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NORTHNAVFACENGCOM 4335/3 (Rev. 6/80)

CONTROL NO. 6

CONTRACT NO.	DELIVERY ORDER	ACTIVITY LOCATION
N62472-94-D-0398	0055	Naval Weapons Station Earle, Colts Neck, NJ

PROJECT TITLE:
BIOSLURPER

FROM:	DATE
Foster Wheeler Environmental Corp. - Program QCM: Mark Miller	April 19, 2000
TO:	DATE
W FAUSTMAN (3 COPIES)	April 19, 2000

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   (b) RETAIN ONE (1) COPY OF THIS TRANSMITTAL FORM AND RETURN REMAINING COPIES WITH REVIEWED SUBMITTALS TO ROICC.
2. THESE SUBMITTALS SHOULD BE RETURNED TO THIS OFFICE BY _____
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Mark Miller APRIL 19, 2000

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FOR COMMANDING OFFICER, NORTHERN DIVISION NAVAL FACILITIES ENGINEERING COMMAND — DATE

ITEM NO.	SUBMITTAL DESCRIPTION	PREPARED/ SUBMITTED BY	APPROVED	DISAPPROVED	REMARKS
6	SD-09, Reports; Bioslurper Status Report Dec '99 thru Feb '00–R0	M. Miller			

MISC\96-184.DOC

BIOSLURPER STATUS REPORT
FOR DECEMBER 1999 THROUGH FEBRUARY 2000
NAVAL WEAPONS STATION - EARLE
COLTS NECK, NEW JERSEY

Issued:

April 2000

Prepared for:

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REMEDIAL ACTION CONTRACT N62472-94-D-0398
DELIVERY ORDER NO. 0055

BIOSLURPER STATUS REPORT
DECEMBER 1999 THROUGH JANUARY 2000
NAVAL WEAPONS STATION - EARLE
COLTS NECK, NEW JERSEY

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BIOSLURPER STATUS REPORT
DECEMBER 1999 THROUGH FEBRUARY 2000
NAVAL WEAPONS STATION - EARLE
COLTS NECK, NEW JERSEY

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1.0 INTRODUCTION

This report summarizes the ongoing bioslurper operations at Site 16 at the Naval Weapons Station-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 December 1, 1999 through February 29, 2000; however, the recovery numbers for the entire operational time (February 1998 through February 2000) are summarized in the report.

Bioslurper Unit #1 (located adjacent to Building C-16) normally recovers product from the following product extraction wells: 16MW-13, 16MW-14, 16MW-15, MW16-04, and vapor extraction wells: 16MW-22 and 16MW-23. Bioslurper Unit #2 (located north of Building C-50) normally extracts from 16MW-20, 16MW-16, C17/20MW-07, 16MW-17 and 16MW-19. As the result of frozen pipes on Bioslurper Unit No. 2, the extraction valves were modified such that Bioslurper Unit No. 1 extracted from all of the normally operated extraction wells (except 16MW20). Bioslurper Unit No. 1 continued to operate from all the recovery wells from January through February. Since Bioslurper Unit No. 2 was not operating in January and February 2000, no air or effluent samples were obtained from Unit No.2.

Figure 1 depicts the locations of the extraction wells and bioslurping systems.

2.0 OPERATIONS AND DIFFICULTIES ENCOUNTERED

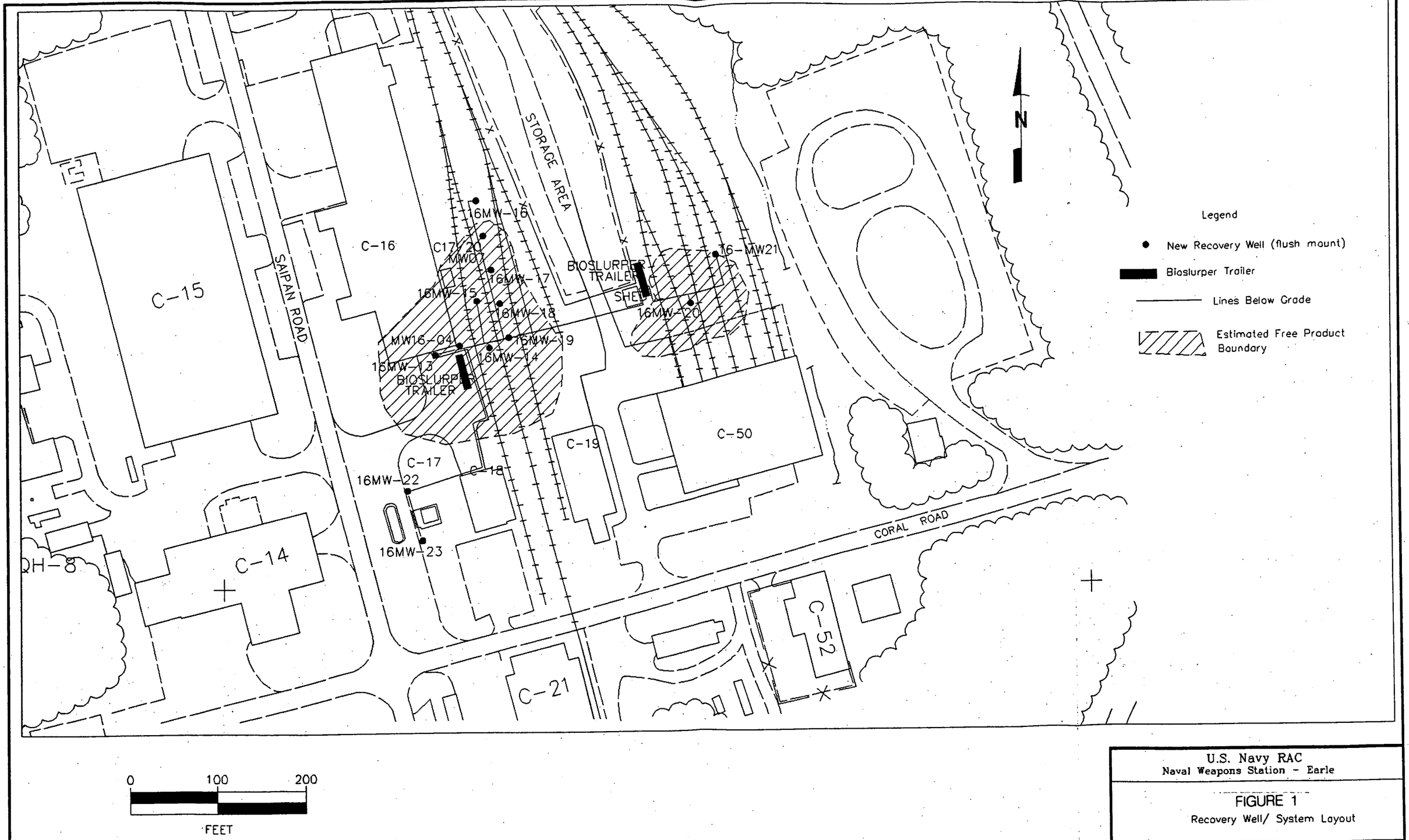
At the direction of Northern Division, the Bioslurper Units were operated on an interim basis from December 1999 through February 2000. The interim operation was directed in order to save operation and maintenance (O&M) costs while the efficiency of the systems operation could be evaluated.

DECEMBER 1999

Bioslurper Unit #1 was operated for a total of 29 hours between December 1, 1999 and December 31, 1999 and Bioslurper Unit #2 was operated for a total of 26 hours. The total amount of groundwater extracted during this time period was 49,752 gallons, with approximately 43 gallons of free-phase oil removed. Appendix A provides a graphical representation of the amount of oil/groundwater extracted, and the operational hours for each Unit. Table 1 and 2 summarize the product and water extracted from each unit to date.

No operational difficulties were encountered during the operation of the systems in December 1999.

The telemetry systems of each unit were re-programmed to ensure that an unintentional start-up would not occur in the event of a power outage.



U.S. Navy RAC
Naval Weapons Station - Earle

FIGURE 1
Recovery Well/ System Layout

FOSTER WHEELER ENVIRONMENTAL CORPORATION

fig3-1

JANUARY 2000

Bioslurper Unit #1 was operated for a total of 30.5 hours between December 31, 1999 and January 31, 2000, and Bioslurper Unit #2 was only operated for a total of 6 hours. The total amount of groundwater extracted during this time period was 4,289 gallons, with approximately 30 gallons of free-phase oil removed. Appendix A provides a graphical representation of the amount of oil/groundwater extracted, and the operational hours for each Unit.

On January 4, 2000, the effluent discharge line from Bioslurper Unit No. 1 froze due to the extremely cold temperatures. This line was previous heat traced. The entire line, which consists of a 2-inch diameter PVC pipe inside a 4-inch diameter PVC pipe was removed and re-constructed. The former heat trace, rated for 4 watts per foot, was replaced with new heat trace, rated 6 watts per foot. The piping was reconnected and the system restarted on January 6, 2000. The repairs did not effect the interim operational time of the system.

On January 19, 2000, the effluent line from Biolsurper Unit No.2 froze due to the extreme cold. The frozen line caused backpressure on the booster pump, and resulted in problems with the pump. The extraction wells being serviced by Bioslurper Unit No. 2 were switched over to Bioslurper Unit No.1. The flexibility of the piping and valve configuration allows for the operation of all wells from just one system. Since the systems were only being operated intermittently, all the extraction wells were kept on Unit No. 1 for winter. The booster pump was repaired, but the full replacement of the effluent discharge line was postponed to warmer weather.

On January 27, 2000, the Navy and a Navy Contractor, Battelle, inspected the bioslurper units to evaluate the systems operations and determine if any actions could be taken to improve the efficiency of the systems.

FEBRUARY 2000

Bioslurper Unit #1 was operated for a total of 60 hours between January 31, 2000 and February 29, 2000. Bioslurper Unit #2 was not operated. All extraction wells were tied into Bioslurper Unit No.1. The total amount of groundwater extracted during this time period was 4,618 gallons, with approximately 60 gallons of free-phase oil removed. Appendix A provides a graphical representation of the amount of oil/groundwater extracted, and the operational hours for each Unit.

No operational difficulties were encountered during the operation of the bioslurper system in February 2000.

3.0 EVALUATION OF SITE CONDITIONS

Water level and product thickness measurements have been obtained periodically from the extraction wells since August 1997 to establish product thickness and groundwater elevation trends. Appendix B provides a tabular and graphical representation of the adjusted water levels and product thickness in the extraction wells. All of the extraction wells contained measurable product, with the exception of 16MW-21. As expected, the vapor extraction wells (16MW-22 and 16MW-23) located near the former gas station, did not contain measurable free-product.

In August 1999, the groundwater elevations in the recovery wells were at their lowest elevations of the year. From August through February, there has been a gradual increase in the product and water table elevations. This increase is expected as the result of increased rainfall in the winter and spring.

4.0 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 of the system. Table 2 summarizes the groundwater extracted/treated to date. Table 3 summarizes the volume of total petroleum hydrocarbons (TPH) removed via the groundwater treatment component of bioslurper systems. Table 4 summarizes the volume of TPH removed via the air extraction component of bioslurper systems. The TPH removal rate for the groundwater and air discharges was calculated using laboratory analytical data and total flow rates for the specific media. Appendix C contains the calculation sheets for determining the TPH removal via air, and Appendix D contains the calculations sheets for determining the TPH removal via groundwater treatment.

5.0 EFFLUENT AND AIR ANALYSIS

The extracted groundwater effluent and the air discharges from the bioslurper units are routinely sampled to ensure discharges are in compliance with the NJDEP air discharge permit and the requirements set forth by the Navy Weapons Station-Earle Sewer Treatment Plant. The air discharge is sampled for total volatile organics (including benzene) and total petroleum hydrocarbons (TPH). Air samples were not obtained from Unit No. 2 in January and February 2000 since the Unit was not in operation. Appendix C summarizes the analytical results of the air discharge samples and the permit limits.

The effluent from the bioslurpers shall be analyzed monthly for TPH in order to ensure the discharge is within the NWS-Earle Sewer Treatment Plant's NJPDES Permit. The decrease in the frequency of the effluent analyses from weekly to monthly is a result of one year operational report, which demonstrated a less frequent sampling regime could be used to reduce the O&M costs, but stay within compliance of the discharge requirements.

Two effluent samples were obtained from the Bioslurper Unit No. 1 each month, one prior to treatment and one after the final carbon treatment unit. Two effluent samples were obtained from Bioslurper Unit No. 2 in December 1999 and January 2000, one prior to treatment and one after treatment. No effluent samples were obtained from Unit No. 2 in February 2000 since the Unit was not in operation. The effluent samples were analyzed for total petroleum hydrocarbons (TPH). Table 5 summarizes the TPH results of the effluent samples. Appendix D contains the laboratory analytical results of the effluent samples.

The influent and effluent sampled from Bioslurper Units No. 1 and No.2 were also analyzed for volatile organic compounds (VOCs), including MTBE. Appendix C contains the laboratory analytical results of the influent samples from Unit No. 1 [16(A)EW01] and Unit No. 2 [16(B)EW01]. The VOC analytical results of the effluent samples from Unit No.1 [16(A)EW02] and Unit No. 2 [16(B)EW02] are also contained in Appendix D The influent samples, which were obtained at the discharge of the oil/water separator, prior to treatment, revealed the typical petroleum-related VOCs, but no MTBE. The effluent samples revealed that the majority of the VOCs were removed with the treatment system. There were some low levels of naphthalene detected in the effluent samples, but this is not a compound regulated for the discharge parameters.

As indicated by the analytical results, both bioslurper units are operating within the permit requirements established for air and treated water discharge.

TABLE 1
NAVAL WEAPONS STATION-EARLE BIOSLURPER UNITS
OIL EXTRACTED TO DATE

1998	**Free-Phase Oil Extracted February (gallons)**	**Free-Phase Oil Extracted March (gallons)**	**Free-Phase Oil Extracted April (gallons)**	**Free-Phase Oil Extracted May (gallons)**	**Free-Phase Oil Extracted August (gallons)**	**Free-Phase Oil Extracted September (gallons)**	**Free-Phase Oil Extracted October (gallons)**	**Free-Phase Oil Extracted November (gallons)**	**Free-Phase Oil Extracted December (gallons)**
Bioslurper System #1	400	375	275	300	225	250	250	140	225
Bioslurper System #2	25	50	50	20	55	30	40	20	30
Total	**425**	**425**	**325**	**320**	**280**	**280**	**290**	**160**	**255**

1999	**Free-Phase Oil Extracted January (gallons)**	**Free-Phase Oil Extracted February (gallons)**	**Free-Phase Oil Extracted March (gallons)**	**Free-Phase Oil Extracted April (gallons)**	**Free-Phase Oil Extracted August (gallons)**	**Free-Phase Oil Extracted November (gallons)**	**Free-Phase Oil Extracted December (gallons)**
Bioslurper System #1	220	50	125	65	34	66	38
Bioslurper System #2	20	15	15	10	14	14	5
Total	**240**	**65**	**140**	**75**	**48**	**80**	**43**

TABLE 1 (Continued)
NAVAL WEAPONS STATION-EARLE BIOSLURPER UNITS
OIL EXTRACTED TO DATE

2000	**Free-Phase Oil Extracted January 2000 (gallons)**	**Free-Phase Oil Extracted February 2000 (gallons)**	**Total Free-Product Extracted to Date (gallons)**
Bioslurper System #1	30	60	3128
Bioslurper System #2	0	0	413
Total	**30**	**60**	**3,541**

TABLE 2
NAVAL WEAPONS STATION-EARLE BIOSLURPER UNITS
GROUNDWATER EXTRACTED/TREATED TO DATE

1998	**Ground-water Extracted February (gallons)**	**Ground-water Extracted March (gallons)**	**Ground-water Extracted April (gallons)**	**Ground-water Extracted May (gallons)**	**Ground-water Extracted August (gallons)**	**Ground-water Extracted September (gallons)**	**Ground-water Extracted October (gallons)**	**Ground-water Extracted November (gallons)**	**Ground-water Extracted December (gallons)**
Bioslurper System #1	2,675	26,169	23,898	12,799	16,498	34,612	29,974	20,503	40,611
Bioslurper System #2	5,282	20,586	22,607	6,584	13,537	14,451	27,805	16,196	9,141
Total	**7,957**	**46,755**	**46,505**	**19,383**	**30,035**	**49,063**	**57,779**	**36,699**	**49,752**

1999	**Ground-water Extracted January (gallons)**	**Ground-water Extracted February (gallons)**	**Ground-water Extracted March (gallons)**	**Ground-water Extracted August (gallons)**	**Ground-water Extracted November (gallons)**	**Ground-water Extracted December (gallons)**
Bioslurper System #1	35,078	6,536	49,834	7,321	9,011	4,283
Bioslurper System #2	8,843	536	12,956	6,187	3,341	3,113
Total	**43,921**	**7,072**	**62,790**	**13,508**	**12,352**	**7396**

TABLE 2 (Continued)
NAVAL WEAPONS STATION-EARLE BIOSLURPER UNITS
GROUNDWATER EXTRACTED/TREATED TO DATE

2000	**Ground-water Extracted January 2000 (gallons)**	**Ground-water Extracted February 2000 (gallons)**	**Total Ground-water Extracted/ Treated to Date (gallons)**
Bioslurper System #1	3,393	4,618	327,813
Bioslurper System #2	896	0	172,061
Total	**4289**	**4,618**	**499,874**

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

1998	TPH Extracted Ground-water Treatment February (pounds)	TPH Extracted Ground-water Treatment March (pounds)	TPH Extracted Ground-water Treatment April (pounds)	TPH Extracted Ground-water Treatment May (pounds)	TPH Extracted Ground-water Treatment August (pounds)	TPH Extracted Ground-water Treatment September (pounds)	TPH Extracted Ground-water Treatment October (pounds)	TPH Extracted Ground-water Treatment November (pounds)	TPH Extracted Ground-water Treatment December (pounds)
Bioslurper System #1	60.75	125.14	306.42	135.56	47.3	---	175.99	179.16	192.96
Bioslurper System #2	4.25	14.17	32.40	9.61	---	13.99	2.37	4.26	11.48
Total	**65.00**	**139.31**	**338.82**	**145.17**	**47.30**	**13.99**	**178.36**	**183.42**	**204.44**

1999	TPH Extracted Ground-water Treatment January (pounds)	TPH Extracted Ground-water Treatment February (pounds)	TPH Extracted Ground-water Treatment March (pounds)	Extracted Ground-water Treatment April (pounds)	TPH Extracted Ground-water Treatment November (pounds)	TPH Extracted Ground-water Treatment December (pounds)
Bioslurper System #1	60.48	56.18	394.28	285.29	0.29	5.00
Bioslurper System #2	3.84	0.21	29.30	15.20	0.014	2.55
Total	**64.32**	**56.39**	**423.58**	**300.49**	**0.30**	**7.55**

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

2000	**TPH Extracted Via Ground-water Treatment** **January 2000 (pounds)**	**TPH Extracted Via Ground-water Treatment** **February 2000 (pounds)**	**Total TPH Extracted via Groundwater to Date** **(pounds)**
Bioslurper System #1	8.58	16.11	2,049.49
Bioslurper System #2	.0058	0	144.65
Total	**8.59**	**16.11**	**2,193.14**

TABLE 4
NAVAL WEAPONS STATION-EARLE BIOSLURPER UNITS
TOTAL PETROLEUM HYDROCARBONS (TPH) REMOVED VIA AIR EXTRACTION

1998	**TPH Removed via Vapor Extraction February (pounds)**	**TPH Removed via Vapor Extraction March (pounds)**	**TPH Removed via Vapor Extraction April (pounds)**	**TPH Removed via Vapor Extraction May (pounds)**	**TPH Removed via Vapor Extraction August (pounds)**	**TPH Removed via Vapor Extraction September (pounds)***	**TPH Removed via Vapor Extraction October (pounds)**	**TPH Removed via Vapor Extraction November (pounds)**	**TPH Removed via Vapor Extraction December (pounds)**
Bioslurper System #1	22.4	16.95	36.73	34.37	24.79	0	5.54	201.95	45.52
Bioslurper System #2	4.5	7.7	20.74	9.96	18.89	32.4	16.71	0	2.79
Total	**26.9**	**24.65**	**57.47**	**44.33**	**43.68**	**32.4**	**22.25**	**201.95**	**48.31**

1999	**TPH Removed via Vapor Extraction January (pounds)**	**TPH Removed via Vapor Extraction February (pounds)**	**TPH Removed via Vapor Extraction March (pounds)**	**TPH Removed via Vapor Extraction November (pounds)**	**TPH Removed via Vapor Extraction December 1999 (pounds)**
Bioslurper System #1	0	0	N/A	94.24	6.89
Bioslurper System #2	2.60	1.53	N/A	18.05	1.05
Total	**2.60**	**1.53**		**112.29**	**7.94**

TABLE 4 (Continued)
NAVAL WEAPONS STATION-EARLE BIOSLURPER UNITS
TOTAL PETROLEUM HYDROCARBONS (TPH) REMOVED VIA AIR EXTRACTION

