	Not Detected	22	Not Detected
Freon 113	5.4	Not Detected	42	Not Detected
Methylene Chloride	5.4	Not Detected	19	Not Detected
1,1-Dichloroethane	5.4	Not Detected	22	Not Detected
cis-1,2-Dichloroethene	5.4	Not Detected	22	Not Detected
Chloroform	5.4	Not Detected	26	Not Detected
1,1,1-Trichloroethane	5.4	Not Detected	30	Not Detected
Carbon Tetrachloride	5.4	Not Detected	34	Not Detected
Benzene	5.4	Not Detected	17	Not Detected
1,2-Dichloroethane	5.4	Not Detected	22	Not Detected
Trichloroethene	5.4	Not Detected	29	Not Detected
1,2-Dichloropropane	5.4	Not Detected	25	Not Detected
cis-1,3-Dichloropropene	5.4	Not Detected	25	Not Detected
Toluene	5.4	Not Detected	20	Not Detected
trans-1,3-Dichloropropene	5.4	Not Detected	25	Not Detected
1,1,2-Trichloroethane	5.4	Not Detected	30	Not Detected
Tetrachloroethene	5.4	Not Detected	37	Not Detected
1,2-Dibromoethane (EDB)	5.4	Not Detected	42	Not Detected
Chlorobenzene	5.4	Not Detected	25	Not Detected
Ethyl Benzene	5.4	Not Detected	24	Not Detected
m,p-Xylene	5.4	Not Detected	24	Not Detected
o-Xylene	5.4	Not Detected	24	Not Detected
Styrene	5.4	Not Detected	23	Not Detected
1,1,2,2-Tetrachloroethane	5.4	Not Detected	37	Not Detected
1,3,5-Trimethylbenzene	5.4	Not Detected	27	Not Detected
1,2,4-Trimethylbenzene	5.4	Not Detected	27	Not Detected
1,3-Dichlorobenzene	5.4	Not Detected	33	Not Detected
1,4-Dichlorobenzene	5.4	Not Detected	33	Not Detected
alpha-Chlorotoluene	5.4	Not Detected	28	Not Detected
1,2-Dichlorobenzene	5.4	Not Detected	33	Not Detected
1,3-Butadiene	5.4	Not Detected	12	Not Detected
Hexane	5.4	Not Detected	19	Not Detected
Cyclohexane	5.4	Not Detected	19	Not Detected
Heptane	5.4	Not Detected	22	Not Detected
Bromodichloromethane	5.4	Not Detected	36	Not Detected
Dibromochloromethane	5.4	Not Detected	46	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VD)03-59

ID#: 0312176A-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	b121116	<b>Date of Collection:</b> 12/8/03
<b>Dil. Factor:</b>	10.7	<b>Date of Analysis:</b> 12/11/03 08:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Cumene	5.4	Not Detected	27	Not Detected
Propylbenzene	5.4	Not Detected	27	Not Detected
Chloromethane	21	Not Detected	45	Not Detected
1,2,4-Trichlorobenzene	21	Not Detected	160	Not Detected
Hexachlorobutadiene	21	Not Detected	230	Not Detected
Acetone	21	Not Detected	52	Not Detected
Carbon Disulfide	21	Not Detected	68	Not Detected
2-Propanol	21	Not Detected	53	Not Detected
trans-1,2-Dichloroethene	21	Not Detected	86	Not Detected
Vinyl Acetate	21	Not Detected	76	Not Detected
2-Butanone (Methyl Ethyl Ketone)	21	Not Detected	64	Not Detected
Tetrahydrofuran	21	Not Detected	64	Not Detected
1,4-Dioxane	21	Not Detected	78	Not Detected
4-Methyl-2-pentanone	21	Not Detected	89	Not Detected
2-Hexanone	21	Not Detected	89	Not Detected
Bromoform	21	Not Detected	220	Not Detected
4-Ethyltoluene	21	Not Detected	110	Not Detected
Methyl tert-butyl ether	21	Not Detected U J	78	Not Detected U J
Ethanol	21	Not Detected	41	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

SAMPLE NAME: 16B(VD)03-28

ID#: 0312176A-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	b121118	Date of Collection:	12/8/03
Dil. Factor:	34.7	Date of Analysis:	12/11/03 10:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	17	Not Detected	87	Not Detected
Freon 114	17	Not Detected	120	Not Detected
Vinyl Chloride	17	23	45	59
Bromomethane	17	Not Detected	68	Not Detected
Chloroethane	17	Not Detected U J	46	Not Detected U J
Freon 11	17	190	99	1100
1,1-Dichloroethene	17	Not Detected	70	Not Detected
Freon 113	17	Not Detected	140	Not Detected
Methylene Chloride	17	Not Detected	61	Not Detected
1,1-Dichloroethane	17	Not Detected	71	Not Detected
cis-1,2-Dichloroethene	17	Not Detected	70	Not Detected
Chloroform	17	Not Detected	86	Not Detected
1,1,1-Trichloroethane	17	Not Detected	96	Not Detected
Carbon Tetrachloride	17	Not Detected	110	Not Detected
Benzene	17	51	56	160
1,2-Dichloroethane	17	Not Detected	71	Not Detected
Trichloroethene	17	Not Detected	95	Not Detected
1,2-Dichloropropane	17	Not Detected	81	Not Detected
cis-1,3-Dichloropropene	17	Not Detected	80	Not Detected
Toluene	17	48	66	190
trans-1,3-Dichloropropene	17	Not Detected	80	Not Detected
1,1,2-Trichloroethane	17	Not Detected	96	Not Detected
Tetrachloroethene	17	Not Detected	120	Not Detected
1,2-Dibromoethane (EDB)	17	Not Detected	140	Not Detected
Chlorobenzene	17	Not Detected	81	Not Detected
Ethyl Benzene	17	1200	76	5300
m,p-Xylene	17	4100	76	18000
o-Xylene	17	990	76	4400
Styrene	17	Not Detected	75	Not Detected
1,1,2,2-Tetrachloroethane	17	Not Detected	120	Not Detected
1,3,5-Trimethylbenzene	17	1100	87	5500
1,2,4-Trimethylbenzene	17	3300	87	16000
1,3-Dichlorobenzene	17	Not Detected	110	Not Detected
1,4-Dichlorobenzene	17	Not Detected	110	Not Detected
alpha-Chlorotoluene	17	Not Detected	91	Not Detected
1,2-Dichlorobenzene	17	Not Detected	110	Not Detected
1,3-Butadiene	17	Not Detected	39	Not Detected
Hexane	17	130	62	460
Cyclohexane	17	270	61	940
Heptane	17	500	72	2100
Bromodichloromethane	17	Not Detected	120	Not Detected
Dibromochloromethane	17	Not Detected	150	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: 16B(VD)03-28