2000	**TPH Removed via Vapor Extraction** **January 2000 (pounds)**	**TPH Removed via Vapor Extraction** **February 2000 (pounds)**	**Total TPH Removed via Vapor Extraction to Date** **(pounds)**
Bioslurper System #1	2.21	5.28	496.87
Bioslurper System #2	0.45	0	137.37
Total	**2.66**	**5.28**	**634.24**

TABLE 5
NAVAL WEAPONS STATION-EARLE BIOSLURPER UNITS
TPH EFFLUENT RESULTS
DECEMBER 1999

Sample No.	TPH Concentration Prior to Treatment	TPH Concentration After Treatment	TPH Discharge Limit
Bioslurper Unit 1			
16(A)99EW64	140 mg/l		
16(A)99EW65		<0.5 mg/l	10 mg/l
Bioslurper Unit 2			
16(B)99EW48	7.26 mg/l		
16(B)99EW49		<0.5 mg/l	10 mg/l

TPH EFFLUENT RESULTS
JANUARY 2000

Sample No.	TPH Concentration Prior to Treatment	TPH Concentration After Treatment	TPH Discharge Limit
Bioslurper Unit 1			
16(A)EW01	303 mg/l		
16(A)EW02		<0.5 mg/l	10 mg/l
Bioslurper Unit 2			
Not in operation			

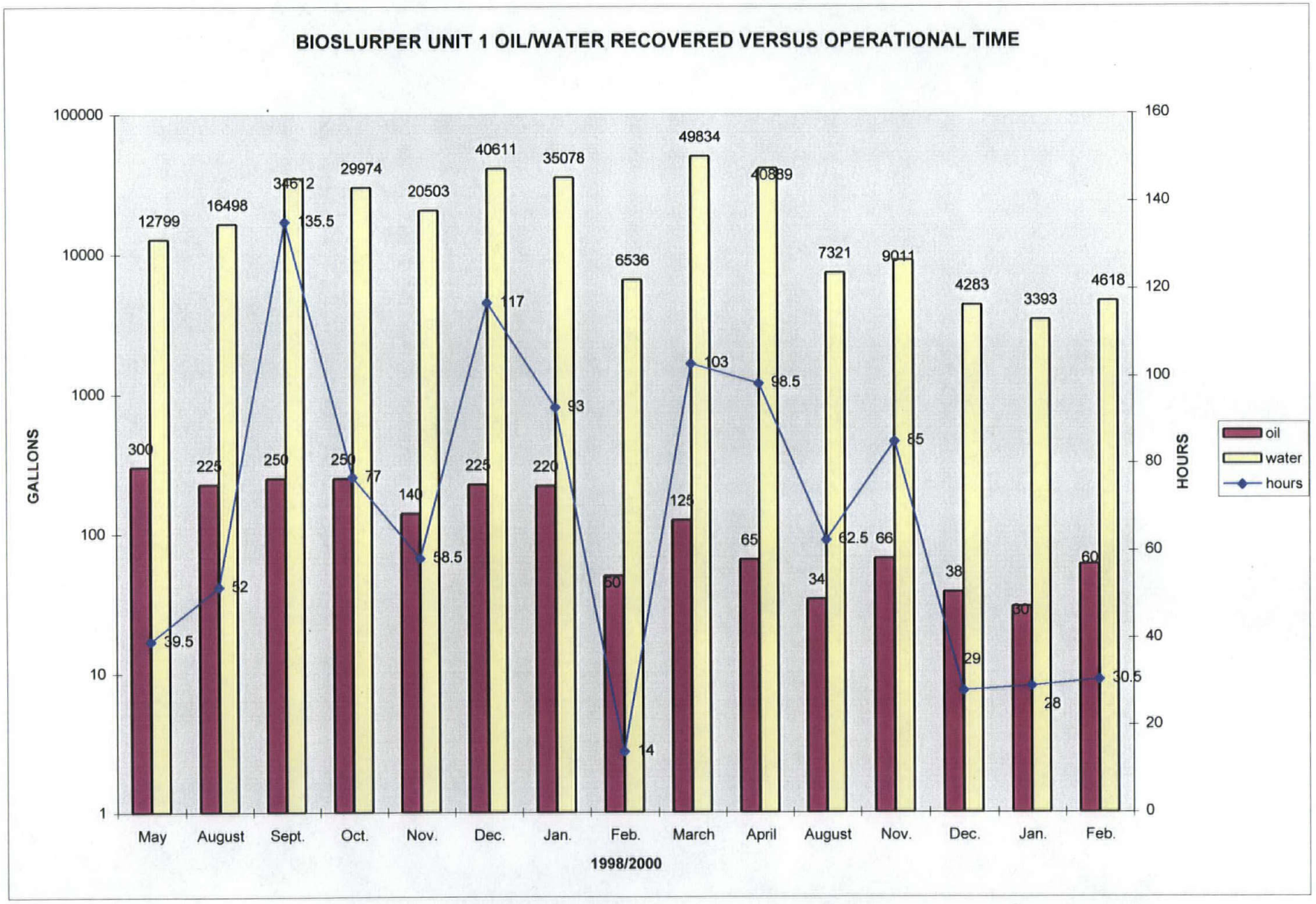
TPH EFFLUENT RESULTS
FEBRUARY 2000

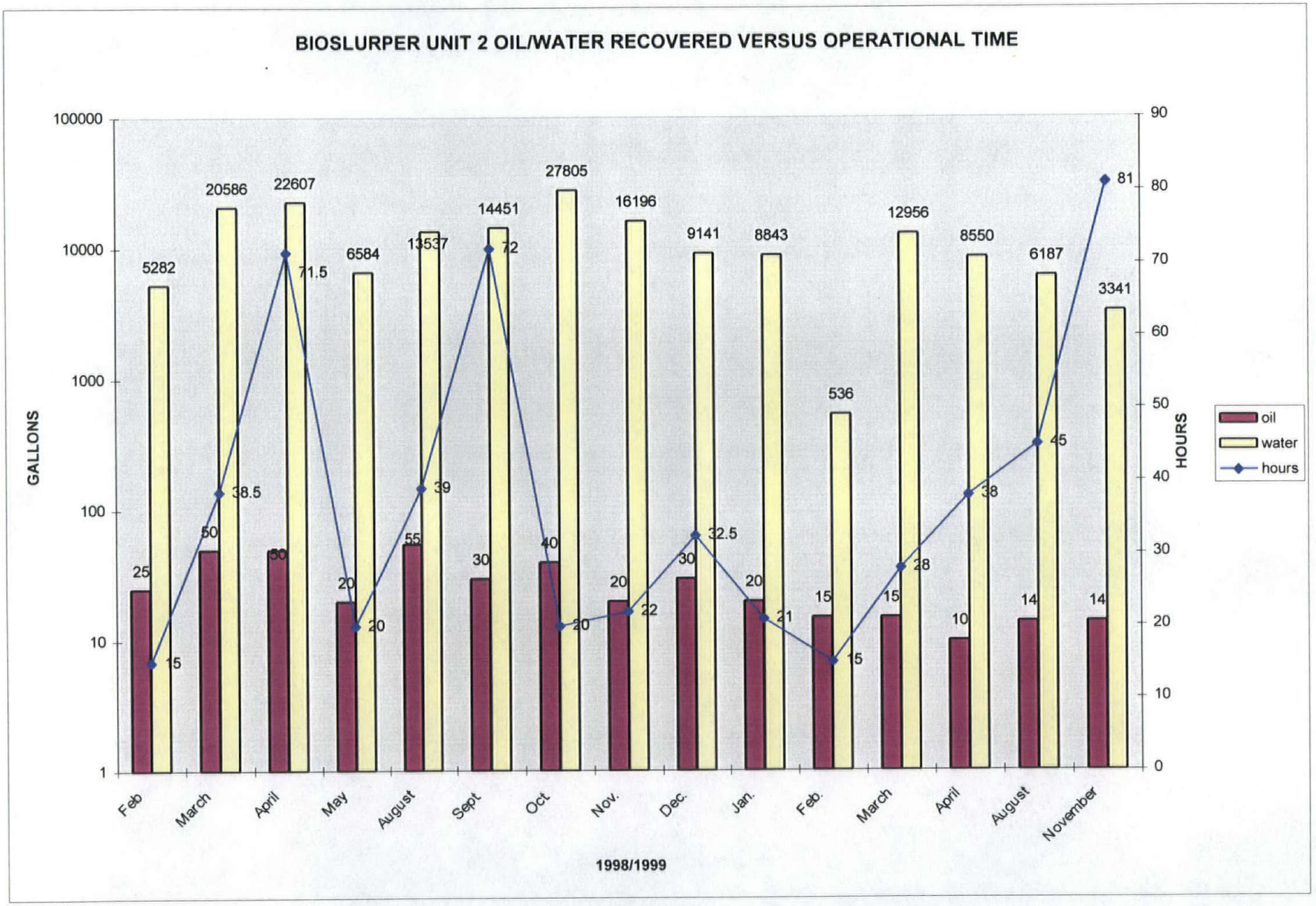
Sample No.	TPH Concentration Prior to Treatment	TPH Concentration After Treatment	TPH Discharge Limit
Bioslurper Unit 1			
16(A)EW03	< 0.5mg/l		
16(A)EW04		<0.5 mg/l	10 mg/l
Bioslurper Unit 2			
Not in Operation			

6.0 CONCLUSIONS

The bioslurper units were operated at a vacuum of between 5 to 10 inches of mercury at each extraction well to extract an average total volume of approximately 0.48 gallons per minute per well from December 1999 through February 2000. The extraction wells were only operated one or two hours five days a week to extract the product in the well and minimize the O & M costs.

As discussed in the One-Year Operational Report, the O&M costs of the groundwater treatment system could be minimized with the installation of an effluent equalization tank, after the oil/water separator, and prior to the treatment units. If the Navy is agreeable to this approach, a temporary frac tank can be set up to test the theory that a longer retention time would decrease the TPH concentrations of the oil/water separator effluent prior to treatment. The decreased TPH concentrations would extend the life of the treatment media, and decrease the O&M costs. Analytical samples could be taken and analyzed prior to and after a retention time of 10 to 12-hours to quantitatively evaluate the TPH concentrations and mass loading of the treatment vessels.


BIOSLURPER UNIT 1 OIL/WATER RECOVERED VERSUS OPERATIONAL TIME
GALLONS
HOURS
100000
10000
1000
100
10
1
160
140
120
100
80
60
40
20
0
12799
16498
36612
29974
20503
40611
35078
6536
49834
40889
7321
9011
4283
3393
4618
300
225
250
250
140
225
220
50
125
65
34
66
38
30
60
39.5
52
135.5
77
58.5
117
93
14
103
98.5
62.5
85
29
28
30.5
May
August
Sept.
Oct.
Nov.
Dec.
Jan.
Feb.
March
April
August
Nov.
Dec.
Jan.
Feb.
1998/2000
oil
water
hours


BIOSLURPER UNIT 2 OIL/WATER RECOVERED VERSUS OPERATIONAL TIME
GALLONS
HOURS
100000
10000
1000
100
10
1
90
80
70
60
50
40
30
20
10
0
5282
20586
22607
6584
13537
14451
27805
16196
9141
8843
536
12956
8550
6187
3341
25
50
50
20
55
30
40
20
30
20
15
15
10
14
14
15
38.5
71.5
20
39
72
20
22
32.5
21
15
28
38
45
81
Feb
March
April
May
August
Sept.
Oct.
Nov.
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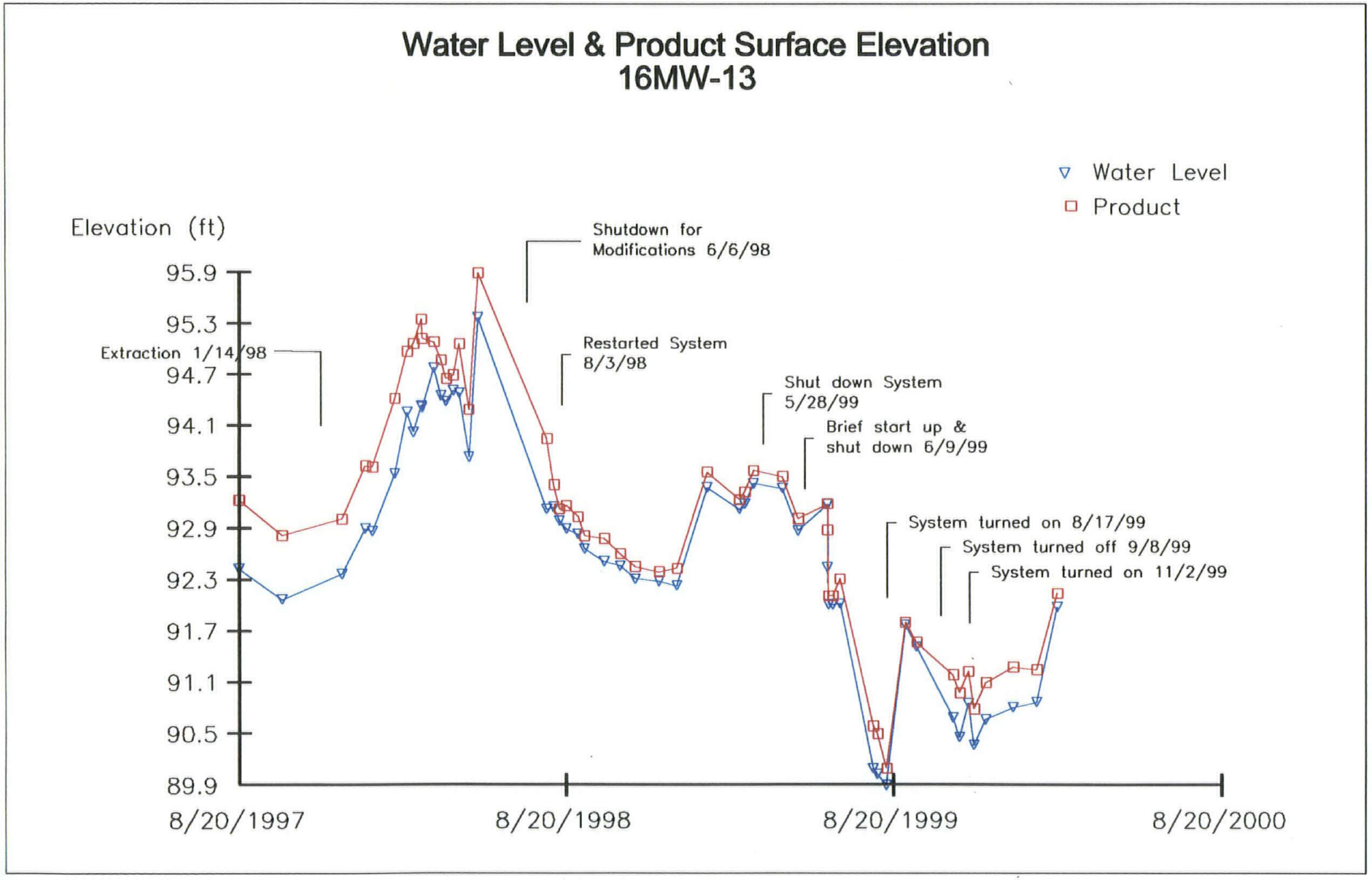
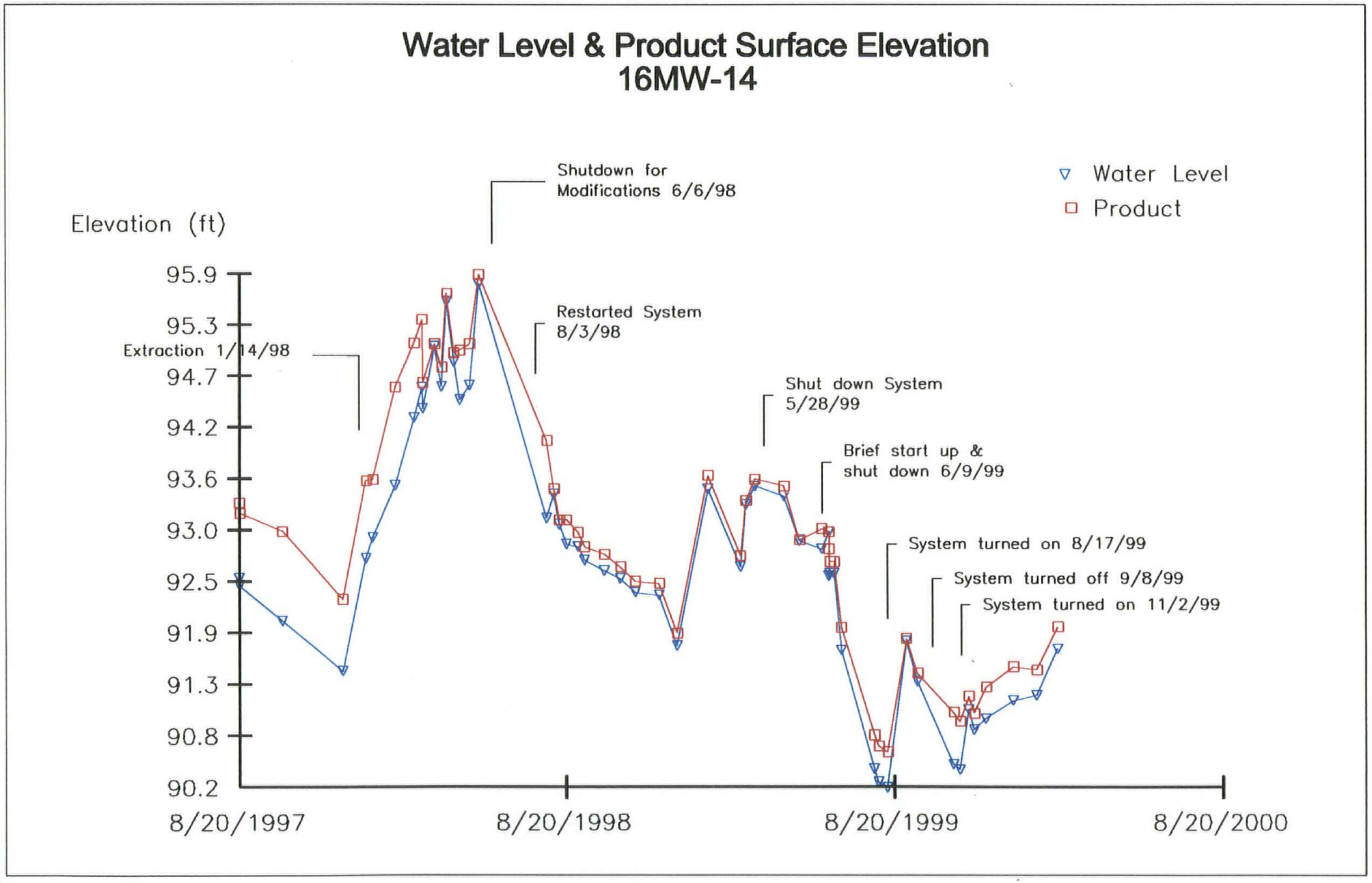
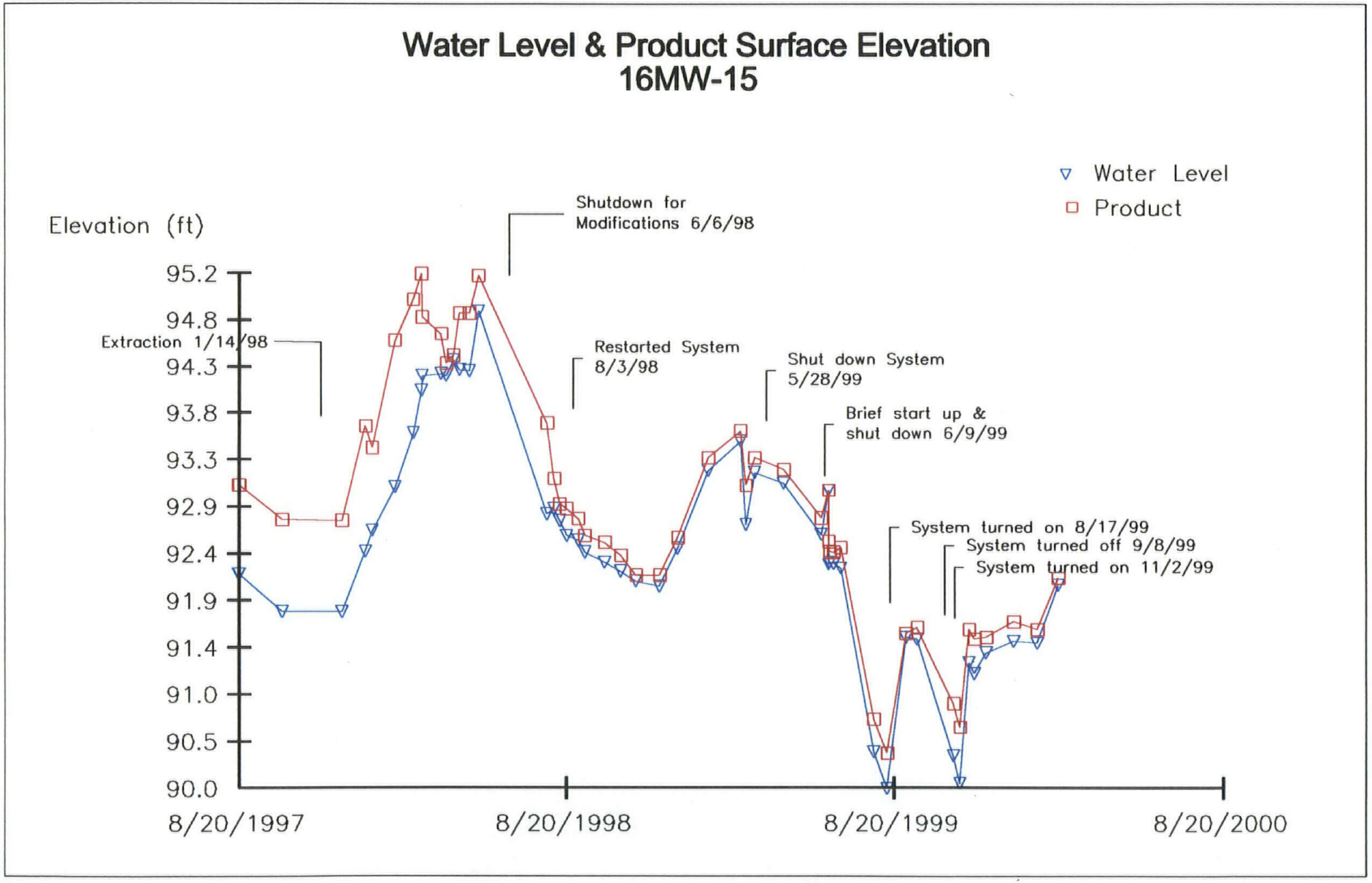
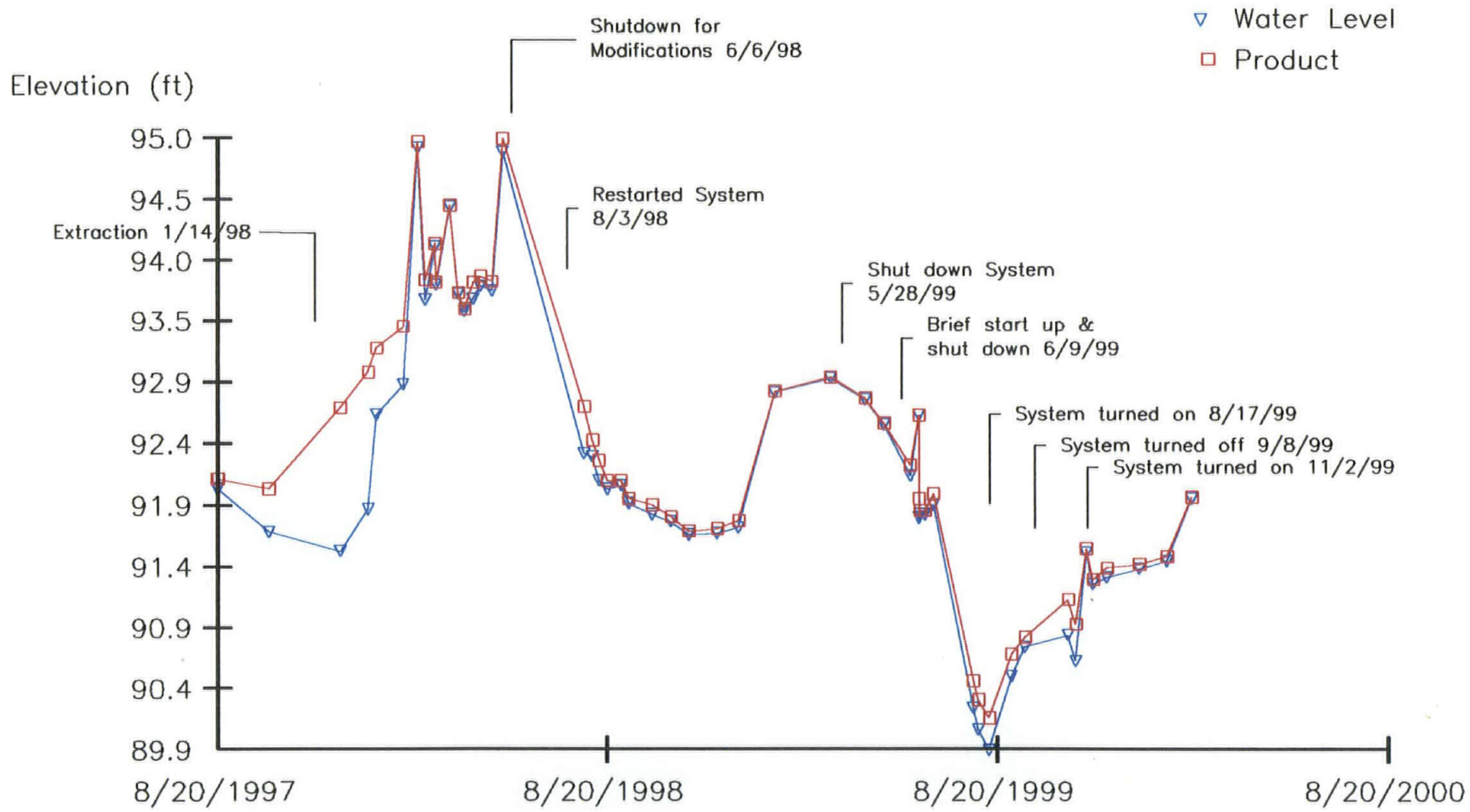
Feb.
March
April
August
November
1998/1999
oil
water
hours

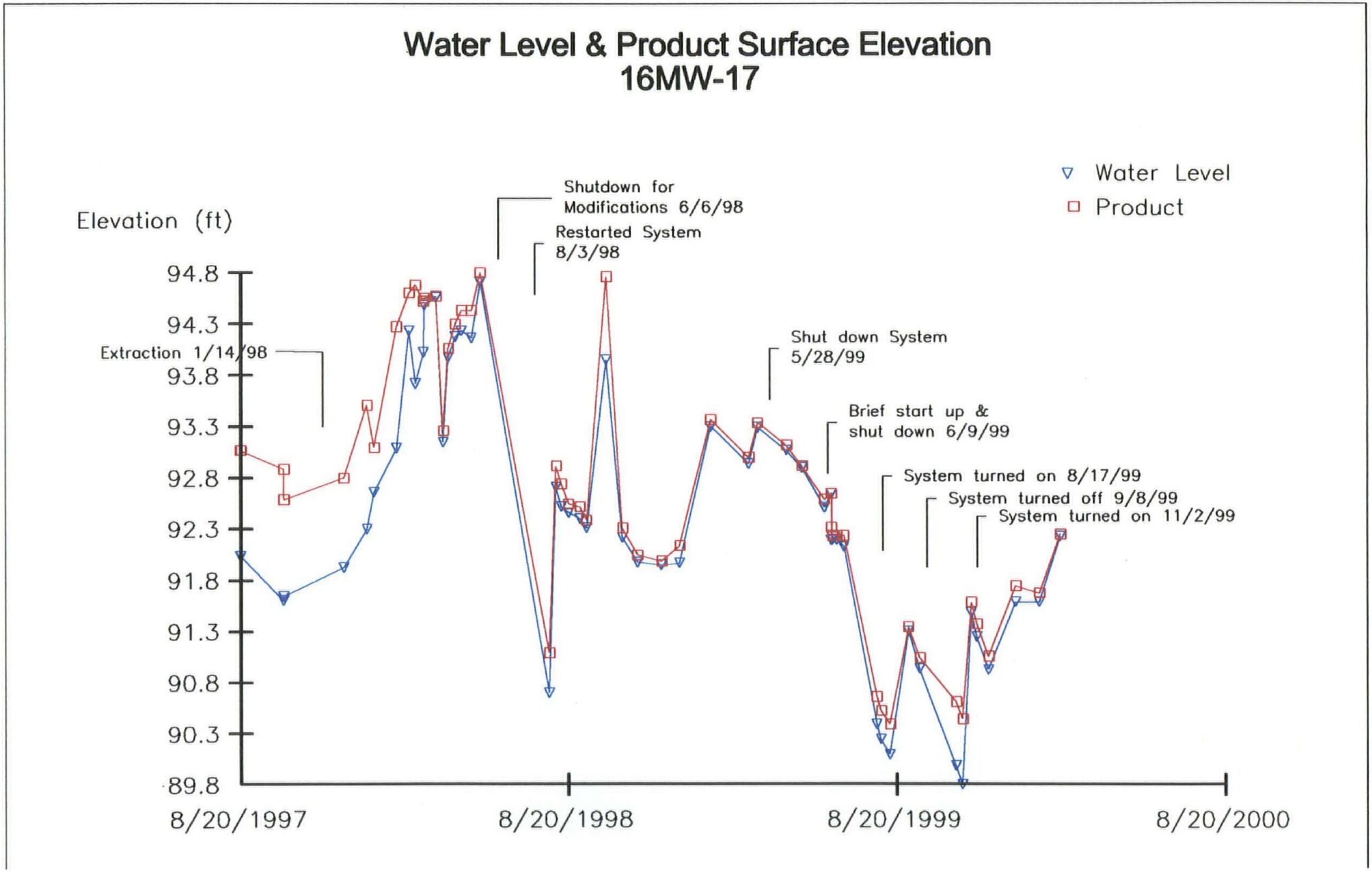

Water Level & Product Surface Elevation
16MW-13
Water Level
Product
Elevation (ft)
95.9
95.3
94.7
94.1
93.5
92.9
92.3
91.7
91.1
90.5
89.9
8/20/1997
8/20/1998
8/20/1999
8/20/2000
Extraction 1/14/98
Shutdown for Modifications 6/6/98
Restarted System 8/3/98
Shut down System 5/28/99
Brief start up & shut down 6/9/99
System turned on 8/17/99
System turned off 9/8/99
System turned on 11/2/99


Water Level & Product Surface Elevation
16MW-14
Water Level
Product
Elevation (ft)
95.9
95.3
94.7
94.2
93.6
93.0
92.5
91.9
91.3
90.8
90.2
8/20/1997
8/20/1998
8/20/1999
8/20/2000
Shutdown for Modifications 6/6/98
Restarted System 8/3/98
Extraction 1/14/98
Shut down System 5/28/99
Brief start up & shut down 6/9/99
System turned on 8/17/99
System turned off 9/8/99
System turned on 11/2/99

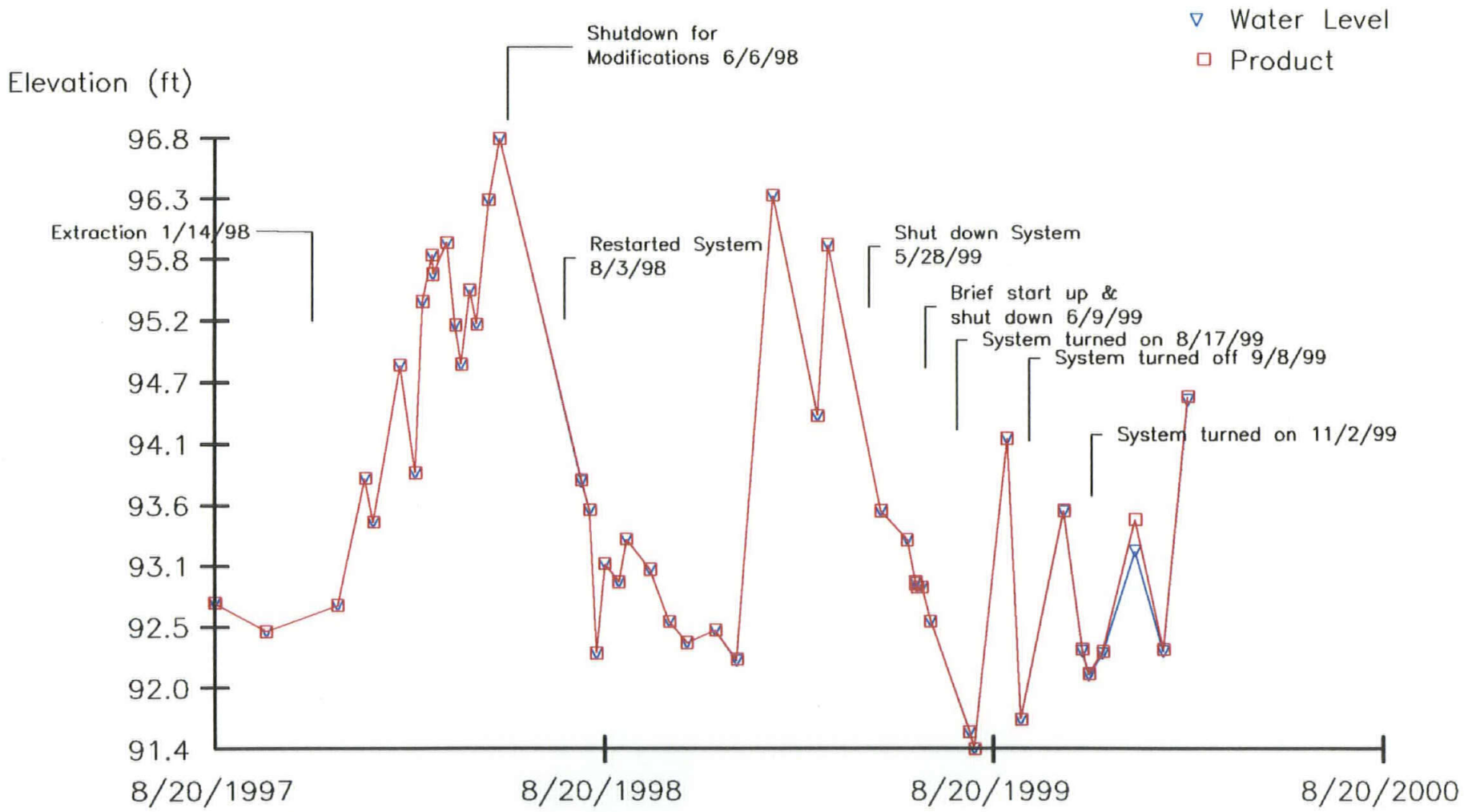

Water Level & Product Surface Elevation
16MW-15
Water Level
Product
Elevation (ft)
95.2
94.8
94.3
93.8
93.3
92.9
92.4
91.9
91.4
91.0
90.5
90.0
8/20/1997
8/20/1998
8/20/1999
8/20/2000
Extraction 1/14/98
Shutdown for Modifications 6/6/98
Restarted System 8/3/98
Shut down System 5/28/99
Brief start up & shut down 6/9/99
System turned on 8/17/99
System turned off 9/8/99
System turned on 11/2/99

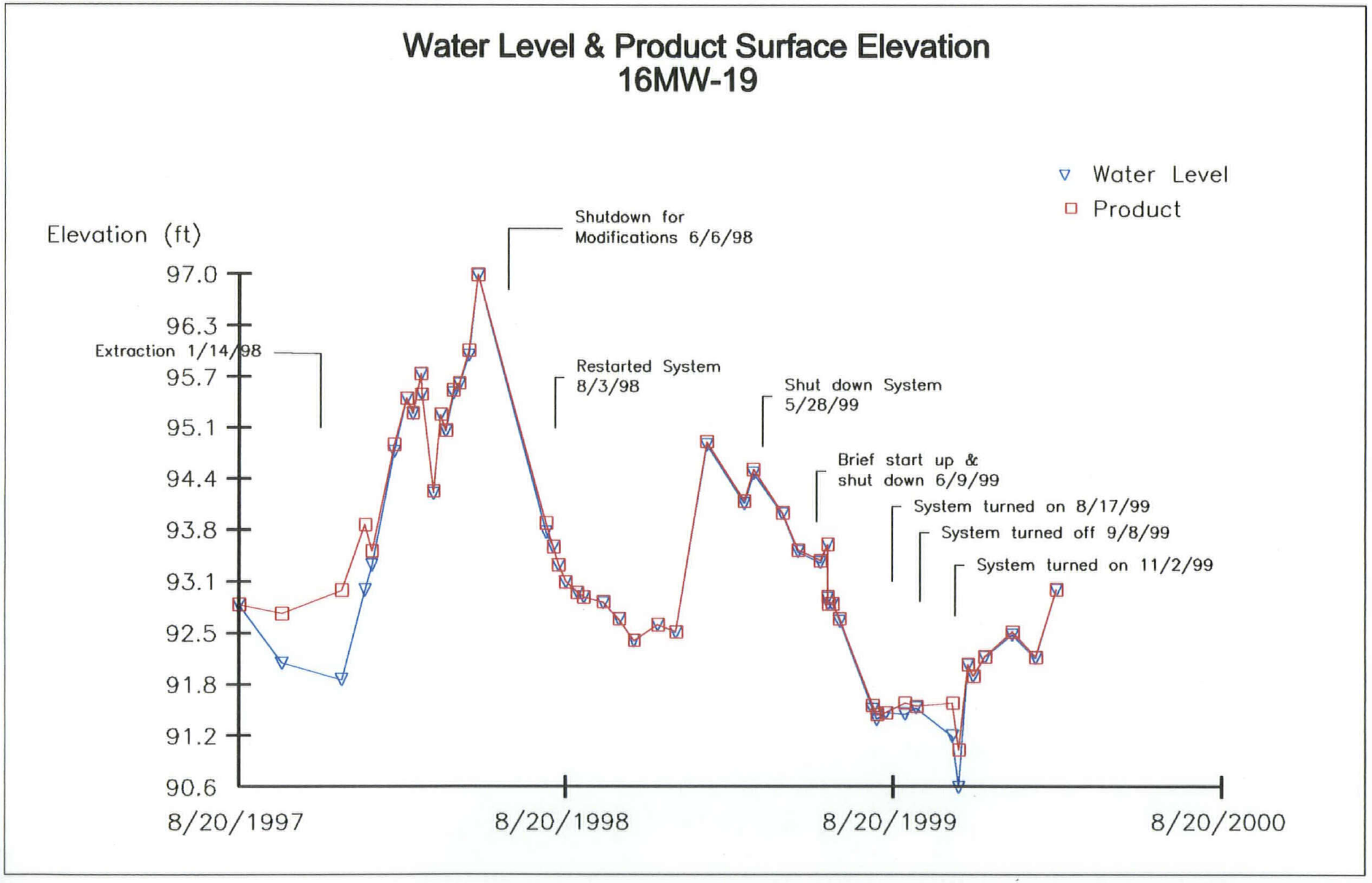
Water Level & Product Surface Elevation
16MW-16

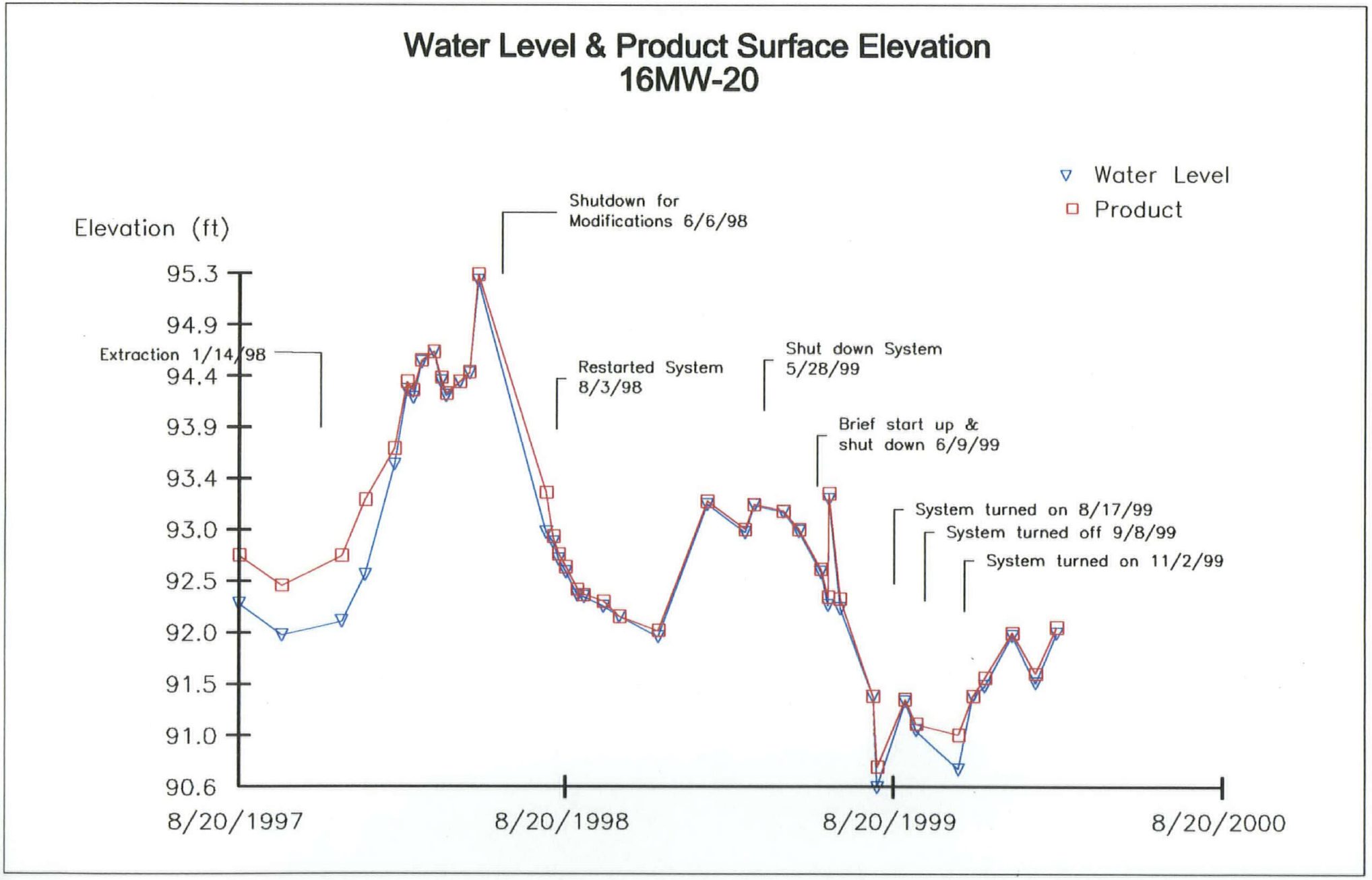



Water Level & Product Surface Elevation
16MW-17
Water Level
Product
Elevation (ft)
94.8
94.3
93.8
93.3
92.8
92.3
91.8
91.3
90.8
90.3
89.8
Extraction 1/14/98
Shutdown for Modifications 6/6/98
Restarted System 8/3/98
Shut down System 5/28/99
Brief start up & shut down 6/9/99
System turned on 8/17/99
System turned off 9/8/99
System turned on 11/2/99
8/20/1997
8/20/1998
8/20/1999
8/20/2000