ID#: 0312176A-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	b121118	Date of Collection: 12/8/03
Dil. Factor:	34.7	Date of Analysis: 12/11/03 10:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Cumene	17	440	87	2200
Propylbenzene	17	650	87	3200
Chloromethane	69	Not Detected	140	Not Detected
1,2,4-Trichlorobenzene	69	Not Detected	520	Not Detected
Hexachlorobutadiene	69	Not Detected	750	Not Detected
Acetone	69	Not Detected	170	Not Detected
Carbon Disulfide	69	Not Detected	220	Not Detected
2-Propanol	69	Not Detected	170	Not Detected
trans-1,2-Dichloroethene	69	Not Detected	280	Not Detected
Vinyl Acetate	69	Not Detected	250	Not Detected
2-Butanone (Methyl Ethyl Ketone)	69	2100	210	6400
Tetrahydrofuran	69	1100	210	3200
1,4-Dioxane	69	Not Detected	250	Not Detected
4-Methyl-2-pentanone	69	Not Detected	290	Not Detected
2-Hexanone	69	Not Detected	290	Not Detected
Bromoform	69	Not Detected	730	Not Detected
4-Ethyltoluene	69	2700	350	14000
Methyl tert-butyl ether	69	Not Detected U J	250	Not Detected U J
Ethanol	69	Not Detected	130	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	109	70-130

# AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0312176A-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	b121105	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/11/03 11:18 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.6	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Bromomethane	0.50	Not Detected	2.0	Not Detected
Chloroethane	0.50	Not Detected U J	1.3	Not Detected U J
Freon 11	0.50	Not Detected	2.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.9	Not Detected
Methylene Chloride	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.5	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.2	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.9	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Heptane	0.50	Not Detected	2.1	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
Dibromochloromethane	0.50	Not Detected	4.3	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0312176A-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	b121105	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/11/03 11:18 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Cumene	0.50	Not Detected	2.5	Not Detected
Propylbenzene	0.50	Not Detected	2.5	Not Detected
Chloromethane	2.0	Not Detected	4.2	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	22	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
Carbon Disulfide	2.0	Not Detected	6.3	Not Detected
2-Propanol	2.0	Not Detected	5.0	Not Detected
trans-1,2-Dichloroethene	2.0	Not Detected	8.0	Not Detected
Vinyl Acetate	2.0	Not Detected	7.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	6.0	Not Detected
Tetrahydrofuran	2.0	Not Detected	6.0	Not Detected
1,4-Dioxane	2.0	Not Detected	7.3	Not Detected
4-Methyl-2-pentanone	2.0	Not Detected	8.3	Not Detected
2-Hexanone	2.0	Not Detected	8.3	Not Detected
Bromoform	2.0	Not Detected	21	Not Detected
4-Ethyltoluene	2.0	Not Detected	10	Not Detected
Methyl tert-butyl ether	2.0	Not Detected U J	7.3	Not Detected U J
Ethanol	2.0	Not Detected	3.8	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0312176A-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	b121102	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/11/03 08:35 AM

Compound	%Recovery
Freon 12	118
Freon 114	90
Vinyl Chloride	106
Bromomethane	101
Chloroethane	69 Q
Freon 11	98
1,1-Dichloroethene	93
Freon 113	92
Methylene Chloride	91
1,1-Dichloroethane	96
cis-1,2-Dichloroethene	97
Chloroform	103
1,1,1-Trichloroethane	104
Carbon Tetrachloride	113
Benzene	93
1,2-Dichloroethane	102
Trichloroethene	100
1,2-Dichloropropane	98
cis-1,3-Dichloropropene	101
Toluene	99
trans-1,3-Dichloropropene	103
1,1,2-Trichloroethane	101
Tetrachloroethene	100
1,2-Dibromoethane (EDB)	102
Chlorobenzene	96
Ethyl Benzene	100
m,p-Xylene	98
o-Xylene	102
Styrene	106
1,1,2,2-Tetrachloroethane	98
1,3,5-Trimethylbenzene	107
1,2,4-Trimethylbenzene	109
1,3-Dichlorobenzene	105
1,4-Dichlorobenzene	104
alpha-Chlorotoluene	118
1,2-Dichlorobenzene	111
1,3-Butadiene	83
Hexane	95
Cyclohexane	102
Heptane	105
Bromodichloromethane	106
Dibromochloromethane	110

# AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0312176A-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	b121102	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/11/03 08:35 AM