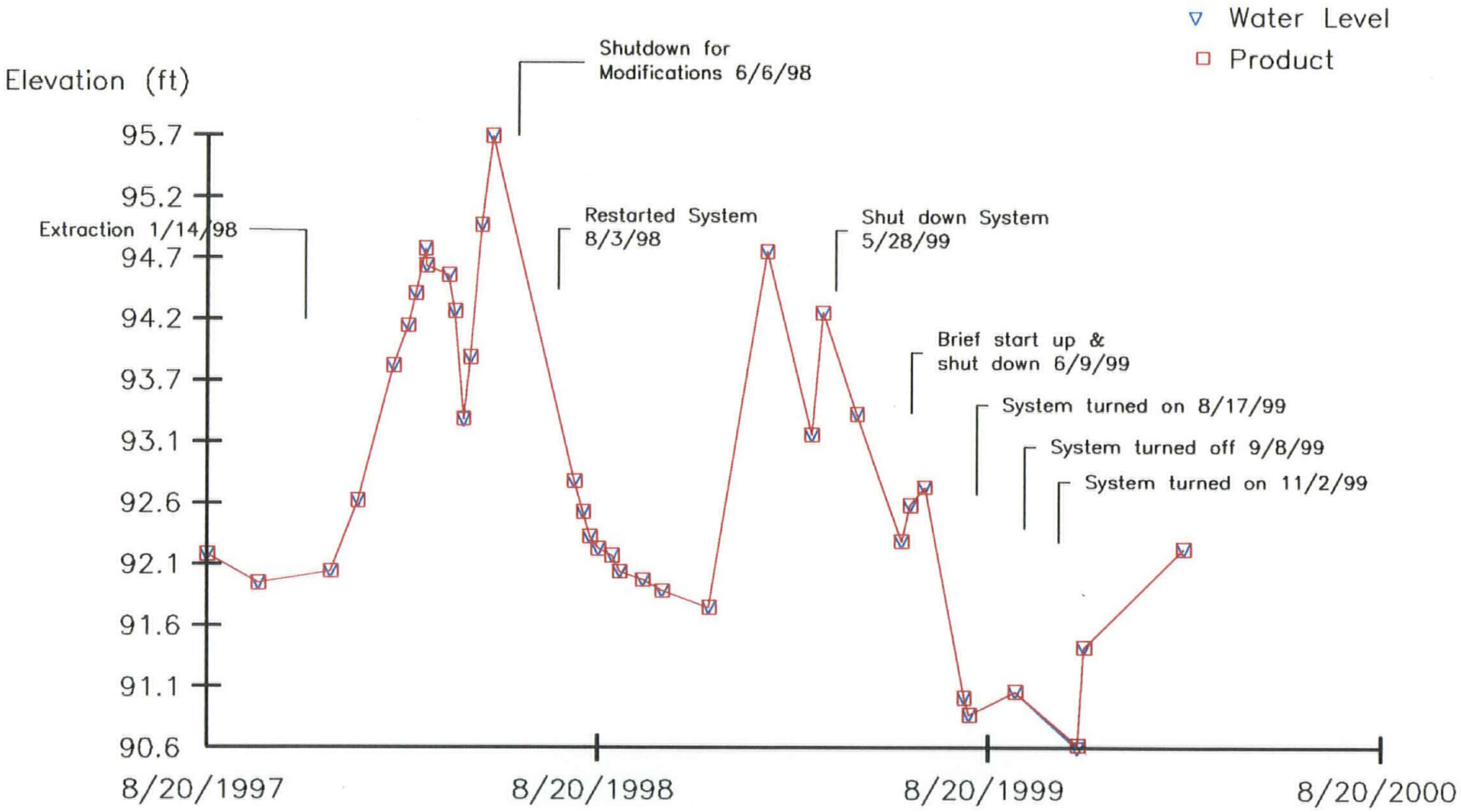
Water Level & Product Surface Elevation
16MW-18

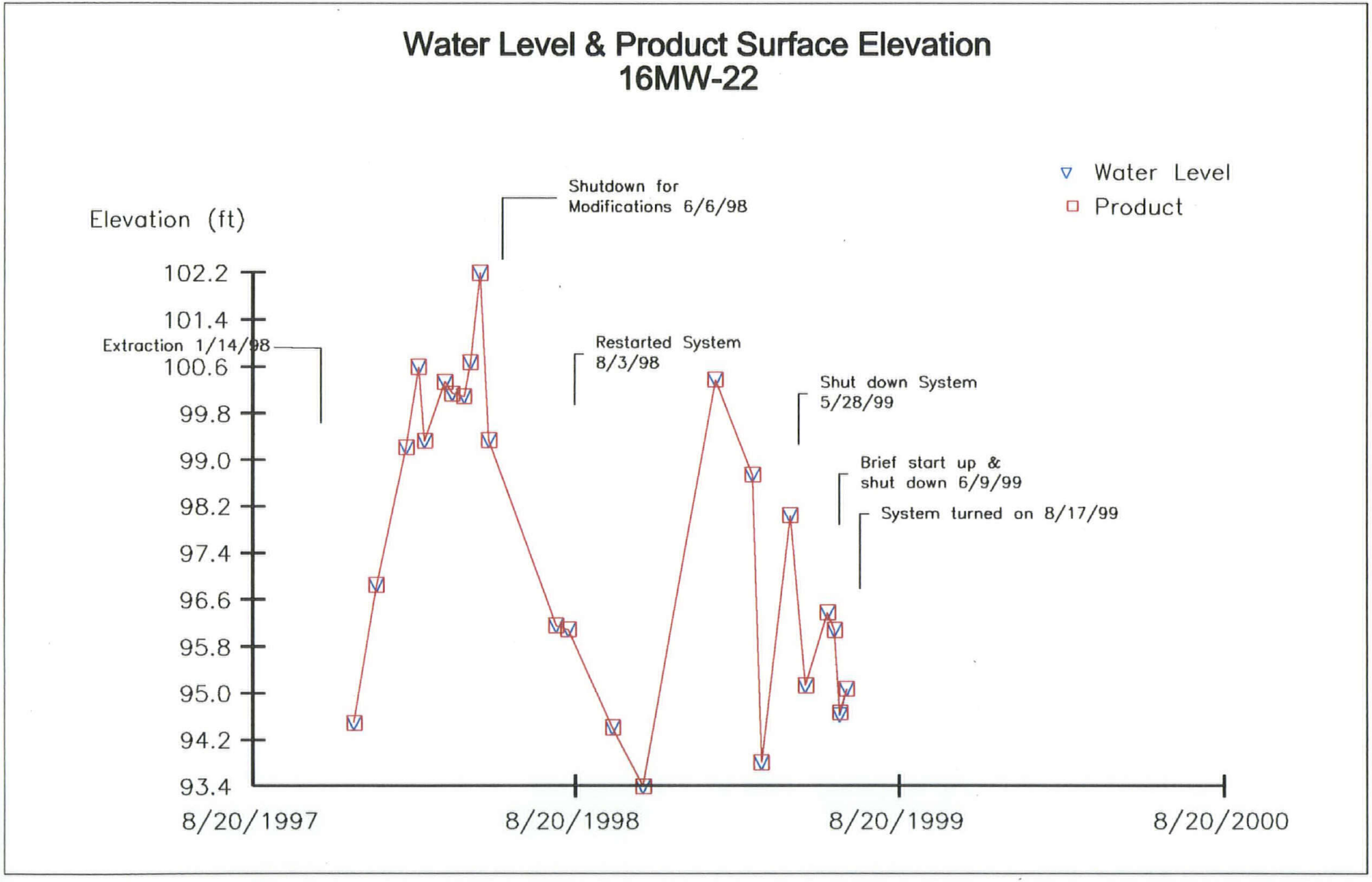



Water Level & Product Surface Elevation
16MW-19
Water Level
Product
Elevation (ft)
97.0
96.3
95.7
95.1
94.4
93.8
93.1
92.5
91.8
91.2
90.6
8/20/1997
8/20/1998
8/20/1999
8/20/2000
Extraction 1/14/98
Shutdown for Modifications 6/6/98
Restarted System 8/3/98
Shut down System 5/28/99
Brief start up & shut down 6/9/99
System turned on 8/17/99
System turned off 9/8/99
System turned on 11/2/99

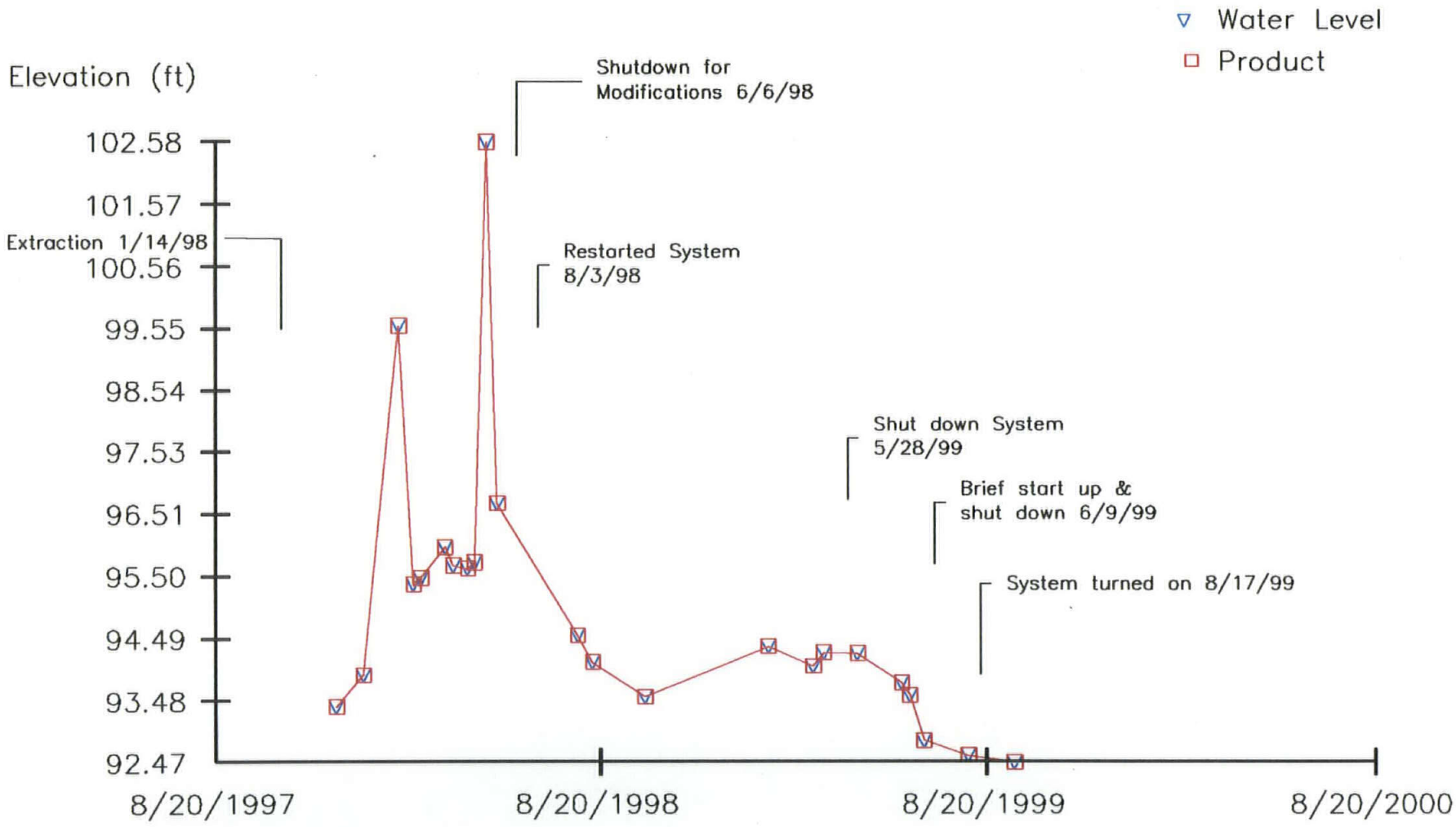

Water Level & Product Surface Elevation
16MW-20
Water Level
Product
Elevation (ft)
95.3
94.9
94.4
93.9
93.4
93.0
92.5
92.0
91.5
91.0
90.6
8/20/1997
8/20/1998
8/20/1999
8/20/2000
Extraction 1/14/98
Shutdown for Modifications 6/6/98
Restarted System 8/3/98
Shut down System 5/28/99
Brief start up & shut down 6/9/99
System turned on 8/17/99
System turned off 9/8/99
System turned on 11/2/99

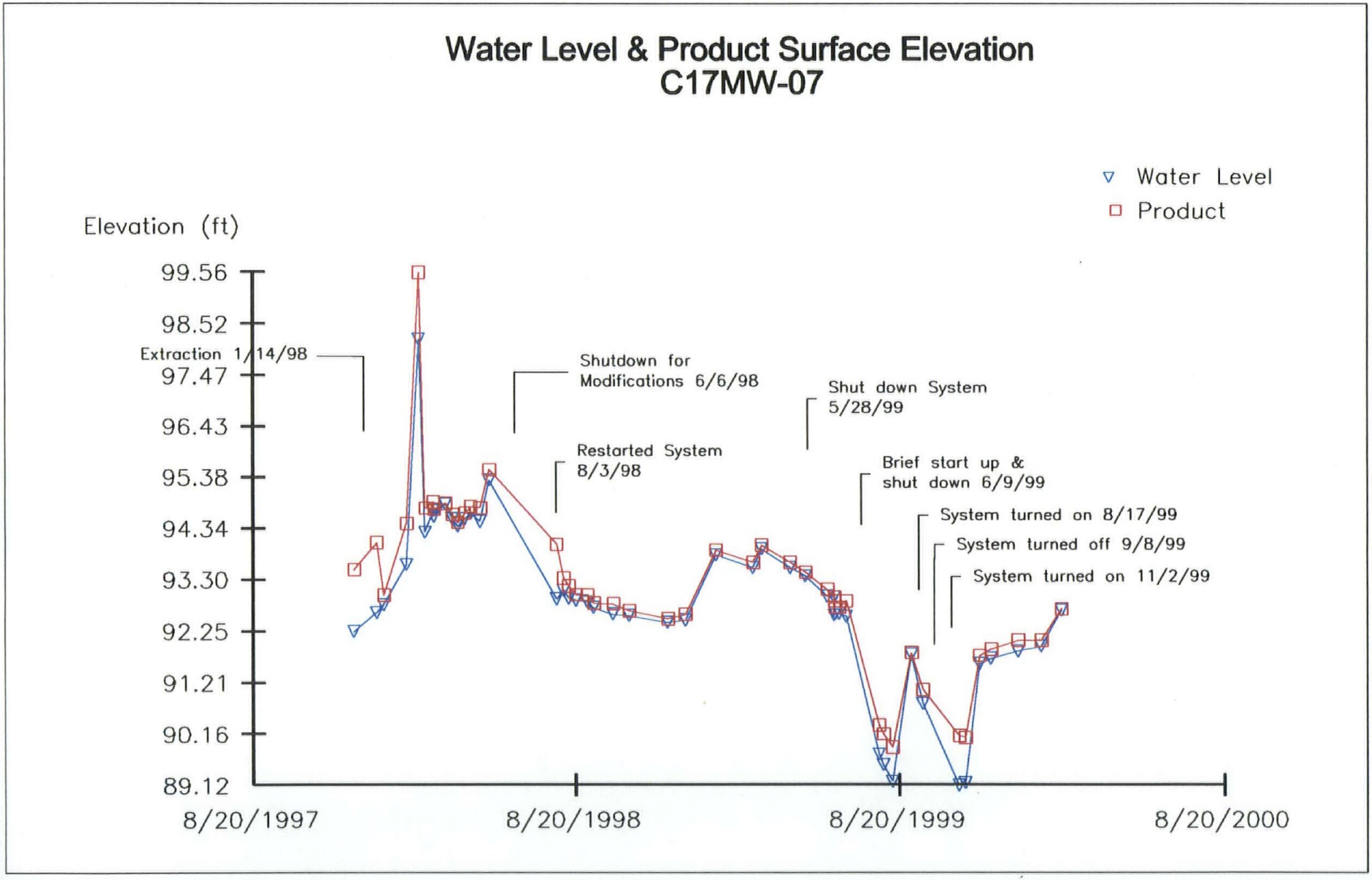
Water Level & Product Surface Elevation
16MW-21

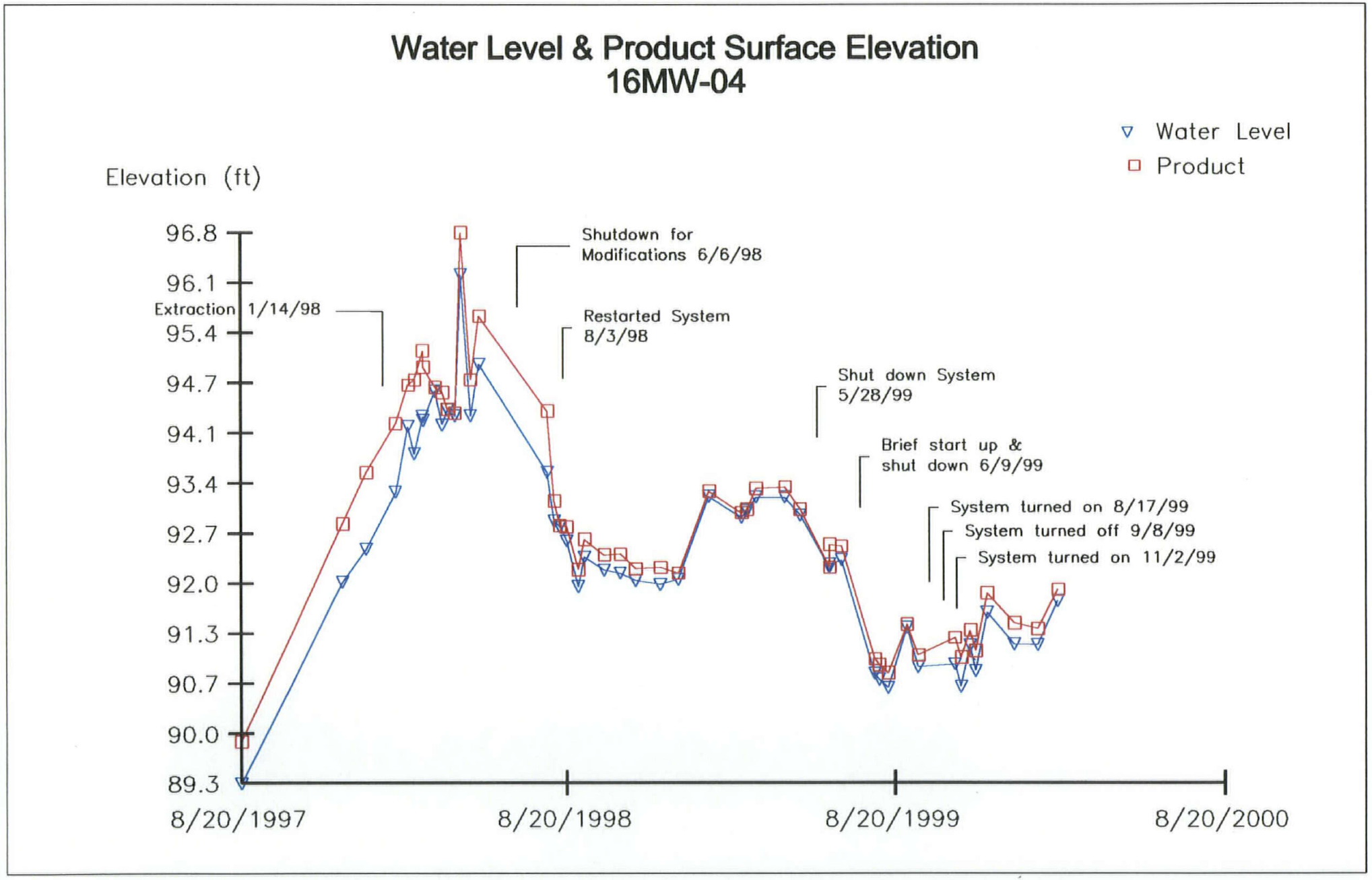



Water Level & Product Surface Elevation
16MW-22
Water Level
Product
Elevation (ft)
102.2
101.4
100.6
99.8
99.0
98.2
97.4
96.6
95.8
95.0
94.2
93.4
Extraction 1/14/98
Shutdown for Modifications 6/6/98
Restarted System 8/3/98
Shut down System 5/28/99
Brief start up & shut down 6/9/99
System turned on 8/17/99
8/20/1997
8/20/1998
8/20/1999
8/20/2000

Water Level & Product Surface Elevation
16MW-23




Water Level & Product Surface Elevation
C17MW-07
Water Level
Product
Elevation (ft)
99.56
98.52
97.47
96.43
95.38
94.34
93.30
92.25
91.21
90.16
89.12
Extraction 1/14/98
Shutdown for Modifications 6/6/98
Restarted System 8/3/98
Shut down System 5/28/99
Brief start up & shut down 6/9/99
System turned on 8/17/99
System turned off 9/8/99
System turned on 11/2/99
8/20/1997
8/20/1998
8/20/1999
8/20/2000


Water Level & Product Surface Elevation
16MW-04
Water Level
Product
Elevation (ft)
96.8
96.1
95.4
94.7
94.1
93.4
92.7
92.0
91.3
90.7
90.0
89.3
Extraction 1/14/98
Shutdown for Modifications 6/6/98
Restarted System 8/3/98
Shut down System 5/28/99
Brief start up & shut down 6/9/99
System turned on 8/17/99
System turned off 9/8/99
System turned on 11/2/99
8/20/1997
8/20/1998
8/20/1999
8/20/2000

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	11.93	0.58	89.31	NA	89.80
16MW-04	12/12/1997	101.23	00:00	9.19	0.79	92.04	2.74	92.71
16MW-04	1/7/1998	101.23	11:02	8.74	1.04	92.49	0.45	93.38
16MW-04	2/10/1998	101.23	00:00	7.98	0.94	93.26	0.76	94.05
16MW-04	2/24/1998	101.23	00:00	7.09	0.57	94.15	0.89	94.63
16MW-04	3/3/1998	101.23	00:00	7.45	1.00	93.78	-0.37	94.63
16MW-04	3/12/1998	101.23	00:00	6.95	0.89	94.29	0.51	95.04
16MW-04	3/13/1998	101.23	00:00	7.00	0.72	94.23	-0.05	94.84
16MW-04	3/26/1998	101.23	00:00	6.60	0.05	94.63	0.40	94.67
16MW-04	4/3/1998	101.23	00:00	7.07	0.45	94.17	-0.46	94.54
16MW-04	4/9/1998	101.23	00:00	6.86	0.01	94.37	0.20	94.38
16MW-04	4/17/1998	101.23	00:00	6.94	0.04	94.29	-0.08	94.32
16MW-04	4/24/1998	101.23	00:00	5.03	0.58	96.20	1.91	96.69
16MW-04	5/5/1998	101.23	00:00	6.94	0.49	94.29	-1.90	94.78
16MW-04	5/15/1998	101.23	00:00	6.24	0.65	94.99	0.69	95.54
16MW-04	7/30/1998	101.23	00:00	7.70	0.82	93.53	-1.46	94.23
16MW-04	8/7/1998	101.23	00:00	8.36	0.27	92.87	-0.66	93.10
16MW-04	8/13/1998	101.23	00:00	8.44	0.02	92.79	-0.08	92.81
16MW-04	8/21/1998	101.23	00:00	8.63	0.19	92.60	-0.19	92.76
16MW-04	9/3/1998	101.23	00:00	9.25	0.23	91.98	-0.62	92.18
16MW-04	9/10/1998	101.23	00:00	8.85	0.24	92.38	0.40	92.58
16MW-04	10/2/1998	101.23	00:00	9.03	0.21	92.20	-0.18	92.38
16MW-04	10/20/1998	101.23	00:00	9.07	0.26	92.16	-0.04	92.38
16MW-04	11/6/1998	101.23	00:00	9.17	0.16	92.06	-0.10	92.19
16MW-04	12/3/1998	101.23	00:00	9.23	0.24	92.01	-0.05	92.21
16MW-04	12/23/1998	101.23	00:00	9.15	0.08	92.08	0.07	92.15

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	1/26/1999	101.23	00:00	8.04	0.08	93.20	1.12	93.26
16MW-04	3/3/1999	101.23[1]	00:00	8.31	0.06	92.92	-0.28	92.97
16MW-04	3/9/1999	101.23	00:00	8.22	0.02	93.01	0.09	93.03
16MW-04	3/19/1999	101.23	00:00	8.04	0.12	93.19	0.18	93.29
16MW-04	4/20/1999	101.23	00:00	8.04	0.14	93.19	0.00	93.31
16MW-04	5/7/1999	101.23	00:00	8.28	0.08	92.95	-0.24	93.02
16MW-04	6/9/1999	101.23	00:00	8.99	0.00	92.24	-0.71	92.24
16MW-04	6/9/1999	101.23	00:01	8.95	0.27	92.28	0.04	92.51
16MW-04	6/22/1999	101.23	08:55	8.89	0.19	92.34	0.06	92.50
16MW-04	7/29/1999	101.23	00:00	10.43	0.20	90.80	-1.54	90.97
16MW-04	8/3/1999	101.23	00:00	10.51	0.20	90.72	-0.08	90.89
16MW-04	8/13/1999	101.23	00:00	10.62	0.20	90.61	-0.11	90.78
16MW-04	9/3/1999	101.23	00:00	9.80	0.04	91.43	0.82	91.46
16MW-04	9/15/1999	101.23	13:35	10.34	0.16	90.89	-0.54	91.03
16MW-04	10/26/1999	101.23	00:00	10.30	0.36	90.93	0.04	91.23
16MW-04	11/2/1999	101.23	00:00	10.60	0.39	90.63	-0.30	90.96
16MW-04	11/12/1999	101.23	00:00	10.05	0.21	91.18	0.55	91.36
16MW-04	11/18/1999	101.23	00:00	10.39	0.27	90.84	-0.34	91.07
16MW-04	12/1/1999	101.23	00:00	9.60	0.26	91.63	0.79	91.85
16MW-04	12/31/1999	101.23	00:00	10.03	0.29	91.20	-0.43	91.45
16MW-04	1/26/2000	101.23	00:00	10.04	0.22	91.19	-0.01	91.38
16MW-04	2/18/2000	101.23	00:00	9.44	0.15	91.79	0.60	91.92
16MW-13	8/20/1997	100.97	00:00	8.50	0.80	92.47	NA	93.15
16MW-13	8/20/1997	100.97	08:45	8.50	0.80	92.47	0.00	93.15
16MW-13	10/6/1997	100.97	10:45	8.86	0.75	92.11	-0.36	92.75
16MW-13	12/12/1997	100.97	08:30	8.57	0.65	92.41	0.29	92.96

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	1/7/1998	100.97	09:35	8.03	0.73	92.94	0.54	93.56
16MW-13	1/15/1998	100.97	07:30	8.06	0.75	92.92	-0.03	93.55
16MW-13	2/10/1998	100.97	00:00	7.39	0.88	93.59	0.67	94.33
16MW-13	2/24/1998	100.97	00:00	6.67	0.72	94.30	0.72	94.91
16MW-13	3/3/1998	100.97	00:00	6.90	1.04	94.07	-0.23	94.96
16MW-13	3/12/1998	100.97	00:00	6.60	1.03	94.38	0.31	95.25
16MW-13	3/13/1998	100.97	00:00	6.61	0.81	94.37	-0.01	95.05
16MW-13	3/26/1998	100.97	00:00	6.14	0.30	94.83	0.46	95.09
16MW-13	4/3/1998	100.97	00:00	6.47	0.42	94.50	-0.33	94.86
16MW-13	4/9/1998	100.97	00:00	6.54	0.27	94.43	-0.07	94.66
16MW-13	4/17/1998	100.97	00:00	6.41	0.18	94.56	0.13	94.71
16MW-13	4/24/1998	100.97	00:00	6.44	0.58	94.54	-0.03	95.03
16MW-13	5/5/1998	100.97	00:00	7.19	0.55	93.78	-0.76	94.33
16MW-13	5/15/1998	100.97	00:00	5.55	0.52	95.43	1.65	95.94
16MW-13	7/30/1998	100.97	00:00	7.80	0.82	93.17	-2.25	93.87
16MW-13	8/7/1998	100.97	00:00	7.78	0.26	93.19	0.02	93.41
16MW-13	8/13/1998	100.97	00:00	7.94	0.14	93.03	-0.16	93.15
16MW-13	8/21/1998	100.97	00:00	8.03	0.27	92.94	-0.09	93.17
16MW-13	9/3/1998	100.97	00:00	8.09	0.20	92.88	-0.06	93.05
16MW-13	9/10/1998	100.97	00:00	8.26	0.15	92.71	-0.17	92.84
16MW-13	10/2/1998	100.97	00:00	8.41	0.27	92.56	-0.15	92.79
16MW-13	10/20/1998	100.97	00:00	8.46	0.14	92.51	-0.05	92.63
16MW-13	11/6/1998	100.97	00:00	8.61	0.14	92.37	-0.15	92.48
16MW-13	12/3/1998	100.97	00:00	8.64	0.11	92.34	-0.03	92.42
16MW-13	12/23/1998	100.97	00:00	8.69	0.20	92.28	-0.06	92.45
16MW-13	1/26/1999	100.97	00:00	7.55	0.18	93.42	1.14	93.57

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	3/3/1999	100.97	00:00	7.80	0.11	93.17	-0.25	93.26
16MW-13	3/9/1999	100.97(1)	00:00	7.74	0.14	93.23	0.06	93.35
16MW-13	3/19/1999	100.97	00:00	7.51	0.16	93.47	0.24	93.60
16MW-13	4/20/1999	100.97	00:00	7.57	0.15	93.41	-0.06	93.53
16MW-13	5/7/1999	100.97	00:00	8.05	0.14	92.93	-0.48	93.04
16MW-13	6/9/1999	100.97	00:00	7.75	0.01	93.23	0.30	93.23
16MW-13	6/9/1999	100.97	00:01	8.48	0.44	92.49	-0.74	92.87
16MW-13	6/10/1999	100.97	00:00	8.91	0.10	92.06	-0.43	92.14
16MW-13	6/14/1999	100.97	13:05	8.91	0.10	92.06	0.00	92.14
16MW-13	6/22/1999	100.97	08:55	8.90	0.29	92.07	0.01	92.32
16MW-13	6/22/1999	100.97	09:45	8.90	0.29	92.07	0.00	92.32
16MW-13	7/29/1999	100.97	00:00	10.83	0.49	90.14	-1.93	90.56
16MW-13	8/3/1999	100.97	00:00	10.90	0.48	90.07	-0.07	90.48
16MW-13	8/13/1999	100.97	00:00	11.03	0.20	89.94	-0.13	90.11
16MW-13	9/3/1999	100.97	00:00	9.15	0.03	91.82	1.88	91.85
16MW-13	9/15/1999	100.97	13:30	9.41	0.05	91.56	-0.26	91.60
16MW-13	10/26/1999	100.97	00:00	10.24	0.50	90.73	-0.83	91.15
16MW-13	11/2/1999	100.97	00:00	10.47	0.52	90.50	-0.23	90.94
16MW-13	11/12/1999	100.97	00:00	10.07	0.37	90.90	0.40	91.21
16MW-13	11/18/1999	100.97	00:00	10.56	0.42	90.41	-0.49	90.76
16MW-13	12/1/1999	100.97	00:00	10.26	0.43	90.71	0.30	91.07
16MW-13	12/31/1999	100.97	00:00	10.12	0.47	90.85	0.14	91.25
16MW-13	1/26/2000	100.97	00:00	10.06	0.38	90.91	0.06	91.24
16MW-13	2/18/2000	100.97	00:00	8.94	0.16	92.03	1.12	92.17
16MW-14	8/20/1997	100.66	00:00	8.16	0.83	92.50	NA	93.21
16MW-14	8/20/1997	100.66	08:48	8.24	0.80	92.42	-0.08	93.10

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	10/6/1997	100.66	10:45	8.63	0.99	92.03	-0.39	92.87
16MW-14	12/12/1997	100.66	08:30	9.18	0.79	91.48	-0.55	92.15
16MW-14	1/7/1998	100.66	09:49	7.94	0.86	92.72	1.24	93.45
16MW-14	1/7/1998	100.66	09:56	7.94	0.86	92.72	0.00	93.45
16MW-14	1/15/1998	100.66	07:30	7.71	0.64	92.96	0.24	93.50
16MW-14	2/10/1998	100.66	00:00	7.13	1.08	93.53	0.58	94.45
16MW-14	3/3/1998	100.66	00:00	6.40	0.84	94.27	0.73	94.98
16MW-14	3/12/1998	100.66	00:00	6.05	0.75	94.61	0.35	95.25
16MW-14	3/13/1998	100.66	00:00	6.29	0.29	94.37	-0.24	94.62
16MW-14	3/26/1998	100.66	00:00	5.60	0.03	95.06	0.69	95.09
16MW-14	4/3/1998	100.66	00:00	6.04	0.21	94.62	-0.44	94.80
16MW-14	4/9/1998	100.66	00:00	5.10	0.09	95.56	0.94	95.63
16MW-14	4/17/1998	100.66	00:00	5.77	0.10	94.90	-0.66	94.98
16MW-14	4/24/1998	100.66	00:00	6.19	0.55	94.48	-0.42	94.94
16MW-14	5/5/1998	100.66	00:00	6.03	0.46	94.63	0.16	95.02
16MW-14	5/15/1998	100.66	00:00	4.90	0.10	95.76	1.13	95.85
16MW-14	7/30/1998	100.66	00:00	7.49	0.85	93.17	-2.59	93.89
16MW-14	8/7/1998	100.66	00:00	7.23	0.06	93.43	0.27	93.48
16MW-14	8/13/1998	100.66	00:00	7.56	0.05	93.10	-0.33	93.14
16MW-14	8/21/1998	100.66	00:00	7.78	0.27	92.88	-0.22	93.11
16MW-14	9/3/1998	100.66	00:00	7.81	0.16	92.85	-0.03	92.99
16MW-14	9/10/1998	100.66	00:00	7.96	0.15	92.70	-0.15	92.83
16MW-14	10/2/1998	100.66	00:00	8.07	0.18	92.59	-0.11	92.74
16MW-14	10/20/1998	100.66	00:00	8.17	0.14	92.50	-0.09	92.61
16MW-14	11/6/1998	100.66	00:00	8.31	0.12	92.36	-0.14	92.45
16MW-14	12/3/1998	100.66	00:00	8.34	0.13	92.33	-0.03	92.43

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	12/23/1998	100.66	00:00	8.90	0.14	91.76	-0.57	91.88
16MW-14	1/26/1999	100.66	00:00	7.17	0.15	93.49	1.73	93.62
16MW-14	3/3/1999	100.66	00:00	8.04	0.13	92.63	-0.87	92.73
16MW-14	3/9/1999	100.66	00:00	7.34	0.04	93.32	0.70	93.35
16MW-14	3/19/1999	100.66	00:00	7.15	0.09	93.52	0.19	93.59
16MW-14	4/20/1999	100.66	00:00	7.25	0.11	93.41	-0.11	93.50
16MW-14	5/7/1999	100.66	00:00	7.74	0.01	92.92	-0.49	92.93
16MW-14	6/1/1999	100.66	00:00	7.83	0.22	92.83	-0.09	93.01
16MW-14	6/9/1999	100.66	00:00	7.64	0.00	93.02	0.19	93.02
16MW-14	6/9/1999	100.66	00:01	8.13	0.30	92.53	-0.49	92.78
16MW-14	6/10/1999	100.66	00:00	8.10	0.13	92.56	0.03	92.67
16MW-14	6/14/1999	100.66	13:10	8.10	0.13	92.56	0.00	92.67
16MW-14	6/22/1999	100.66	09:00	8.95	0.25	91.71	-0.85	91.93
16MW-14	7/29/1999	100.66	00:00	10.25	0.38	90.41	-1.30	90.73
16MW-14	8/3/1999	100.66	00:00	10.40	0.40	90.26	-0.15	90.60
16MW-14	8/13/1999	100.66	00:00	10.46	0.39	90.20	-0.06	90.53
16MW-14	9/3/1999	100.66	00:00	8.85	0.03	91.81	1.61	91.84
16MW-14	9/15/1999	100.66	13:40	9.29	0.09	91.37	-0.44	91.45
16MW-14	10/26/1999	100.66	00:00	10.20	0.57	90.46	-0.91	90.95
16MW-14	11/2/1999	100.66	00:00	10.26	0.53	90.40	-0.06	90.85
16MW-14	11/12/1999	100.66	00:00	9.60	0.15	91.06	0.66	91.19
16MW-14	11/18/1999	100.66	00:00	9.82	0.18	90.84	-0.22	90.99
16MW-14	12/1/1999	100.66	00:00	9.70	0.35	90.96	0.12	91.26
16MW-14	12/31/1999	100.66	00:00	9.50	0.38	91.16	0.20	91.48
16MW-14	1/26/2000	100.66	00:00	9.44	0.29	91.22	0.06	91.46
16MW-14	2/18/2000	100.66	00:00	8.93	0.24	91.73	0.51	91.94

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	8/20/1997	100.98	00:00	8.80	0.90	92.18	NA	92.95
16MW-15	8/20/1997	100.98	08:55	8.80	0.90	92.18	0.00	92.95
16MW-15	8/20/1997	100.98	09:12	8.80	0.90	92.18	0.00	92.95
16MW-15	10/6/1997	100.98	10:45	9.18	0.93	91.80	-0.39	92.59
16MW-15	12/12/1997	100.98	08:30	9.19	0.93	91.80	0.00	92.58
16MW-15	1/7/1998	100.98	10:05	8.57	1.27	92.41	0.62	93.49
16MW-15	1/15/1998	100.98	07:30	8.36	0.84	92.62	0.21	93.34
16MW-15	2/10/1998	100.98	00:00	7.92	1.50	93.07	0.45	94.34
16MW-15	3/3/1998	100.98	00:00	7.38	1.38	93.61	0.54	94.78
16MW-15	3/12/1998	100.98	00:00	6.93	1.19	94.05	0.45	95.06
16MW-15	3/13/1998	100.98	00:00	6.79	0.61	94.20	0.15	94.71
16MW-15	4/3/1998	100.98	00:00	6.77	0.42	94.22	0.02	94.57
16MW-15	4/9/1998	100.98	00:00	6.79	0.14	94.20	-0.02	94.31
16MW-15	4/17/1998	100.98	00:00	6.63	0.06	94.36	0.16	94.40
16MW-15	4/24/1998	100.98	00:00	6.72	0.58	94.26	-0.09	94.76
16MW-15	5/5/1998	100.98	00:00	6.73	0.59	94.25	-0.01	94.84
16MW-15	5/15/1998	100.98	00:00	6.12	0.36	94.86	0.61	95.17
16MW-15	7/30/1998	100.98	00:00	8.19	0.92	92.79	-2.07	93.57
16MW-15	8/7/1998	100.98	00:00	8.14	0.31	92.84	0.06	93.10
16MW-15	8/13/1998	100.98	00:00	8.26	0.17	92.72	-0.12	92.87
16MW-15	8/21/1998	100.98	00:00	8.41	0.27	92.57	-0.15	92.80
16MW-15	9/3/1998	100.98	00:00	8.46	0.22	92.52	-0.05	92.71
16MW-15	9/10/1998	100.98	00:00	8.59	0.18	92.40	-0.13	92.54
16MW-15	10/2/1998	100.98	00:00	8.69	0.21	92.30	-0.10	92.47
16MW-15	10/20/1998	100.98	00:00	8.77	0.16	92.21	-0.09	92.35
16MW-15	11/6/1998	100.98	00:00	8.87	0.06	92.11	-0.10	92.16