Compound	%Recovery
Cumene	103
Propylbenzene	101
Chloromethane	97
1,2,4-Trichlorobenzene	102
Hexachlorobutadiene	107
Acetone	82
Carbon Disulfide	91
2-Propanol	90
trans-1,2-Dichloroethene	94
Vinyl Acetate	92
2-Butanone (Methyl Ethyl Ketone)	97
Tetrahydrofuran	94
1,4-Dioxane	100
4-Methyl-2-pentanone	101
2-Hexanone	107
Bromoform	112
4-Ethyltoluene	105
Methyl tert-butyl ether	69 Q
Ethanol	98

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	105	70-130

# AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0312176A-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	b121103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/11/03 09:37 AM

Compound	%Recovery
Freon 12	129
Freon 114	102
Vinyl Chloride	123
Bromomethane	112
Chloroethane	87
Freon 11	101
1,1-Dichloroethene	94
Freon 113	96
Methylene Chloride	93
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	106
Chloroform	106
1,1,1-Trichloroethane	103
Carbon Tetrachloride	117
Benzene	102
1,2-Dichloroethane	108
Trichloroethene	108
1,2-Dichloropropane	101
cis-1,3-Dichloropropene	100
Toluene	108
trans-1,3-Dichloropropene	110
1,1,2-Trichloroethane	100
Tetrachloroethene	106
1,2-Dibromoethane (EDB)	93
Chlorobenzene	97
Ethyl Benzene	100
m,p-Xylene	96
o-Xylene	95
Styrene	112
1,1,2,2-Tetrachloroethane	93
1,3,5-Trimethylbenzene	86
1,2,4-Trimethylbenzene	81
1,3-Dichlorobenzene	88
1,4-Dichlorobenzene	80
alpha-Chlorotoluene	100
1,2-Dichlorobenzene	84
1,3-Butadiene	93
Hexane	101
Cyclohexane	108
Heptane	103
Bromodichloromethane	102
Dibromochloromethane	101

# AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0312176A-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

<b>File Name:</b>	<b>b121103</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 12/11/03 09:37 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Cumene	105
Propylbenzene	74
Chloromethane	104
1,2,4-Trichlorobenzene	88
Hexachlorobutadiene	86
Acetone	93
Carbon Disulfide	101
2-Propanol	100
trans-1,2-Dichloroethene	109
Vinyl Acetate	103
2-Butanone (Methyl Ethyl Ketone)	110
Tetrahydrofuran	104
1,4-Dioxane	110
4-Methyl-2-pentanone	109
2-Hexanone	101
Bromoform	83
4-Ethyltoluene	73
Methyl tert-butyl ether	84
Ethanol	109

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

## **Air Toxics Ltd. Introduces the Electronic Report**

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

**180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630**

**(916) 985-1000 .FAX (916) 985-1020**

**Hours 8:00 A.M to 6:00 P.M. Pacific**

**E-mail to:samplereceiving@airtoxics.com**

**WORK ORDER #: 0312176B**

Work Order Summary

**CLIENT:** Ms. Chris Joblon  
Tetra Tech FW/Foster Wheeler  
1 Oxford Valley #200  
2300 Lincoln Highway  
Langhorne, PA 19047

**PHONE:** 215-702-4000

**FAX:** 215-702-4045

**DATE RECEIVED:** 12/9/03

**DATE COMPLETED:** 12/12/03

**BILL TO:** Ms. Sonya Staten  
Tetra Tech FW/Foster Wheeler  
1 Oxford Valley #200  
2300 Lincoln Highway  
Langhorne, PA 19047

**P.O. #** 044014

**PROJECT #** NWS EARLE

**CONTACT:** Betty Chu

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	16A(VD)03-58	Modified TO-3	0.4 psi
02A	16A(VD)03-59	Modified TO-3	0.0 "Hg
03A	16B(VD)03-28	Modified TO-3	0.4 psi
04A	Lab Blank	Modified TO-3	NA
05A	LCS	Modified TO-3	NA

CERTIFIED BY: *Sinda J. Freeman*

DATE: 12/12/03

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/03, Expiration date: 06/30/04

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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**LABORATORY NARRATIVE**  
**Modified TO-3**  
**Foster Wheeler Environmental Corporation**  
**Workorder# 0312176B**

Three 6 Liter Summa Canister samples were received on December 09, 2003. The laboratory performed analysis via modified EPA Method TO-3 for Total Petroleum Hydrocarbons (TPH) via GC/FID. The TPH results are calculated using the response of Gasoline. A molecular weight of 100 is used to convert the TPH ppmv result to ug/L. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. See the data sheets for the reporting limits.

<i>Requirement</i>	<i>TO-3</i>	<i>ATL Modifications</i>
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch <=/ 20 samples.
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation $DL = A + 3.3S$ , where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

There were no analytical discrepancies.

**Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B - Compound present in laboratory blank greater than reporting limit.
- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the detection limit.
- M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VD)03-58

ID#: 0312176B-01A

MODIFIED EPA METHOD TO-3 GC/FID

<b>File Name:</b>	<b>d121104</b>	<b>Date of Collection:</b>	<b>12/8/03</b>
<b>Dil. Factor:</b>	<b>1.30</b>	<b>Date of Analysis:</b>	<b>12/11/03 12:29 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppmv)</b>	<b>Rpt. Limit (uG/L)</b>	<b>Amount (ppmv)</b>	<b>Amount (uG/L)</b>
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.032	0.14	4.6	19

**Container Type: 6 Liter Summa Canister**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	97	75-150

# AIR TOXICS LTD.

SAMPLE NAME: 16A(VD)03-59

ID#: 0312176B-02A

MODIFIED EPA METHOD TO-3 GC/FID

<b>File Name:</b>	d121105	<b>Date of Collection:</b>	12/8/03
<b>Dil. Factor:</b>	1.34	<b>Date of Analysis:</b>	12/11/03 01:05 PM

<b>Compound</b>	<b>Rpt. Limit (ppmv)</b>	<b>Rpt. Limit (uG/L)</b>	<b>Amount (ppmv)</b>	<b>Amount (uG/L)</b>
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.034	0.14	5.5	23

**Container Type: 6 Liter Summa Canister**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	86	75-150

# AIR TOXICS LTD.

SAMPLE NAME: 16B(VD)03-28

ID#: 0312176B-03A

MODIFIED EPA METHOD TO-3 GC/FID

<b>File Name:</b>	d121106	<b>Date of Collection:</b>	12/8/03
<b>Dil. Factor:</b>	17.3	<b>Date of Analysis:</b>	12/11/03 01:40 PM

<b>Compound</b>	<b>Rpt. Limit (ppmv)</b>	<b>Rpt. Limit (uG/L)</b>	<b>Amount (ppmv)</b>	<b>Amount (uG/L)</b>
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.43	1.8	210	870

**Container Type: 6 Liter Summa Canister**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	90	75-150

# AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0312176B-04A

MODIFIED EPA METHOD TO-3 GC/FID

<b>File Name:</b>	<b>d121103</b>	<b>Date of Collection:</b>	<b>NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b>	<b>12/11/03 11:14 AM</b>

<b>Compound</b>	<b>Rpt. Limit (ppmv)</b>	<b>Rpt. Limit (uG/L)</b>	<b>Amount (ppmv)</b>	<b>Amount (uG/L)</b>
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.025	0.10	Not Detected	Not Detected

Container Type: NA - Not Applicable

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	86	75-150

# AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0312176B-05A

MODIFIED EPA METHOD TO-3 GC/FID

<b>File Name:</b>	<b>d121108</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 12/11/03 04:08 PM</b>

<b>Compound</b>	<b>%Recovery</b>
TPH (C5+ Hydrocarbons) ref. to Gasoline	109

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	101	75-150

APPENDIX D  
ANALYTICAL RESULTS FOR EFFLUENT SAMPLES

NWS-EARLE  
 BIOSLURPER UNIT #1 AND #2  
 TPH EXTRACTED VIA GROUNDWATER TREATMENT

<b>BIOSLURPER UNIT 1</b>	
TPH INFLUENT* (mg/L):	152
TPH EFFLUENT* (mg/L):	0
GALLONS GROUNDWATER TREATED:	13448
* as per analytical average if more than one sample	9/30/2003
	17.06 = POUNDS OF TPH

<b>BIOSLURPER UNIT 2</b>	
TPH INFLUENT* (mg/L):	6.42
TPH EFFLUENT* (mg/L):	0
GALLONS GROUNDWATER TREATED:	2924
* as per analytical average if more than one sample	9/30/2003
	0.16 = POUNDS OF TPH

POUNDS OF TPH=

$$\frac{\text{Gallons Groundwater Treated} * (3.785 \text{ L/gal}) * (\text{TPH INFLUENT (mg/L)} - \text{TPH EFFLUENT (mg/l)}) * 0.001 \text{g/mg} * 0.002205 \text{ pounds/g}}{}$$

NWS-EARLE  
 BIOSLURPER UNIT #1 AND #2  
 TPH EXTRACTED VIA GROUNDWATER TREATMENT

<b>BIOSLURPER UNIT 1</b>	
TPH INFLUENT* (mg/L):	129
TPH EFFLUENT* (mg/L):	0
GALLONS GROUNDWATER TREATED:	13615
* as per analytical average if more than one sample	10/22/2003
	14.66 =POUNDS OF TPH

<b>BIOSLURPER UNIT 2</b>	
TPH INFLUENT* (mg/L):	27.5
TPH EFFLUENT* (mg/L):	0
GALLONS GROUNDWATER TREATED:	1190
* as per analytical average if more than one sample	10/22/2003
	0.27 =POUNDS OF TPH

POUNDS OF TPH=  

$$\frac{\text{Gallons Groundwater Treated} * (3.785 \text{ L/gal}) * (\text{TPH INFLUENT (mg/L)} - \text{TPH EFFLUENT (mg/l)}) * 0.001 \text{g/mg} * 0.002205 \text{ pounds/g}}{1}$$

NWS-EARLE  
 BIOSLURPER UNIT #1 AND #2  
 TPH EXTRACTED VIA GROUNDWATER TREATMENT

<b>BIOSLURPER UNIT 1</b>	
TPH INFLUENT* (mg/L):	
TPH EFFLUENT* (mg/L):	
GALLONS GROUNDWATER TREATED:	1984
* as per analytical average if more than one sample	<b>no sample</b>
	<b>0.00</b> =POUNDS OF TPH

<b>BIOSLURPER UNIT 2</b>	
TPH INFLUENT* (mg/L):	3.05
TPH EFFLUENT* (mg/L):	0
GALLONS GROUNDWATER TREATED:	1103
* as per analytical average if more than one sample	<b>12/8/2003</b>
	<b>0.03</b> =POUNDS OF TPH

POUNDS OF TPH=  

$$\text{Gallons Groundwater Treated} * (3.785 \text{ L/gal}) * (\text{TPH INFLUENT (mg/L)} - \text{TPH EFFLUENT (mg/l)}) * 0.001 \text{g/mg} * 0.002205 \text{ pounds/g}$$



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**Certificate of Analysis**

December 12, 2003

Cris Joblon  
Tetra Tech FW, Inc.  
2300 E. Lincoln Highway  
Suite 200  
Langhorne, PA 19047

Lab ID #: 252407002  
Received: 12/09/03 13:30  
Discard: 12/26/03

Page: 1 Of 1

Project Name: NWS Earle

PO#:

Sample ID: 16B [EW] 03-50  
Date Collected: 12/08/03 12:15

Matrix: Ground Water  
Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
<b>PETROLEUM HC's</b>							
Diesel Range Organics <sup>1</sup>	ND	mg/L	0.17	SW846 8015M	12/11/03 22:46	12/11/03	JJH
<b>Surrogates</b>							
o-Terphenyl	.0344	mg/L	83.0%	(51 - 135)			

1 - The DRO value reported is for petroleum hydrocarbons eluting between n-C10 and n-C28.

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

Raymond J. Martrano  
Laboratory Manager



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## Certificate of Analysis

October 7, 2003

Lab ID#: 246582

Cris Joblon  
Tetra Tech FW, Inc.  
2300 E. Lincoln Highway  
Suite 200  
Langhorne, PA 19047

PO#:

Project Name: NWS Earle

This report relates only to the sample(s) as received by the laboratory. Laboratory reports may not be reproduced, except in full, without the written approval of the laboratory.

Qualifier Flags - These flags may follow individual results for a specific analyte

- U - Indicates that the analyte was not detected
- J - Indicates an estimated value between method detection limit and the practical quantitation limit for the analyte
- E - Indicates an estimated value outside of the calibration range of the analysis
- B - Indicates that the analyte was found in the method blank associated with the sample

A result of ND indicates that the analyte was Not Detected at the Reporting Detection Limit (RDL).

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If you have any questions in reference to this laboratory report, please contact your ALSI project coordinator or the laboratory manager listed at the bottom of this report at 717-944-5541.

Note: This document is included as part of the Analytical Report and must be retained as a permanent record thereof.

Raymond J. Martrano  
Laboratory Manager



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### Certificate of Analysis

October 7, 2003

Cris Joblon  
Tetra Tech FW, Inc.  
2300 E. Lincoln Highway  
Suite 200  
Langhorne, PA 19047

Lab ID #: 246582001  
Received: 10/01/03 13:37  
Discard: 10/21/03

Page: 1 Of 1

PO#:

Project Name: NWS Earle

Sample ID: 16A[EW]03-79  
Date Collected: 09/30/03 10:45

Matrix: Ground Water  
Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
PETROLEUM HC's							
Diescl Range Organics	152	mg/L	18.4	SW846 8015M	10/06/03 10:41	10/02/03	JJH
Surrogates				Recovery Limits			
o-Terphenyl	0	mg/L	0.0*	(51 - 135)			

**Comments:**

This sample was analyzed at a dilution in the 8015 diescl range organics analysis of this sample due to the level of analyte native to the sample. Ortho-terphenyl surrogate recovery could not be evaluated as a result of the dilution. JJH 10/6/03

\* - The DRO value reported is for petroleum hydrocarbons eluting between n-C10 and n-C28.  
This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

Raymond J. Martrano  
Laboratory Manager



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**Certificate of Analysis**

October 7, 2003

Cris Joblon  
Tetra Tech FW, Inc.  
2300 E. Lincoln Highway  
Suite 200  
Langhorne, PA 19047

Lab ID #: 246582002  
Received: 10/01/03 13:37  
Discard: 10/21/03

Page: 1 Of 1

Project Name: NWS Earle

PO#:

Sample ID: 16A(EW)03-80  
Date Collected: 09/30/03 10:50

Matrix: Ground Water  
Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
PETROLEUM HC's							
Diesel Range Organics	ND	mg/L	0.18	SW846 8015M	10/03/03 05:06	10/02/03	JJH
Surrogates							
o-Terphenyl	.0356	mg/L		Recovery Limits 80.0% (51 - 135)			

1 - The DRO value reported is for petroleum hydrocarbons eluting between n-C10 and n-C28.  
This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

Raymond J. Martrano  
Laboratory Manager



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## Certificate of Analysis

October 7, 2003

Cris Joblon  
Tetra Tech FW, Inc.  
2300 E. Lincoln Highway  
Suite 200  
Langhorne, PA 19047

Lab ID #: 246582003  
Received: 10/01/03 13:37  
Discard: 10/21/03

Page: 1 Of 2

Project Name: NWS Earle

PO#:

Sample ID: 16B[EW]03-45  
Date Collected: 09/30/03 10:30

Matrix: Ground Water  
Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
<b>VOLATILE ORGANICS</b>							
Acrolein	ND	ug/L	50	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Acrylonitrile	ND	ug/L	20.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Benzene	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Bromodichloromethane	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Bromoform	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Bromomethane	ND	ug/L	10.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
2-Butanone (MEK)	ND	ug/L	20.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Carbon Tetrachloride	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Chlorobenzene	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Chlorodibromomethane	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Chloroethane	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
2-Chloroethylvinyl ether	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Chloroform	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Chloromethane	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
1,1-Dichloroethane	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
1,2-Dichloroethane	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
1,1-Dichloroethene	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
trans-1,2-Dichloroethene	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
1,2-Dichloropropane	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
1,3-Dichloropropene, Total	ND	ug/L	10.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Ethylbenzene	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Methylene chloride	ND	ug/L	10.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH



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## Certificate of Analysis

October 7, 2003

Cris Joblon  
Tetra Tech FW, Inc.  
2300 E. Lincoln Highway  
Suite 200  
Langhorne, PA 19047