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	12/3/1998	100.98	00:00	8.93	0.12	92.06	-0.05	92.15
16MW-15	12/23/1998	100.98	00:00	8.54	0.11	92.44	0.39	92.53
16MW-15	1/26/1999	100.98	00:00	7.75	0.13	93.24	0.80	93.34
16MW-15	3/3/1999	100.98	00:00	7.46	0.11	93.53	0.29	93.61
16MW-15	3/9/1999	100.98	00:00	8.30	0.40	92.68	-0.85	93.02
16MW-15	3/19/1999	100.98	00:00	7.77	0.15	93.21	0.53	93.34
16MW-15	4/20/1999	100.98	00:00	7.88	0.14	93.10	-0.11	93.22
16MW-15	6/1/1999	100.98	00:00	8.40	0.17	92.58	-0.52	92.73
16MW-15	6/9/1999	100.98	00:00	7.95	0.00	93.03	0.45	93.03
16MW-15	6/9/1999	100.98	00:01	8.70	0.23	92.29	-0.74	92.48
16MW-15	6/10/1999	100.98	00:00	8.68	0.11	92.30	0.02	92.39
16MW-15	6/14/1999	100.98	13:15	8.69	0.11	92.29	-0.01	92.38
16MW-15	6/22/1999	100.98	09:00	8.74	0.21	92.24	-0.05	92.42
16MW-15	7/29/1999	100.98	00:00	10.61	0.33	90.37	-1.87	90.65
16MW-15	8/13/1999	100.98	00:00	10.98	0.36	90.00	-0.37	90.31
16MW-15	9/3/1999	100.98	00:00	9.44	0.04	91.54	1.54	91.57
16MW-15	9/15/1999	100.98	13:45	9.46	0.12	91.52	-0.02	91.62
16MW-15	10/26/1999	100.98	00:00	10.65	0.53	90.33	-1.19	90.78
16MW-15	11/2/1999	100.98	00:00	10.93	0.57	90.05	-0.28	90.54
16MW-15	11/12/1999	100.98	00:00	9.70	0.34	91.28	1.23	91.57
16MW-15	11/18/1999	100.98	00:00	9.81	0.35	91.17	-0.11	91.47
16MW-15	12/1/1999	100.98	00:00	9.60	0.16	91.38	0.21	91.52
16MW-15	12/31/1999	100.98	00:00	9.48	0.21	91.50	0.12	91.68
16MW-15	1/26/2000	100.98	00:00	9.50	0.14	91.48	-0.02	91.60
16MW-15	2/18/2000	100.98	00:00	8.91	0.07	92.07	0.59	92.13
16MW-16	8/20/1997	98.82	00:00	6.77	0.08	92.05	NA	92.12

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	8/20/1997	98.82	09:12	6.77	0.08	92.05	0.00	92.12
16MW-16	10/6/1997	98.82	10:45	7.13	0.36	91.70	-0.36	92.00
16MW-16	12/12/1997	98.82	08:30	7.29	1.20	91.53	-0.17	92.55
16MW-16	1/7/1998	98.82	10:10	6.94	1.15	91.88	0.35	92.86
16MW-16	1/15/1998	98.82	07:30	6.15	0.56	92.67	0.79	93.15
16MW-16	2/10/1998	98.82	00:00	5.90	0.49	92.92	0.25	93.34
16MW-16	2/24/1998	98.82	00:00	3.90	0.05	94.92	2.00	94.96
16MW-16	3/3/1998	98.82	00:00	5.18	0.17	93.64	-1.28	93.78
16MW-16	3/12/1998	98.82	00:00	4.73	0.03	94.09	0.46	94.12
16MW-16	3/13/1998	98.82	00:00	5.05	0.02	93.77	-0.33	93.79
16MW-16	3/26/1998	98.82	00:00	4.39	0.01	94.43	0.66	94.44
16MW-16	4/3/1998	98.82	00:00	5.13	0.01	93.69	-0.74	93.70
16MW-16	4/9/1998	98.82	00:00	5.28	0.02	93.54	-0.15	93.56
16MW-16	4/17/1998	98.82	00:00	5.17	0.14	93.65	0.11	93.77
16MW-16	4/24/1998	98.82	00:00	5.06	0.08	93.77	0.12	93.83
16MW-16	5/5/1998	98.82	00:00	5.10	0.08	93.73	-0.04	93.80
16MW-16	5/15/1998	98.82	00:00	3.93	0.11	94.89	1.17	94.98
16MW-16	7/30/1998	98.82	00:00	6.47	0.39	92.35	-2.54	92.68
16MW-16	8/7/1998	98.82	00:00	6.50	0.14	92.32	-0.03	92.44
16MW-16	8/13/1998	98.82	00:00	6.70	0.17	92.12	-0.20	92.26
16MW-16	8/21/1998	98.82	00:00	6.77	0.07	92.05	-0.07	92.11
16MW-16	9/3/1998	98.82	00:00	6.74	0.04	92.08	0.03	92.11
16MW-16	9/10/1998	98.82	00:00	6.89	0.04	91.93	-0.15	91.96
16MW-16	10/2/1998	98.82	00:00	6.98	0.08	91.84	-0.09	91.91
16MW-16	10/20/1998	98.82	00:00	7.04	0.04	91.78	-0.06	91.81
16MW-16	11/6/1998	98.82	00:00	7.15	0.03	91.67	-0.11	91.69

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	12/3/1998	98.82	00:00	7.14	0.04	91.69	0.02	91.72
16MW-16	12/23/1998	98.82	00:00	7.09	0.06	91.73	0.05	91.78
16MW-16	1/26/1999	98.82	00:00	5.96	0.01	92.86	1.13	92.87
16MW-16	3/19/1999	98.82	00:00	5.84	0.01	92.99	0.12	92.99
16MW-16	4/20/1999	98.82	00:00	6.02	0.01	92.80	-0.19	92.81
16MW-16	5/7/1999	98.82	00:00	6.23	0.01	92.59	-0.21	92.60
16MW-16	6/1/1999	98.82	00:00	6.66	0.10	92.16	-0.43	92.24
16MW-16	6/9/1999	98.82	00:00	6.15	0.00	92.67	0.51	92.67
16MW-16	6/9/1999	98.82	00:01	7.01	0.16	91.81	-0.86	91.94
16MW-16	6/10/1999	98.82	00:00	6.98	0.03	91.85	0.04	91.87
16MW-16	6/14/1999	98.82	13:40	6.98	0.03	91.85	0.00	91.87
16MW-16	6/22/1999	98.82	09:30	6.90	0.10	91.92	0.08	92.00
16MW-16	7/29/1999	98.82	00:00	8.62	0.23	90.20	-1.72	90.39
16MW-16	8/3/1999	98.82	00:00	8.80	0.25	90.02	-0.18	90.23
16MW-16	8/13/1999	98.82	00:00	8.97	0.27	89.85	-0.17	90.08
16MW-16	9/3/1999	98.82	00:00	8.35	0.20	90.47	0.62	90.64
16MW-16	9/15/1999	98.82	14:20	8.10	0.09	90.72	0.25	90.79
16MW-16	10/26/1999	98.82	00:00	8.00	0.30	90.82	0.10	91.08
16MW-16	11/2/1999	98.82	00:00	8.22	0.31	90.60	-0.22	90.86
16MW-16	11/12/1999	98.82	00:00	7.30	0.03	91.52	0.92	91.54
16MW-16	11/18/1999	98.82	00:00	7.57	0.04	91.25	-0.27	91.29
16MW-16	12/1/1999	98.82	00:00	7.51	0.08	91.31	0.06	91.38
16MW-16	12/31/1999	98.82	00:00	7.44	0.04	91.38	0.07	91.41
16MW-16	1/26/2000	98.82	00:00	7.37	0.04	91.45	0.07	91.49
16MW-16	2/18/2000	98.82	00:00	6.85	0.01	91.97	0.52	91.98
16MW-17	8/20/1997	99.79	00:00	7.77	1.04	92.03	NA	92.91

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	8/20/1997	99.79	09:07	7.77	1.04	92.03	0.00	92.91
16MW-17	10/6/1997	99.79	00:00	8.19	1.28	91.60	-0.43	92.69
16MW-17	10/6/1997	99.79	10:45	8.15	0.94	91.64	0.04	92.44
16MW-17	12/12/1997	99.79	08:30	7.88	0.88	91.92	0.28	92.66
16MW-17	1/7/1998	99.79	10:23	7.51	1.22	92.29	0.37	93.32
16MW-17	1/15/1998	99.79	07:30	7.14	0.44	92.65	0.37	93.03
16MW-17	2/10/1998	99.79	00:00	6.71	1.18	93.08	0.43	94.09
16MW-17	2/24/1998	99.79	00:00	5.58	0.38	94.22	1.13	94.54
16MW-17	3/3/1998	99.79	00:00	6.08	0.96	93.71	-0.50	94.53
16MW-17	3/12/1998	99.79	00:00	5.78	0.50	94.01	0.30	94.44
16MW-17	3/13/1998	99.79	00:00	5.33	0.08	94.47	0.45	94.53
16MW-17	3/26/1998	99.79	00:00	5.25	0.02	94.55	0.08	94.56
16MW-17	4/3/1998	99.79	00:00	6.65	0.11	93.14	-1.40	93.23
16MW-17	4/9/1998	99.79	00:00	5.84	0.10	93.96	0.81	94.04
16MW-17	4/17/1998	99.79	00:00	5.64	0.14	94.16	0.20	94.27
16MW-17	4/24/1998	99.79	00:00	5.58	0.21	94.22	0.06	94.39
16MW-17	5/5/1998	99.79	00:00	5.64	0.27	94.15	-0.07	94.42
16MW-17	5/15/1998	99.79	00:00	5.09	0.09	94.70	0.55	94.78
16MW-17	7/30/1998	99.79	00:00	9.09	0.39	90.70	-4.00	91.03
16MW-17	8/7/1998	99.79	00:00	7.09	0.21	92.70	2.00	92.88
16MW-17	8/13/1998	99.79	00:00	7.28	0.22	92.51	-0.19	92.70
16MW-17	8/21/1998	99.79	00:00	7.34	0.09	92.45	-0.06	92.52
16MW-17	9/3/1998	99.79	00:00	7.40	0.12	92.39	-0.06	92.49
16MW-17	9/10/1998	99.79	00:00	7.49	0.08	92.30	-0.09	92.37
16MW-17	10/2/1998	99.79	00:00	5.85	0.81	93.94	1.64	94.63
16MW-17	10/20/1998	99.79	00:00	7.58	0.09	92.21	-1.73	92.29

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	11/6/1998	99.79	00:00	7.82	0.07	91.97	-0.24	92.03
16MW-17	12/3/1998	99.79	00:00	7.86	0.05	91.94	-0.03	91.97
16MW-17	12/23/1998	99.79	00:00	7.84	0.18	91.96	0.02	92.10
16MW-17	1/26/1999	99.79	00:00	6.51	0.08	93.29	1.33	93.35
16MW-17	3/9/1999	99.79	00:00	6.86	0.06	92.93	-0.35	92.98
16MW-17	3/19/1999	99.79	00:00	6.52	0.06	93.28	0.34	93.32
16MW-17	4/20/1999	99.79	00:00	6.74	0.06	93.06	-0.22	93.10
16MW-17	5/7/1999	99.79	00:00	6.90	0.02	92.89	-0.17	92.91
16MW-17	6/1/1999	99.79	00:00	7.29	0.08	92.50	-0.39	92.57
16MW-17	6/9/1999	99.79	00:00	7.15	0.00	92.64	0.14	92.64
16MW-17	6/9/1999	99.79	00:01	7.61	0.13	92.18	-0.46	92.29
16MW-17	6/10/1999	99.79	00:00	7.61	0.05	92.19	0.00	92.22
16MW-17	6/14/1999	99.79	13:30	7.61	0.05	92.19	0.00	92.22
16MW-17	6/22/1999	99.79	09:20	7.67	0.11	92.12	-0.07	92.22
16MW-17	7/29/1999	99.79	00:00	9.40	0.27	90.39	-1.73	90.62
16MW-17	8/3/1999	99.79	00:00	9.55	0.28	90.24	-0.15	90.48
16MW-17	8/13/1999	99.79	00:00	9.70	0.30	90.09	-0.15	90.35
16MW-17	9/3/1999	99.79	00:00	8.49	0.04	91.30	1.21	91.34
16MW-17	9/15/1999	99.79	14:05	8.86	0.11	90.93	-0.37	91.03
16MW-17	10/26/1999	99.79	00:00	9.81	0.63	89.98	-0.95	90.51
16MW-17	11/2/1999	99.79	00:00	9.99	0.64	89.80	-0.18	90.34
16MW-17	11/12/1999	99.79	00:00	8.31	0.10	91.48	1.68	91.57
16MW-17	11/18/1999	99.79	00:00	8.55	0.13	91.24	-0.24	91.35
16MW-17	12/1/1999	99.79	00:00	8.87	0.13	90.92	-0.32	91.03
16MW-17	12/31/1999	99.79	00:00	8.21	0.16	91.58	0.66	91.72
16MW-17	1/26/2000	99.79	00:00	8.21	0.09	91.58	0.00	91.66

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	2/18/2000	99.79	00:00	7.57	0.02	92.22	0.64	92.24
16MW-18	8/20/1997	100.69	00:00	7.96	0.00	92.73	NA	92.73
16MW-18	8/20/1997	100.69	09:03	7.96	0.00	92.73	0.00	92.73
16MW-18	10/6/1997	100.69	10:45	8.21	0.00	92.48	-0.25	92.48
16MW-18	12/12/1997	100.69	08:30	7.98	0.00	92.71	0.23	92.71
16MW-18	1/7/1998	100.69	10:30	6.85	0.00	93.84	1.13	93.84
16MW-18	1/15/1998	100.69	07:30	7.24	0.00	93.45	-0.39	93.45
16MW-18	2/10/1998	100.69	00:00	5.86	0.00	94.83	1.38	94.83
16MW-18	2/24/1998	100.69	00:00	6.80	0.00	93.89	-0.94	93.89
16MW-18	3/3/1998	100.69	00:00	5.30	0.00	95.39	1.50	95.39
16MW-18	3/12/1998	100.69	00:00	4.89	0.00	95.80	0.41	95.80
16MW-18	3/13/1998	100.69	00:00	5.06	0.00	95.63	-0.17	95.63
16MW-18	3/26/1998	100.69	00:00	4.78	0.00	95.91	0.28	95.91
16MW-18	4/3/1998	100.69	00:00	5.51	0.00	95.18	-0.73	95.18
16MW-18	4/9/1998	100.69	00:00	5.85	0.00	94.84	-0.34	94.84
16MW-18	4/17/1998	100.69	00:00	5.20	0.00	95.49	0.65	95.49
16MW-18	4/24/1998	100.69	00:00	5.50	0.00	95.19	-0.30	95.19
16MW-18	5/5/1998	100.69	00:00	4.40	0.00	96.29	1.10	96.29
16MW-18	5/15/1998	100.69	00:00	3.85	0.00	96.84	0.55	96.84
16MW-18	7/30/1998	100.69	00:00	6.88	0.02	93.81	-3.03	93.83
16MW-18	8/7/1998	100.69	00:00	7.13	0.00	93.56	-0.26	93.56
16MW-18	8/13/1998	100.69	00:00	8.40	0.00	92.29	-1.27	92.29
16MW-18	8/21/1998	100.69	00:00	7.61	0.00	93.08	0.79	93.08
16MW-18	9/3/1998	100.69	00:00	7.77	0.00	92.92	-0.16	92.92
16MW-18	9/10/1998	100.69	00:00	7.39	0.00	93.30	0.38	93.30
16MW-18	10/2/1998	100.69	00:00	7.66	0.00	93.03	-0.27	93.03

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	10/20/1998	100.69	00:00	8.12	0.00	92.57	-0.46	92.57
16MW-18	11/6/1998	100.69	00:00	8.31	0.00	92.38	-0.19	92.38
16MW-18	12/3/1998	100.69	00:00	8.20	0.00	92.49	0.11	92.49
16MW-18	12/23/1998	100.69	00:00	8.47	0.01	92.23	-0.27	92.23
16MW-18	1/26/1999	100.69	00:00	4.36	0.00	96.33	4.11	96.33
16MW-18	3/9/1999	100.69	00:00	6.30	0.00	94.39	-1.94	94.39
16MW-18	3/19/1999	100.69	00:00	4.80	0.00	95.89	1.50	95.89
16MW-18	5/7/1999	100.69	00:00	7.14	0.00	93.55	-2.34	93.55
16MW-18	6/1/1999	100.69	00:00	7.40	0.00	93.29	-0.26	93.29
16MW-18	6/9/1999	100.69	00:00	7.79	0.00	92.90	-0.39	92.90
16MW-18	6/9/1999	100.69	00:01	7.77	0.00	92.92	0.02	92.92
16MW-18	6/10/1999	100.69	00:00	7.82	0.00	92.87	-0.05	92.87
16MW-18	6/14/1999	100.69	13:25	7.82	0.00	92.87	0.00	92.87
16MW-18	6/22/1999	100.69	09:15	8.12	0.00	92.57	-0.30	92.57
16MW-18	7/29/1999	100.69	00:00	9.10	0.00	91.59	-0.98	91.59
16MW-18	8/3/1999	100.69	00:00	9.25	0.00	91.44	-0.15	91.44
16MW-18	9/3/1999	100.69	00:00	6.50	0.00	94.19	2.75	94.19
16MW-18	9/15/1999	100.69	14:00	8.99	0.00	91.70	-2.49	91.70
16MW-18	10/26/1999	100.69	00:00	7.15	0.01	93.54	1.84	93.55
16MW-18	11/12/1999	100.69	00:00	8.39	0.02	92.30	-1.24	92.32
16MW-18	11/18/1999	100.69	00:00	8.60	0.01	92.09	-0.21	92.10
16MW-18	12/1/1999	100.69	00:00	8.41	0.02	92.28	0.19	92.29
16MW-18	12/31/1999	100.69	00:00	7.50	0.28	93.19	0.91	93.42
16MW-18	1/26/2000	100.69	00:00	8.39	0.02	92.30	-0.89	92.32
16MW-18	2/18/2000	100.69	00:00	6.17	0.03	94.52	2.22	94.55
16MW-19	8/20/1997	100.54	08:57	7.70	0.00	92.84	NA	92.84

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	10/6/1997	100.54	10:45	8.43	0.62	92.11	-0.73	92.64
16MW-19	12/12/1997	100.54	08:30	8.65	1.13	91.90	-0.22	92.85
16MW-19	1/7/1998	100.54	10:37	7.53	0.83	93.02	1.12	93.72
16MW-19	1/15/1998	100.54	07:30	7.21	0.18	93.33	0.31	93.48
16MW-19	2/10/1998	100.54	00:00	5.79	0.10	94.76	1.43	94.84
16MW-19	2/24/1998	100.54	00:00	5.10	0.00	95.44	0.69	95.44
16MW-19	3/3/1998	100.54	00:00	5.31	0.02	95.24	-0.21	95.25
16MW-19	3/12/1998	100.54	00:00	4.81	0.02	95.74	0.50	95.75
16MW-19	3/13/1998	100.54	00:00	5.05	0.00	95.49	-0.25	95.49
16MW-19	3/26/1998	100.54	00:00	6.31	0.03	94.23	-1.26	94.26
16MW-19	4/3/1998	100.54	00:00	5.31	0.00	95.23	1.00	95.23
16MW-19	4/9/1998	100.54	00:00	5.52	0.01	95.02	-0.21	95.03
16MW-19	4/17/1998	100.54	00:00	5.04	0.04	95.50	0.48	95.54
16MW-19	4/24/1998	100.54	00:00	4.92	0.01	95.62	0.12	95.63
16MW-19	5/5/1998	100.54	00:00	4.56	0.06	95.98	0.36	96.04
16MW-19	5/15/1998	100.54	00:00	3.56	0.01	96.98	0.99	96.99
16MW-19	7/30/1998	100.54	00:00	6.79	0.11	93.75	-3.23	93.84
16MW-19	8/7/1998	100.54	00:00	6.97	0.00	93.57	-0.18	93.57
16MW-19	8/13/1998	100.54	00:00	7.21	0.01	93.34	-0.24	93.34
16MW-19	8/21/1998	100.54	00:00	7.41	0.00	93.13	-0.21	93.13
16MW-19	9/3/1998	100.54	00:00	7.54	0.00	93.00	-0.13	93.00
16MW-19	9/10/1998	100.54	00:00	7.60	0.00	92.94	-0.06	92.94
16MW-19	10/2/1998	100.54	00:00	7.67	0.01	92.87	-0.07	92.88
16MW-19	10/20/1998	100.54	00:00	7.88	0.01	92.66	-0.21	92.67
16MW-19	11/6/1998	100.54	00:00	8.15	0.01	92.39	-0.27	92.40
16MW-19	12/3/1998	100.54	00:00	7.94	0.00	92.60	0.21	92.60