Lab ID #: 246582003  
Received: 10/01/03 13:37  
Discard: 10/21/03

Page: 2 Of 2

Project Name: NWS Earle

PO#:

Sample ID: 16B[EW]03-45  
Date Collected: 09/30/03 10:30

Matrix: Ground Water  
Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
<b>VOLATILE ORGANICS (continued)</b>							
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Tetrachloroethene	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Toluene	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Total Xylenes	20.2	ug/L	15.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
1,1,1-Trichloroethane	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
1,1,2-Trichloroethane	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Trichloroethene	ND	ug/L	5.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
Vinyl Chloride	ND	ug/L	10.0	SW846 8260B	10/02/03 13:33	10/02/03	TEH
<b>PETROLEUM HC's</b>							
Diesel Range Organics	6.42	mg/L	1.80	SW846 8015M	10/06/03 13:31	10/02/03	JJH
Surrogates	Result	Units	Recovery	Limits			
1,2-Dichloroethane-d4	172	ug/L	115.0%	(70 - 134)			
Dibromofluoromethane	162	ug/L	108.0%	(71 - 135)			
Toluene-d8	163	ug/L	109.0%	(74 - 132)			
4-Bromofluorobenzene	143	ug/L	95.3%	(84 - 116)			
o-Terphenyl	.052	mg/L	116.0%	(51 - 135)			

**Comments:**

The volatiles organics analysis for this sample was diluted - due to the sample matrix. The detection limits were raised - accordingly.  
This sample was analyzed at a dilution in the 8015 diesel range organics analysis of this sample due to the level of analyte native to the sample. JJH 10/6/03

1 - The DRD value reported is for petroleum hydrocarbons eluting between n-C10 and n-C28.

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Raymond J. Martrano  
Laboratory Manager



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## Certificate of Analysis

October 7, 2003

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2300 E. Lincoln Highway  
Suite 200  
Langhorne, PA 19047

Lab ID #: 246582004  
Received: 10/01/03 13:37  
Discard: 10/21/03

Page: 1 Of 2

Project Name: NWS Earle

PO#:

Sample ID: 16B[EW]03-46  
Date Collected: 09/30/03 10:35

Matrix: Ground Water  
Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
<b>VOLATILE ORGANICS</b>							
Acrolein	ND	ug/L	10	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Acrylonitrile	ND	ug/L	4.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Benzene	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Bromodichloromethane	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Bromoform	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Bromomethane	ND	ug/L	2.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
2-Butanone (MEK)	ND	ug/L	4.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Carbon Tetrachloride	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Chlorobenzene	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Chlorodibromomethane	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Chloroethane	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
2-Chloroethylvinyl ether	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Chloroform	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Chloromethane	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
1,1-Dichloroethane	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
1,2-Dichloroethane	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
1,1-Dichloroethene	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
trans-1,2-Dichloroethene	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
1,2-Dichloropropane	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
1,3-Dichloropropane, Total	ND	ug/L	2.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Ethylbenzene	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Methylene chloride	ND	ug/L	2.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH



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## Certificate of Analysis

October 7, 2003

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2300 E. Lincoln Highway  
Suite 200  
Langhorne, PA 19047

Lab ID #: 246582004  
Received: 10/01/03 13:37  
Discard: 10/21/03

Page: 2 Of 2

Project Name: NWS Earle

PO#:

Sample ID: 16B[EW]03-46  
Date Collected: 09/30/03 10:35

Matrix: Ground Water  
Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
<b>VOLATILE ORGANICS (continued)</b>							
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Tetrachloroethene	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Toluene	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Total Xylenes	ND	ug/L	3.00	SW846 8260B	10/02/03 12:58	10/02/03	TEH
1,1,1-Trichloroethane	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
1,1,2-Trichloroethane	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Trichloroethene	ND	ug/L	1.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
Vinyl Chloride	ND	ug/L	2.0	SW846 8260B	10/02/03 12:58	10/02/03	TEH
<b>PETROLEUM HC's</b>							
Diesel Range Organics <sup>1</sup>	ND	mg/L	0.17	SW846 8015M	10/03/03 08:11	10/02/03	JJH
Surrogates	Result	Units	Recovery	Limits			
1,2-Dichloroethane-d4	33.5	ug/L	112.0%	(70 - 134)			
Dibromofluoromethane	32	ug/L	107.0%	(71 - 135)			
Toluene-d8	33.2	ug/L	111.0%	(74 - 132)			
4-Bromofluorobenzene	30.3	ug/L	101.0%	(84 - 116)			
o-Terphenyl	.0399	mg/L	92.8%	(51 - 135)			

1 - The DRO value reported is for petroleum hydrocarbons eluting between n-C10 and n-C28.

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Raymond J. Martrano  
Laboratory Manager





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## Certificate of Analysis

October 29, 2003

Cris Joblon  
Tetra Tech FW, Inc.  
2300 E. Lincoln Highway  
Suite 200  
Langhorne, PA 19047

Lab ID#: 248596

Project Name: **NWS Earle**

PO#:

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Qualifier Flags - These flags may follow individual results for a specific analyte

- U - Indicates that the analyte was not detected
- J - Indicates an estimated value between method detection limit and the practical quantitation limit for the analyte
- E - Indicates an estimated value outside of the calibration range of the analysis
- B - Indicates that the analyte was found in the method blank associated with the sample

A result of ND indicates that the analyte was Not Detected at the Reporting Detection Limit (RDL).

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If you have any questions in reference to this laboratory report, please contact your ALSI project coordinator or the laboratory manager listed at the bottom of this report a 717-944-5541.