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	12/23/1998	100.54	00:00	8.05	0.02	92.50	-0.10	92.51
16MW-19	1/26/1999	100.54	00:00	5.69	0.04	94.85	2.36	94.88
16MW-19	3/9/1999	100.54	00:00	6.43	0.03	94.11	-0.74	94.14
16MW-19	3/19/1999	100.54	00:00	6.05	0.05	94.49	0.38	94.53
16MW-19	4/20/1999	100.54	00:00	6.56	0.01	93.98	-0.51	93.99
16MW-19	5/7/1999	100.54	00:00	7.04	0.03	93.51	-0.47	93.53
16MW-19	6/1/1999	100.54	00:00	7.17	0.03	93.37	-0.14	93.39
16MW-19	6/9/1999	100.54	00:00	6.94	0.00	93.60	0.23	93.60
16MW-19	6/9/1999	100.54	00:01	7.62	0.03	92.92	-0.68	92.95
16MW-19	6/10/1999	100.54	00:00	7.68	0.00	92.86	-0.06	92.86
16MW-19	6/14/1999	100.54	13:20	7.68	0.00	92.86	0.00	92.86
16MW-19	6/22/1999	100.54	09:10	7.90	0.03	92.64	-0.22	92.66
16MW-19	7/29/1999	100.54	00:00	9.01	0.05	91.53	-1.11	91.57
16MW-19	8/3/1999	100.54	00:00	9.14	0.06	91.40	-0.13	91.45
16MW-19	8/13/1999	100.54	00:00	9.05	0.00	91.49	0.09	91.49
16MW-19	9/3/1999	100.54	00:00	9.07	0.14	91.47	-0.02	91.59
16MW-19	9/15/1999	100.54	13:55	8.99	0.02	91.55	0.08	91.57
16MW-19	10/26/1999	100.54	00:00	9.35	0.42	91.19	-0.36	91.54
16MW-19	11/2/1999	100.54	00:00	9.99	0.47	90.55	-0.64	90.95
16MW-19	11/12/1999	100.54	00:00	8.45	0.01	92.09	1.54	92.10
16MW-19	11/18/1999	100.54	00:00	8.59	0.00	91.95	-0.14	91.95
16MW-19	12/1/1999	100.54	00:00	8.35	0.01	92.19	0.24	92.20
16MW-19	12/31/1999	100.54	00:00	8.07	0.04	92.47	0.28	92.50
16MW-19	1/26/2000	100.54	00:00	8.36	0.01	92.18	-0.29	92.19
16MW-19	2/18/2000	100.54	00:00	7.51	0.01	93.03	0.85	93.04
16MW-20	8/20/1997	100.82	09:26	8.55	0.45	92.28	NA	92.65

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	10/6/1997	100.82	10:45	8.84	0.46	91.98	-0.30	92.37
16MW-20	12/12/1997	100.82	08:30	8.71	0.61	92.11	0.13	92.63
16MW-20	1/7/1998	100.82	10:49	8.28	0.70	92.55	0.44	93.14
16MW-20	2/10/1998	100.82	00:00	7.25	0.15	93.57	1.02	93.70
16MW-20	2/24/1998	100.82	00:00	6.56	0.08	94.26	0.69	94.33
16MW-20	3/3/1998	100.82	00:00	6.63	0.07	94.19	-0.07	94.25
16MW-20	3/12/1998	100.82	00:00	6.30	0.02	94.52	0.33	94.54
16MW-20	3/26/1998	100.82	00:00	6.20	0.00	94.62	0.10	94.62
16MW-20	4/3/1998	100.82	00:00	6.48	0.04	94.34	-0.28	94.37
16MW-20	4/9/1998	100.82	00:00	6.61	0.02	94.21	-0.13	94.23
16MW-20	4/24/1998	100.82	00:00	6.48	0.00	94.34	0.13	94.34
16MW-20	5/5/1998	100.82	00:00	6.40	0.01	94.42	0.08	94.43
16MW-20	5/15/1998	100.82	00:00	5.54	0.06	95.29	0.86	95.33
16MW-20	7/30/1998	100.82	00:00	7.88	0.37	92.94	-2.34	93.25
16MW-20	8/7/1998	100.82	00:00	7.97	0.05	92.85	-0.09	92.89
16MW-20	8/13/1998	100.82	00:00	8.13	0.05	92.69	-0.17	92.73
16MW-20	8/21/1998	100.82	00:00	8.25	0.05	92.57	-0.12	92.61
16MW-20	9/3/1998	100.82	00:00	8.47	0.06	92.35	-0.22	92.40
16MW-20	9/10/1998	100.82	00:00	8.48	0.02	92.34	-0.01	92.36
16MW-20	10/2/1998	100.82	00:00	8.57	0.05	92.25	-0.10	92.29
16MW-20	10/20/1998	100.82	00:00	8.66	0.00	92.16	-0.09	92.16
16MW-20	12/3/1998	100.82	00:00	8.85	0.06	91.97	-0.19	92.02
16MW-20	1/26/1999	100.82	00:00	7.62	0.03	93.20	1.23	93.22
16MW-20	3/9/1999	100.82	00:00	7.88	0.03	92.95	-0.26	92.97
16MW-20	3/19/1999	100.82	00:00	7.63	0.01	93.19	0.25	93.20
16MW-20	4/20/1999	100.82	00:00	7.69	0.01	93.14	-0.06	93.14

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	7.87	0.02	92.96	-0.18	92.97
16MW-20	6/1/1999	100.82	00:00	8.25	0.04	92.57	-0.39	92.60
16MW-20	6/9/1999	100.82	00:01	8.56	0.08	92.26	-0.31	92.33
16MW-20	6/10/1999	100.82	00:00	7.57	0.05	93.25	0.99	93.29
16MW-20	6/22/1999	100.82	09:35	8.59	0.09	92.23	-1.02	92.30
16MW-20	7/29/1999	100.82	00:00	9.40	0.00	91.42	-0.81	91.42
16MW-20	8/3/1999	100.82	00:00	10.25	0.19	90.57	-0.85	90.73
16MW-20	9/3/1999	100.82	00:00	9.45	0.02	91.37	0.80	91.38
16MW-20	9/15/1999	100.82	14:30	9.72	0.07	91.10	-0.27	91.16
16MW-20	11/2/1999	100.82	00:00	10.08	0.32	90.74	-0.36	91.01
16MW-20	11/18/1999	100.82	00:00	9.40	0.00	91.42	0.68	91.42
16MW-20	12/1/1999	100.82	00:00	9.31	0.08	91.51	0.09	91.58
16MW-20	12/31/1999	100.82	00:00	8.84	0.03	91.98	0.47	92.01
16MW-20	1/26/2000	100.82	00:00	9.28	0.09	91.54	-0.44	91.62
16MW-20	2/18/2000	100.82	00:00	8.82	0.06	92.00	0.46	92.05
16MW-21	8/20/1997	99.78	00:00	7.56	0.00	92.22	NA	92.22
16MW-21	8/20/1997	99.78	09:35	7.56	0.00	92.22	0.00	92.22
16MW-21	10/6/1997	99.78	10:45	7.80	0.00	91.98	-0.24	91.98
16MW-21	12/12/1997	99.78	08:30	7.70	0.00	92.08	0.10	92.08
16MW-21	1/7/1998	99.78	10:58	7.12	0.00	92.66	0.58	92.66
16MW-21	2/10/1998	99.78	00:00	6.00	0.00	93.78	1.12	93.78
16MW-21	2/24/1998	99.78	00:00	5.67	0.00	94.11	0.33	94.11
16MW-21	3/3/1998	99.78	00:00	5.40	0.00	94.38	0.27	94.38
16MW-21	3/12/1998	99.78	00:00	5.03	0.00	94.75	0.37	94.75
16MW-21	3/13/1998	99.78	00:00	5.17	0.00	94.61	-0.14	94.61
16MW-21	4/3/1998	99.78	00:00	5.25	0.00	94.53	-0.08	94.53

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	4/9/1998	99.78	00:00	5.55	0.00	94.23	-0.30	94.23
16MW-21	4/17/1998	99.78	00:00	6.45	0.01	93.33	-0.90	93.34
16MW-21	4/24/1998	99.78	00:00	5.93	0.00	93.85	0.52	93.85
16MW-21	5/5/1998	99.78	00:00	4.83	0.00	94.95	1.10	94.95
16MW-21	5/15/1998	99.78	00:00	4.10	0.00	95.68	0.73	95.68
16MW-21	7/30/1998	99.78	00:00	6.95	0.00	92.83	-2.85	92.83
16MW-21	8/7/1998	99.78	00:00	7.21	0.00	92.57	-0.26	92.57
16MW-21	8/13/1998	99.78	00:00	7.41	0.00	92.37	-0.20	92.37
16MW-21	8/21/1998	99.78	00:00	7.51	0.00	92.27	-0.10	92.27
16MW-21	9/3/1998	99.78	00:00	7.57	0.00	92.21	-0.06	92.21
16MW-21	9/10/1998	99.78	00:00	7.70	0.00	92.08	-0.13	92.08
16MW-21	10/2/1998	99.78	00:00	7.77	0.00	92.01	-0.07	92.01
16MW-21	10/20/1998	99.78	00:00	7.86	0.00	91.92	-0.09	91.92
16MW-21	12/3/1998	99.78	00:00	8.00	0.00	91.78	-0.14	91.78
16MW-21	1/26/1999	99.78	00:00	5.05	0.00	94.73	2.95	94.73
16MW-21	3/9/1999	99.78	00:00	6.57	0.00	93.21	-1.52	93.21
16MW-21	3/19/1999	99.78	00:00	5.56	0.00	94.22	1.01	94.22
16MW-21	4/20/1999	99.78	00:00	6.40	0.00	93.38	-0.84	93.38
16MW-21	6/1/1999	99.78	00:00	7.45	0.00	92.33	-1.05	92.33
16MW-21	6/9/1999	99.78	00:01	7.15	0.00	92.63	0.30	92.63
16MW-21	6/22/1999	99.78	09:40	7.00	0.00	92.78	0.15	92.78
16MW-21	7/29/1999	99.78	00:00	8.75	0.00	91.03	-1.75	91.03
16MW-21	8/3/1999	99.78	00:00	8.89	0.00	90.89	-0.14	90.89
16MW-21	9/15/1999	99.78	14:35	8.70	0.00	91.08	0.19	91.08
16MW-21	11/12/1999	99.78	00:00	9.17	0.03	90.61	-0.47	90.64
16MW-21	11/18/1999	99.78	00:00	8.33	0.00	91.45	0.84	91.45

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	2/18/2000	99.78	00:00	7.51	0.00	92.27	0.82	92.27
16MW-22	12/12/1997	102.22	00:00	7.70	0.00	94.52	NA	94.52
16MW-22	1/7/1998	102.22	00:00	5.34	0.00	96.88	2.36	96.88
16MW-22	2/10/1998	102.22	00:00	2.98	0.00	99.24	2.36	99.24
16MW-22	2/24/1998	102.22	00:00	1.60	0.00	100.62	1.38	100.62
16MW-22	3/3/1998	102.22	00:00	2.87	0.00	99.35	-1.27	99.35
16MW-22	3/26/1998	102.22	00:00	1.85	0.00	100.37	1.02	100.37
16MW-22	4/3/1998	102.22	00:00	2.05	0.00	100.17	-0.20	100.17
16MW-22	4/17/1998	102.22	00:00	2.10	0.00	100.12	-0.05	100.12
16MW-22	4/24/1998	102.22	00:00	1.52	0.00	100.70	0.58	100.70
16MW-22	5/5/1998	102.22	00:00	0.00	0.00	102.22	1.52	102.22
16MW-22	5/15/1998	102.22	00:00	2.86	0.00	99.36	-2.86	99.36
16MW-22	7/30/1998	102.22	00:00	6.03	0.00	96.19	-3.17	96.19
16MW-22	8/13/1998	102.22	00:00	6.10	0.00	96.12	-0.07	96.12
16MW-22	10/2/1998	102.22	00:00	7.78	0.00	94.44	-1.68	94.44
16MW-22	11/6/1998	102.22	00:00	8.79	0.00	93.43	-1.01	93.43
16MW-22	1/26/1999	102.22	00:00	1.81	0.00	100.41	6.98	100.41
16MW-22	3/9/1999	102.22	00:00	3.45	0.00	98.77	-1.64	98.77
16MW-22	3/19/1999	102.22	00:00	8.38	0.00	93.84	-4.93	93.84
16MW-22	4/20/1999	102.22	00:00	4.15	0.00	98.07	4.23	98.07
16MW-22	5/7/1999	102.22	00:00	7.05	0.00	95.17	-2.90	95.17
16MW-22	6/1/1999	102.22	00:00	5.81	0.00	96.41	1.24	96.41
16MW-22	6/9/1999	102.22	00:01	6.11	0.00	96.11	-0.30	96.11
16MW-22	6/14/1999	102.22	13:45	7.57	0.05	94.65	-1.46	94.69
16MW-22	6/22/1999	102.22	10:15	7.11	0.00	95.11	0.46	95.11

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	12/12/1997	102.58	08:30	9.19	0.00	93.39	NA	93.39
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
16MW-23	2/10/1998	102.58	00:00	2.98	0.00	99.60	5.69	99.60
16MW-23	2/24/1998	102.58	00:00	7.20	0.00	95.38	-4.22	95.38
16MW-23	3/3/1998	102.58	00:00	7.10	0.00	95.48	0.10	95.48
16MW-23	3/26/1998	102.58	00:00	6.60	0.00	95.98	0.50	95.98
16MW-23	4/3/1998	102.58	00:00	6.90	0.00	95.68	-0.30	95.68
16MW-23	4/17/1998	102.58	00:00	6.95	0.00	95.63	-0.05	95.63
16MW-23	4/24/1998	102.58	00:00	6.84	0.00	95.74	0.11	95.74
16MW-23	5/5/1998	102.58	00:00	0.00	0.00	102.58	6.84	102.58
16MW-23	5/15/1998	102.58	00:00	5.89	0.00	96.69	-5.89	96.69
16MW-23	7/30/1998	102.58	00:00	8.03	0.00	94.55	-2.14	94.55
16MW-23	8/13/1998	102.58	00:00	8.46	0.00	94.12	-0.43	94.12
16MW-23	10/2/1998	102.58	00:00	9.03	0.00	93.55	-0.57	93.55
16MW-23	1/26/1999	102.58	00:00	8.21	0.00	94.37	0.82	94.37
16MW-23	3/9/1999	102.58	00:00	8.53	0.00	94.05	-0.32	94.05
16MW-23	3/19/1999	102.58	00:00	8.31	0.00	94.27	0.22	94.27
16MW-23	4/20/1999	102.58	00:00	8.32	0.00	94.26	-0.01	94.26
16MW-23	6/1/1999	102.58	00:00	8.80	0.00	93.78	-0.48	93.78
16MW-23	6/9/1999	102.58	00:01	9.01	0.00	93.57	-0.21	93.57
16MW-23	6/22/1999	102.58	10:00	9.75	0.00	92.83	-0.74	92.83
16MW-23	8/3/1999	102.58	00:00	10.00	0.00	92.58	-0.25	92.58
16MW-23	9/15/1999	102.58	15:00	10.11	0.00	92.47	-0.11	92.47
C17MW-07	12/12/1997	100.16	00:00	7.91	1.26	92.25	NA	93.32
C17MW-07	1/7/1998	100.16	00:00	7.52	1.42	92.64	0.39	93.85

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	1/15/1998	100.16	00:00	7.37	0.20	92.80	0.16	92.96
C17MW-07	2/10/1998	100.16	00:00	6.55	0.84	93.62	0.82	94.33
C17MW-07	2/24/1998	100.16	00:00	1.95	1.35	98.21	4.60	99.36
C17MW-07	3/3/1998	100.16	00:00	5.89	0.49	94.27	-3.94	94.69
C17MW-07	3/12/1998	100.16	00:00	5.45	0.18	94.71	0.44	94.86
C17MW-07	3/13/1998	100.16	00:00	5.56	0.14	94.61	-0.11	94.72
C17MW-07	3/26/1998	100.16	00:00	5.31	0.01	94.85	0.24	94.86
C17MW-07	4/3/1998	100.16	00:00	5.62	0.09	94.54	-0.31	94.61
C17MW-07	4/9/1998	100.16	00:00	5.77	0.08	94.39	-0.15	94.46
C17MW-07	4/17/1998	100.16	00:00	5.62	0.12	94.54	0.15	94.64
C17MW-07	4/24/1998	100.16	00:00	5.50	0.13	94.66	0.12	94.77
C17MW-07	5/5/1998	100.16	00:00	5.67	0.28	94.49	-0.17	94.77
C17MW-07	5/15/1998	100.16	00:00	4.83	0.22	95.33	0.83	95.52
C17MW-07	7/30/1998	100.16	00:00	7.25	1.12	92.91	-2.42	93.86
C17MW-07	8/7/1998	100.16	00:00	7.07	0.25	93.10	0.19	93.30
C17MW-07	8/13/1998	100.16	00:00	7.23	0.25	92.93	-0.17	93.14
C17MW-07	8/21/1998	100.16	00:00	7.27	0.11	92.89	-0.04	92.98
C17MW-07	9/3/1998	100.16	00:00	7.31	0.15	92.85	-0.04	92.98
C17MW-07	9/10/1998	100.16	00:00	7.42	0.09	92.75	-0.11	92.82
C17MW-07	10/2/1998	100.16	00:00	7.55	0.21	92.62	-0.13	92.79
C17MW-07	10/20/1998	100.16	00:00	7.58	0.10	92.58	-0.04	92.67
C17MW-07	12/3/1998	100.16	00:00	7.72	0.08	92.44	-0.14	92.51
C17MW-07	12/23/1998	100.16	00:00	7.67	0.12	92.49	0.05	92.59
C17MW-07	1/26/1999	100.16	00:00	6.35	0.10	93.81	1.32	93.90
C17MW-07	3/9/1999	100.16	00:00	6.61	0.11	93.55	-0.26	93.64
C17MW-07	3/19/1999	100.16	00:00	6.23	0.08	93.93	0.39	94.00

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

PERIOD: From 08/20/1997 thru 02/18/2000 - 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	4/20/1999	100.16	00:00	6.61	0.11	93.56	-0.38	93.64
C17MW-07	5/7/1999	100.16	00:00	6.78	0.08	93.39	-0.17	93.45
C17MW-07	6/1/1999	100.16	00:00	7.19	0.14	92.97	-0.42	93.09
C17MW-07	6/9/1999	100.16	00:00	7.20	0.00	92.96	-0.01	92.96
C17MW-07	6/9/1999	100.16	00:01	7.57	0.28	92.60	-0.37	92.83
C17MW-07	6/10/1999	100.16	00:00	7.54	0.13	92.62	0.03	92.73
C17MW-07	6/14/1999	100.16	13:35	7.54	0.13	92.62	0.00	92.73
C17MW-07	6/22/1999	100.16	09:25	7.60	0.32	92.56	-0.06	92.83
C17MW-07	7/29/1999	100.16	00:00	10.40	0.60	89.76	-2.80	90.27
C17MW-07	8/3/1999	100.16	00:00	10.62	0.63	89.54	-0.22	90.08
C17MW-07	8/13/1999	100.16	00:00	10.96	0.70	89.20	-0.34	89.20
C17MW-07	9/3/1999	100.16	00:00	8.37	0.04	91.79	2.59	91.83
C17MW-07	9/15/1999	100.16	14:15	9.37	0.29	90.79	-1.00	90.82
C17MW-07	10/26/1999	100.16	00:00	11.04	1.02	89.12	-1.67	89.99
C17MW-07	11/2/1999	100.16	00:00	10.99	0.93	89.17	0.05	89.17
C17MW-07	11/18/1999	100.16	00:00	8.56	0.17	91.60	2.43	91.74
C17MW-07	12/1/1999	100.16	00:00	8.45	0.19	91.71	0.11	91.87
C17MW-07	12/31/1999	100.16	00:00	8.30	0.22	91.86	0.15	92.05
C17MW-07	1/26/2000	100.16	00:00	8.20	0.12	91.96	0.10	92.06
C17MW-07	2/18/2000	100.16	00:00	7.47	0.03	92.69	0.73	92.72

(1) Change in Water Elevation since last reported measuremen
(2) Measurements Based on Mean Sea Level

U.S. Navy RAC Contract No. 62472-94-D-0398
Naval Weapons Station-Earle: Bioslurper No. 1
Analytical Results of Air Samples

Bi slurper Unit #1

SAMPLE NO. 16(A)VD99-09 Sampl Date: 12/31/1999 Compound	Molecular Weight (lbs/lbs-mol)	Conversion Constant (cu. ft/lbs-mol	Time Conversion (min/hr)	Weekly Flow Rate (cu. ft/min)	Compound Conc. (ppm(v))	Compound Emission Limit ppm(v)	Output Rate (lbs/hr)	Emission Limits (lbs/hr)
Acetone	58.1	384.6	60.0	67.0	0.0	N/A	0.00E+00	
Benzene	78.0	384.6	60.0	67.0	1.100	7.0	8.97E-04	8.00E-03
Toluene	92.0	384.6	60.0	67.0	0.15	N/A	1.44E-04	
Ethylbenzene	106.0	384.6	60.0	67.0	0.0	N/A	0.00E+00	
m,p-Xylenes	106.0	384.6	60.0	67.0	0.000	N/A	0.00E+00	
o-Xylene	106.0	384.6	60.0	67.0	0.0	N/A	0.00E+00	
1,3,5-Trimethylbenzene	120.0	384.6	60.0	67.0	0.000	N/A	0.00E+00	
1,2,4-Trimethylbenzene	120.0	384.6	60.0	67.0	0.0	N/A	0.00E+00	
				Total Emissions:	**1.25**	**25**	**1.04E-03**	**3.50E-02**

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. 62472-94-D-0398
Naval Weapons Station-Earle: Bioslurper No. 2
Analytical Results of Air Samples

Bioslurper Unit # 2

SAMPLE NO. 16(B)VD99-07 SAMPLE DATE: 12/31/1999 Compound	Molecular Weight (lbs/lbs-mol)	Conversion Constant (cu. ft/lbs-mol	Time Conversion (min/hr)	Weekly Flow Rate (cu. ft/min)	Compound Conc. (ppm(v))	Compound Emission Limit ppm(v)	Output Rate (lbs/hr)	Emissi n Limits (lbs/hr)
Acetone	58.1	384.6	60.0	79.0	0.0	N/A	0.00E+00	
Benzene	78.0	384.6	60.0	79.0	**1.00**	**7.0**	**9.61E-04**	**8.00E-03**
Toluene	92.0	384.6	60.0	79.0	0.0	N/A	0.00E+00	
Ethylbenzene	106.0	384.6	60.0	79.0	0.93	N/A	1.21E-03	
m,p-Xylenes	106.0	384.6	60.0	79.0	1.3	N/A	1.70E-03	
o-Xylene	106.0	384.6	60.0	79.0	0.73	N/A	9.54E-04	
1,3,5-Trimethylbenzene	120.0	384.6	60.0	79.0	0.69	N/A	1.02E-03	
1,2,4-Trimethylbenzene	120.0	384.6	60.0	79.0	1.7	N/A	2.51E-03	
				Total Emissions:	**6.4**	**25**	**8.36E-03**	**3.50E-02**

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

U.S. Navy RAC Contract No. 62472-94-D-0398
Naval Weapons Station-Earle: Bioslurper No. 1
Analytical Results of Air Samples

Bioslurper Unit #1

SAMPLE NO. 16(A)VD002 Sample Date: 2/1/2000 Compound	Molecular Weight (lbs/lbs-mol)	Conversion Constant (cu. ft/lbs-mol	Time Conversion (min/hr)	Weekly Flow Rate (cu. ft/min)	Compound Conc. (ppm(v))	Compound Emission Limit ppm(v)	Output Rate (lbs/hr)	Emission Limits (lbs/hr)
Acetone	58.1	384.6	60.0	68.0	0.0	N/A	0.00E+00	
Benzene	78.0	384.6	60.0	68.0	**0.000**	**7.0**	**0.00E+00**	**8.00E-03**
Toluene	92.0	384.6	60.0	68.0	0.0	N/A	0.00E+00	
Ethylbenzene	106.0	384.6	60.0	68.0	0.0	N/A	0.00E+00	
m,p-Xylenes	106.0	384.6	60.0	68.0	0.000	N/A	0.00E+00	
o-Xylene	106.0	384.6	60.0	68.0	0.0	N/A	0.00E+00	
1,3,5-Trimethylbenzene	120.0	384.6	60.0	68.0	0.000	N/A	0.00E+00	
1,2,4-Trimethylbenzene	120.0	384.6	60.0	68.0	0.0	N/A	0.00E+00	
				Total Emissions:	**0.00**	**25**	**0.00E+00**	**3.50E-02**

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

Note: Sample collected after carbon treatment.