Note: This document is included as part of the Analytical Report and must be retained as a permanent record thereof.

Raymond J. Martrano  
Laboratory Manager



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Lab ID #: 248596001  
Received: 10/23/03 10:45  
Discard: 11/12/03

Page: 1 Of 1

Project Name: NWS Earle

PO#:

Sample ID: 16A[EW]03-81

Matrix: Ground Water

Date Collected: 10/22/03 09:00

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
<b>PETROLEUM HC's</b>							
Diesel Range Organics	129	mg/L	17.8	SW846 8015M	10/28/03 09:31	10/27/03	JJH
<b>Surrogates</b>							
	<b>Result</b>	<b>Units</b>	<b>Recovery</b>	<b>Limits</b>			
o-Terphenyl	0	mg/L	0.0%	(51 - 135)			

**Comments:**

This sample was analyzed at a dilution in the 8015 diesel range organics analysis of this sample due to the level of analyte detected in the sample. Ortho-terphenyl surrogate recovery could not be evaluated as a result of the dilution. JJH 10/28/03

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Raymond J. Martrano  
Laboratory Manager



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Lab ID #: 248596002  
Received: 10/23/03 10:45  
Discard: 11/12/03

Page: 1 Of 1

Project Name: **NWS Earle**

PO#:

Sample ID: **16A[EW]03-82**

Matrix: Ground Water

Date Collected: 10/22/03 09:15

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
<b>PETROLEUM HC's</b>							
Diesel Range Organics <sup>1</sup>	ND	mg/L	0.17	SW846 8015M	10/28/03 01:23	10/27/03	JJH
<b>Surrogates</b>							
	<b>Result</b>	<b>Units</b>	<b>Recovery</b>	<b>Limits</b>			
o-Terphenyl	.0339	mg/L	80.6%	(51 - 135)			

1 - The DRO value reported is for petroleum hydrocarbons eluting between n-C10 and n-C28.

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Raymond J. Martrano  
Laboratory Manager



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October 29, 2003

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Lab ID #: 248596003  
Received: 10/23/03 10:45  
Discard: 11/12/03

Page: 1 Of 3

Project Name: NWS Earle

PO#:

Sample ID: 16B[EW]03-47

Matrix: Ground Water

Date Collected: 10/22/03 10:00

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
<b>VOLATILE ORGANICS</b>							
Acrolein	ND	ug/L	100	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Acrylonitrile	ND	ug/L	25.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Benzene	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Bromodichloromethane	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Bromoform	ND	ug/L	10.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Bromomethane	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
2-Butanone (MEK)	ND	ug/L	50.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Carbon Tetrachloride	ND	ug/L	10.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Chlorobenzene <sup>1</sup>	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Chlorodibromomethane	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Chloroethane	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
2-Chloroethylvinyl ether	ND	ug/L	10.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Chloroform	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Chloromethane	ND	ug/L	15.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
1,1-Dichloroethane	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
1,2-Dichloroethane	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
1,1-Dichloroethene	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
trans-1,2-Dichloroethene	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
1,2-Dichloropropane	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
1,3-Dichloropropene, Total	ND	ug/L	10.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Ethylbenzene	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Methylene Chloride	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD

1 - This compound was recovered below quality control criteria in the LCS associated with this sample. The data user is cautioned that results may be biased low.



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Lab ID #: 248596003  
Received: 10/23/03 10:45  
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Page: 2 Of 3

Project Name: NWS Earle

PO#:

Sample ID: 16B[EW]03-47

Matrix: Ground Water

Date Collected: 10/22/03 10:00

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
<b>VOLATILE ORGANICS (continued)</b>							
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Tetrachloroethene	ND	ug/L	10.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Toluene	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Total Xylenes	ND	ug/L	15.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
1,1,1-Trichloroethane	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
1,1,2-Trichloroethane	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Trichloroethene	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
Vinyl Chloride	ND	ug/L	5.0	SW846 8260B	10/28/03 02:53	10/28/03	JHD
<b>PETROLEUM HC's</b>							
Diesel Range Organics	27.5	mg/L	8.89	SW846 8015M	10/28/03 10:33	10/27/03	JJH
<b>Surrogates</b>							
	<b>Result</b>	<b>Units</b>	<b>Recovery</b>	<b>Limits</b>			
1,2-Dichloroethane-d4	156	ug/L	104.0%	(70 - 134)			
Dibromofluoromethane	154	ug/L	103.0%	(71 - 135)			
Toluene-d8	139	ug/L	92.7%	(74 - 132)			
4-Bromofluorobenzene	134	ug/L	89.3%	(84 - 116)			
o-Terphenyl	0	mg/L	0.0%	(51 - 135)			

**Comments:**

The GCMS volatiles analysis was performed at a dilution - due to the level of target compounds. The vial analyzed for GCMS volatiles contained headspace. The method requires that samples be collected without headspace in order to prevent the loss of volatile organics. Results reported from the dilution should be considered estimated.



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## Certificate of Analysis

October 29, 2003

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Lab ID #: 248596003  
Received: 10/23/03 10:45  
Discard: 11/12/03

Page: 3 Of 3

Project Name: **NWS Earle**

PO#:

Sample ID: **16B[EW]03-47**

Matrix: Ground Water

Date Collected: 10/22/03 10:00

Collected by: Collected by Customer

**Comments: (continued)**

This sample was analyzed at a dilution in the 8015 diesel range organics analysis of this sample due to the level of analyte detected in the sample. Ortho-terphenyl surrogate recovery could not be evaluated as a result of the dilution. JJH 10/28/03

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Raymond J. Martrano  
Laboratory Manager



## Certificate of Analysis

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Lab ID #: 248596004  
Received: 10/23/03 10:45  
Discard: 11/12/03

Page: 1 OF 2

Project Name: NWS Earle

PO#:

Sample ID: 16B[EW]03-48

Matrix: Ground Water

Date Collected: 10/22/03 10:15

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
<b>VOLATILE ORGANICS</b>							
Acrolein	ND	ug/L	20	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Acrylonitrile	ND	ug/L	5.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Benzene	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Bromodichloromethane	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Bromoform	ND	ug/L	2.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Bromomethane	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
2-Butanone (MEK)	ND	ug/L	10.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Carbon Tetrachloride	ND	ug/L	2.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Chlorobenzene	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Chlorodibromomethane	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Chloroethane	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
2-Chloroethylvinyl ether	ND	ug/L	2.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Chloroform	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Chloromethane	ND	ug/L	3.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
1,1-Dichloroethane	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
1,2-Dichloroethane	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
1,1-Dichloroethene	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
trans-1,2-Dichloroethene	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
1,2-Dichloropropane	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
1,3-Dichloropropene, Total	ND	ug/L	2.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Ethylbenzene	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Methylene Chloride	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH



**Certificate of Analysis**

October 29, 2003

Cris Joblon  
Tetra Tech FW, Inc.  
2300 E. Lincoln Highway  
Suite 200  
Langhorne, PA 19047

Lab ID #: 248596004  
Received: 10/23/03 10:45  
Discard: 11/12/03

Page: 2 Of 2

Project Name: **NWS Earle**

PO#:

Sample ID: **16B[EW]03-48**

Matrix: Ground Water

Date Collected: 10/22/03 10:15

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
<b>VOLATILE ORGANICS (continued)</b>							
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Tetrachloroethene	ND	ug/L	2.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Toluene	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Total Xylenes	ND	ug/L	3.00	SW846 8260B	10/27/03 19:45	10/27/03	TEH
1,1,1-Trichloroethane	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
1,1,2-Trichloroethane	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Trichloroethene	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
Vinyl Chloride	ND	ug/L	1.0	SW846 8260B	10/27/03 19:45	10/27/03	TEH
<b>PETROLEUM HC's</b>							
Diesel Range Organics <sup>1</sup>	ND	mg/L	0.17	SW846 8015M	10/28/03 04:29	10/27/03	JJH
<b>Surrogates</b>							
	<b>Result</b>	<b>Units</b>	<b>Recovery</b>	<b>Limits</b>			
1,2-Dichloroethane-d4	30.2	ug/L	101.0%	(70 - 134)			
Dibromofluoromethane	31.5	ug/L	105.0%	(71 - 135)			
Toluene-d8	29	ug/L	96.7%	(74 - 132)			
4-Bromofluorobenzene	29.1	ug/L	97.0%	(84 - 116)			
o-Terphenyl	.0344	mg/L	79.9%	(51 - 135)			

1 - The DRO value reported is for petroleum hydrocarbons eluting between n-C10 and n-C28.

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

Raymond J. Martrano  
Laboratory Manager



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**NJ PA010 NY 11759**



**34 Dogwood Lane - Middletown, PA 17057 Phone: 717-944-5541 Fax: 717-944-1430**

## Certificate of Analysis

December 12, 2003

Cris Joblon  
Tetra Tech FW, Inc.  
2300 E. Lincoln Highway  
Suite 200  
Langhorne, PA 19047

Lab ID#: 252407

Project Name: NWS Earle

PO#:

This report relates only to the sample(s) as received by the laboratory. Laboratory reports may not be reproduced, except in full, without the written approval of the laboratory.

Qualifier Flags - These flags may follow individual results for a specific analyte

- U - Indicates that the analyte was not detected
- J - Indicates an estimated value between method detection limit and the practical quantitation limit for the analyte
- E - Indicates an estimated value outside of the calibration range of the analysis
- B - Indicates that the analyte was found in the method blank associated with the sample

A result of ND indicates that the analyte was Not Detected at the Reporting Detection Limit (RDL).

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If you have any questions in reference to this laboratory report, please contact your ALSI project coordinator or the laboratory manager listed at the bottom of this report at 717-944-5541.

Note: This document is included as part of the Analytical Report and must be retained as a permanent record thereof.

Raymond J. Martrano  
Laboratory Manager



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34 Dogwood Lane - Middletown, PA 17057 Phone: 717-944-5541 Fax: 717-944-1430

**Certificate of Analysis**

December 12, 2003

Cris Joblon  
Tetra Tech FW, Inc.  
2300 E. Lincoln Highway  
Suite 200  
Langhorne, PA 19047

Lab ID #: 252407001  
Received: 12/09/03 13:30  
Discard: 12/26/03

Page: 1 Of 1

Project Name: NWS Earle

PO#:

Sample ID: 16B[EW]03-49

Matrix: Ground Water

Date Collected: 12/08/03 12:00

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
<b>PETROLEUM HC's</b>							
Diesel Range Organics <sup>1</sup>	3.05	mg/L	1.69	SW846 8015M	12/12/03 10:28	12/11/03	JJH
<b>Surrogates</b>							
	<b>Result</b>	<b>Units</b>	<b>Recovery</b>	<b>Limits</b>			
o-Terphenyl	.0475	mg/L	112.0%	(51 - 135)			

**Comments:**

This sample was analyzed at a dilution in the 8015 diesel range organics analysis of this sample due to the level of analyte detected in the sample. JJH 12/12/03

1 - The DRO value reported is for petroleum hydrocarbons eluting between n-C10 and n-C28.

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

Raymond J. Martrano  
Laboratory Manager