U.S. Navy RAC Contract No. 62472-94-D-0398
Naval Weapons Station-Earle: Bioslurper No. 2
Analytical Results of Air Samples

Bioslurper Unit # 2

SAMPLE NO. 16(B)VD001 SAMPLE DATE: 2/1/2000 Compound	Molecular Weight (lbs/lbs-mol)	Conversion Constant (cu. ft/lbs-mol	Time Conversion (min/hr)	Weekly Flow Rate (cu. ft/min)	Compound Conc. (ppm(v))	Compound Emission Limit ppm(v)	Output Rate (lbs/hr)	Emission Limits (lbs/hr)
Acetone	58.1	384.6	60.0	82.0	0.0	N/A	0.00E+00	
Benzene	78.0	384.6	60.0	82.0	**0.35**	**7.0**	**3.49E-04**	**8.00E-03**
Toluene	92.0	384.6	60.0	82.0	0.18	N/A	2.12E-04	
Ethylbenzene	106.0	384.6	60.0	82.0	0.7	N/A	9.36E-04	
m,p-Xylenes	106.0	384.6	60.0	82.0	1.6	N/A	2.17E-03	
o-Xylene	106.0	384.6	60.0	82.0	0.4	N/A	5.29E-04	
1,3,5-Trimethylbenzene	120.0	384.6	60.0	82.0	3.2	N/A	4.91E-03	
1,2,4-Trimethylbenzene	120.0	384.6	60.0	82.0	1.2	N/A	1.84E-03	
				Total Emissions:	**7.6**	**25**	**1.09E-02**	**3.50E-02**

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

U.S. Navy RAC Contract No. 62472-94-D-0398
Naval Weapons Station-Earle: Bioslurper No. 1
Analytical Results of Air Samples

Bioslurper Unit #1

SAMPLE NO. 16(A)VD004 Sampl Date: 2/29/2000 Compound	Molecular Weight (lbs/lbs-mol)	Conversion Constant (cu. ft/lbs-mol	Time Conversion (min/hr)	Weekly Flow Rate (cu. ft/min)	Compound Conc. (ppm(v))	Compound Emission Limit ppm(v)	Output Rate (lbs/hr)	Emission Limits (lbs/hr)
Acetone	58.1	384.6	60.0	70.0	0.0	N/A	0.00E+00	
Benzene	78.0	384.6	60.0	70.0	**0.000**	**7.0**	**0.00E+00**	**8.00E-03**
Toluene	92.0	384.6	60.0	70.0	0.0	N/A	0.00E+00	
Ethylbenzene	106.0	384.6	60.0	70.0	0.0	N/A	0.00E+00	
m,p-Xylenes	106.0	384.6	60.0	70.0	0.000	N/A	0.00E+00	
o-Xylene	106.0	384.6	60.0	70.0	0.0	N/A	0.00E+00	
1,3,5-Trimethylbenzene	120.0	384.6	60.0	70.0	0.000	N/A	0.00E+00	
1,2,4-Trimethylbenzene	120.0	384.6	60.0	70.0	0.0	N/A	0.00E+00	
			Total Emissions:		**0.00**	**25**	**0.00E+00**	**3.50E-02**

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

4/3/2000

BIOSLURPER UNIT 1

OPERATED (hours):	36.5	
AVERAGE FLOW RATE (cfm):	67	
TPH CONCENTRATION (mg/m^3):	752	
(as per analytical) **16(A)VD99-08**		
	6.890307	=POUNDS OF TPH

BIOSLURPER UNIT 2

OPERATED (hours):	28	
AVERAGE FLOW RATE (cfm):	79	
TPH CONCENTRATION (mg/m^3):	127	
(as per analytical) **16(B)VD99-07**		
	1.052548	=POUNDS OF TPH

POUNDS OF TPH=
AVERAGE FLOW RATE (cfm) * $0.02832 m^3/ft^3$ * **TPH CONC**(mg/m^3) * 0.001g/mg * 0.002205 lbs/g * 60 min/hr * **OPERATED** (hours)

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

4/3/2000

BIOSLURPER UNIT 1		
OPERATED (hours):	30.5	
AVERAGE FLOW RATE (cfm):	70	
TPH CONCENTRATION (mg/m^3):	660	
(as per analytical) **16(A)VD003**		
	5.279526	=POUNDS OF TPH

POUNDS OF TPH=

AVERAGE FLOW RATE (cfm) * $0.02832 m^3/ft^3$ * **TPH CONC**(mg/m^3) * 0.001g/mg * 0.002205 lbs/g * 60 min/hr * **OPERATED** (hours)

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

4/3/2000

BIOSLURPER UNIT 1

OPERATED (hours):	29	
AVERAGE FLOW RATE (cfm):	68	
TPH CONCENTRATION (mg/m^3):	300	
(as per analytical) **16(A)VD001**		
	2.216569	=POUNDS OF TPH

BIOSLURPER UNIT 2

OPERATED (hours):	8	
AVERAGE FLOW RATE (cfm):	82	
TPH CONCENTRATION (mg/m^3):	184	
(as per analytical) **16(B)VD99**		
	0.452246	=POUNDS OF TPH

POUNDS OF TPH=

AVERAGE FLOW RATE (cfm) * $0.02832 m^3/ft^3$ * **TPH CONC**(mg/m^3) * 0.001g/mg * 0.002205 lbs/g * 60 min/hr * **OPERATED** (hours)

Dec 99 - AIR

PHONE (714) 751-3210 FAX (714) 751-6414

3190-A AIRPORT LOOP DRIVE COSTA MESA, CALIFORNIA 92626

AAI RFS #: 0000402

January 17, 2000

Foster Wheeler Environmental
One Oxford Valley, Suite 200
Langhorne, PA 19047

Project Name: Naval Weapons Station - Earle
Project Number: ---

Attention: Mike Heffron

Apollo Analytics Inc., has received the following sample(s):

Date Received	Quantity	Matrix
January 4, 2000	3	Air/Canister

The sample(s) received were analyzed for total petroleum hydrocarbons as gasoline using an HP gas chromatograph equipped with a flame ionization detector (GC/FID) and volatile organics by GC/MS using EPA method TO-14.

The results of these analyses and the quality control are enclosed. If you have any questions please do not hesitate to call (714) 751-3210.

Leon Levan
Laboratory Manager

VOLATILE ORGANIC ANALYSIS

CLIENT NAME:	Foster Wheeler Environmental	**CLIENT SAMPLE ID:**	16 (A) VD99-08
PROJECT #:	---	**AAI RFS#**	0000402
PROJECT NAME:	Naval Weapons Station - Earle	**AAI ID#:**	0000402-001
MATRIX:	Air/Canister		
SAMPLE VOLUME:	0.01 Liter	**DATE SAMPLED:**	12/31/99
INITIAL PRESSURE:	14.80 psia	**DATE RECEIVED:**	1/4/00
FINAL PRESSURE:	16.30 psia	**DATE ANALYZED:**	1/5/00
PRES. DILUTION :	1.10		
DILUTION FACTOR:	1	**ANALYTICAL METHOD:**	EPA TO14 (GC/MS)

CAS NUMBER	COMPOUND	CONCENTRATION mg/m3	PQL	ppm(v)	PQL
74-87-3	Chloromethane	ND<	0.55	ND<	0.267
74-83-9	Bromomethane	ND<	0.55	ND<	0.142
75-01-04	Vinyl Chloride	ND<	0.55	ND<	0.216
75-00-3	Chloroethane	ND<	0.55	ND<	0.209
75-69-4	Freon 11	ND<	0.55	ND<	0.098
75-35-4	1,1-Dichloroethene	ND<	0.55	ND<	0.139
76-13-1	Freon 113	ND<	0.55	ND<	0.072
75-09-2	Methylene Chloride	ND<	0.55	ND<	0.159
75-35-3	1,1-Dichloroethane	ND<	0.55	ND<	0.136
156-60-5	trans-1,2-Dichloroethene	ND<	0.55	ND<	0.139
156-59-2	cis-1,2-Dichloroethene	ND<	0.55	ND<	0.139
67-66-3	Chloroform	ND<	0.55	ND<	0.113
71-55-6	1,1,1-Trichloroethane	ND<	0.55	ND<	0.101
56-23-5	Carbon Tetrachloride	ND<	0.55	ND<	0.088
71-43-2	Benzene	17	0.55	5.4	0.172
107-06-2	1,2-Dichloroethane	ND<	0.55	ND<	0.136
79-01-6	Trichloroethene	ND<	0.55	ND<	0.103
78-87-5	1,2-Dichloropropane	ND<	0.55	ND<	0.119
10061-02-6	trans-1,3-Dichloropropene	ND<	0.55	ND<	0.121
108-88-3	Toluene	6.7	0.55	1.8	0.146
10061-01-5	cis-1,3-Dichloropropene	ND<	0.55	ND<	0.121
79-00-5	1,1-2-Trichloroethane	ND<	0.55	ND<	0.101
127-18-4	Tetrachloroethene	ND<	0.55	ND<	0.081
106-93-4	Ethylene Dibromide	ND<	0.55	ND<	0.072
108-90-7	Chlorobenzene	ND<	0.55	ND<	0.120
100-41-4	Ethylbenzene	17	0.55	3.8	0.127
1330-20-7	m,p-Xylene	19	0.55	4.5	0.127
95-47-6	o-Xylene	13	0.55	3.1	0.127
100-42-5	Styrene	ND<	0.55	ND<	0.129
79-34-5	1,1,2,2-Tetrachlorethane	ND<	0.55	ND<	0.080
108-67-8	1,3,5-Trimethyl Benzene	10	0.55	2.1	0.112
95-63-6	1,2,4-Trimethyl Benzene	18	0.55	3.6	0.112
541-73-1	1,3-Dichlorobenzene	ND<	0.55	ND<	0.092
106-46-7	1,4-Dichlorobenzene	ND<	0.55	ND<	0.092
100-44-7	Chlorotoluene	ND<	0.55	ND<	0.106
95-50-1	1,2-Dichlorobenzene	ND<	0.55	ND<	0.092
67-64-1	Acetone	ND<	0.55	ND<	0.232
78-93-3	2-Butanone	ND<	0.55	ND<	0.187
108-10-1	4-methyl-2-pentanone	ND<	0.55	ND<	0.135
591-78-6	2-Hexanone	ND<	0.55	ND<	0.134

Surrogate Recovery	% Recovery	
1,2-Dichloroethane-D4 (SS1)	26*	70-130
Toluene-d8 (SS2)	76	70-130
4- Bromofluorobenzene (SS3)	88	70-130

ND- Not detected

TR - Trace

*Value outside QC limits due to matrix interfence.

Approved by: _____ Date: 01/02/02

VOLATILE ORGANIC ANALYSIS

CLIENT NAME:	Foster Wheeler Environmental	**CLIENT SAMPLE ID:**	16 (A) VD99-09
PROJECT #:	---	**AAI RFS#**	0000402
PROJECT NAME:	Naval Weapons Station - Earle	**AAI ID#:**	0000402-002
MATRIX:	Air/Canister		
SAMPLE VOLUME:	0.01 Liter	**DATE SAMPLED:**	12/31/99
INITIAL PRESSURE:	14.90 psia	**DATE RECEIVED:**	1/4/00
FINAL PRESSURE:	16.20 psia	**DATE ANALYZED:**	1/5/00
PRES. DILUTION :	1.09		
DILUTION FACTOR:	1	**ANALYTICAL METHOD:**	EPA TO14 (GC/MS)

CAS NUMBER	COMPOUND	CONCENTRATION mg/m3	PQL	ppm(v)	PQL
74-87-3	Chloromethane	ND<	0.54	ND<	0.263
74-83-9	Bromomethane	ND<	0.54	ND<	0.140
75-01-04	Vinyl Chloride	ND<	0.54	ND<	0.213
75-00-3	Chloroethane	ND<	0.54	ND<	0.206
75-69-4	Freon 11	ND<	0.54	ND<	0.097
75-35-4	1,1-Dichloroethene	ND<	0.54	ND<	0.137
76-13-1	Freon 113	ND<	0.54	ND<	0.071
75-09-2	Methylene Chloride	ND<	0.54	ND<	0.157
75-35-3	1,1-Dichloroethane	ND<	0.54	ND<	0.134
156-60-5	trans-1,2-Dichloroethene	ND<	0.54	ND<	0.137
156-59-2	cis-1,2-Dichloroethene	ND<	0.54	ND<	0.137
67-66-3	Chloroform	ND<	0.54	ND<	0.111
71-55-6	1,1,1-Trichloroethane	ND<	0.54	ND<	0.100
56-23-5	Carbon Tetrachloride	ND<	0.54	ND<	0.086
71-43-2	Benzene	3.4	0.54	1.1	0.170
107-06-2	1,2-Dichloroethane	ND<	0.54	ND<	0.134
79-01-6	Trichloroethene	ND<	0.54	ND<	0.101
78-87-5	1,2-Dichloropropane	ND<	0.54	ND<	0.118
10061-02-6	trans-1,3-Dichloropropene	ND<	0.54	ND<	0.120
108-88-3	Toluene	0.58	0.54	0.15	0.144
10061-01-5	cis-1,3-Dichloropropene	ND<	0.54	ND<	0.120
79-00-5	1,1-2-Trichloroethane	ND<	0.54	ND<	0.100
127-18-4	Tetrachloroethene	ND<	0.54	ND<	0.080
106-93-4	Ethylene Dibromide	ND<	0.54	ND<	0.071
108-90-7	Chlorobenzene	3.8	0.54	0.83	0.118
100-41-4	Ethylbenzene	ND<	0.54	ND<	0.125
1330-20-7	m,p-Xylene	ND<	0.54	ND<	0.125
95-47-6	o-Xylene	ND<	0.54	ND<	0.125
100-42-5	Styrene	ND<	0.54	ND<	0.128
79-34-5	1,1,2,2-Tetrachlorethane	ND<	0.54	ND<	0.079
108-67-8	1,3,5-Trimethyl Benzene	ND<	0.54	ND<	0.111
95-63-6	1,2,4-Trimethyl Benzene	ND<	0.54	ND<	0.111
541-73-1	1,3-Dichlorobenzene	ND<	0.54	ND<	0.090
106-46-7	1,4-Dichlorobenzene	ND<	0.54	ND<	0.090
100-44-7	Chlorotoluene	ND<	0.54	ND<	0.105
95-50-1	1,2-Dichlorobenzene	ND<	0.54	ND<	0.090
67-64-1	Acetone	ND<	0.54	ND<	0.229
78-93-3	2-Butanone	ND<	0.54	ND<	0.185
108-10-1	4-methyl-2-pentanone	ND<	0.54	ND<	0.133
591-78-6	2-Hexanone	ND<	0.54	ND<	0.133

Surrogate Recovery	% Recovery	
1,2-Dichloroethane-D4 (SS1)	56*	70-130
Toluene-d8 (SS2)	74	70-130
4- Bromofluorobenzene (SS3)	83	70-130

ND- Not detected

TR - Trace

*Value outside QC limits due to matrix interfence.

Approved by: _____ Date: 01/12/00

VOLATILE ORGANIC ANALYSIS

CLIENT NAME:	Foster Wheeler Environmental	**CLIENT SAMPLE ID:**	16 (B) VD99-07
PROJECT #:	---	**AAI RFS#**	0000402
PROJECT NAME:	Naval Weapons Station - Earle	**AAI ID#:**	0000402-003
MATRIX:	Air/Canister		
SAMPLE VOLUME:	0.01 Liter	**DATE SAMPLED:**	12/31/99
INITIAL PRESSURE:	14.70 psia	**DATE RECEIVED:**	1/4/00
FINAL PRESSURE:	16.00 psia	**DATE ANALYZED:**	1/5/00
PRES. DILUTION :	1.09		
DILUTION FACTOR:	1	**ANALYTICAL METHOD:**	EPA TO14 (GC/MS)

CAS NUMBER	COMPOUND	CONCENTRATION mg/m3	PQL	ppm(v)	PQL
74-87-3	Chloromethane	ND<	0.54	ND<	0.264
74-83-9	Bromomethane	ND<	0.54	ND<	0.140
75-01-04	Vinyl Chloride	ND<	0.54	ND<	0.213
75-00-3	Chloroethane	ND<	0.54	ND<	0.206
75-69-4	Freon 11	ND<	0.54	ND<	0.097
75-35-4	1,1-Dichloroethene	ND<	0.54	ND<	0.137
76-13-1	Freon 113	ND<	0.54	ND<	0.071
75-09-2	Methylene Chloride	ND<	0.54	ND<	0.157
75-35-3	1,1-Dichloroethane	ND<	0.54	ND<	0.135
156-60-5	trans-1,2-Dichloroethene	ND<	0.54	ND<	0.137
156-59-2	cis-1,2-Dichloroethene	ND<	0.54	ND<	0.137
67-66-3	Chloroform	ND<	0.54	ND<	0.112
71-55-6	1,1,1-Trichloroethane	ND<	0.54	ND<	0.100
56-23-5	Carbon Tetrachloride	ND<	0.54	ND<	0.087
71-43-2	Benzene	3.0	0.54	1.0	0.170
107-06-2	1,2-Dichloroethane	ND<	0.54	ND<	0.135
79-01-6	Trichloroethene	ND<	0.54	ND<	0.101
78-87-5	1,2-Dichloropropane	ND<	0.54	ND<	0.118
10061-02-6	trans-1,3-Dichloropropene	ND<	0.54	ND<	0.120
108-88-3	Toluene	ND<	0.54	ND<	0.144
10061-01-5	cis-1,3-Dichloropropene	ND<	0.54	ND<	0.120
79-00-5	1,1-2-Trichloroethane	ND<	0.54	ND<	0.100
127-18-4	Tetrachloroethene	ND<	0.54	ND<	0.080
106-93-4	Ethylene Dibromide	ND<	0.54	ND<	0.071
108-90-7	Chlorobenzene	ND<	0.54	ND<	0.118
100-41-4	Ethylbenzene	4.0	0.54	0.93	0.125
1330-20-7	m,p-Xylene	5.6	0.54	1.3	0.125
95-47-6	o-Xylene	3.2	0.54	0.73	0.125
100-42-5	Styrene	ND<	0.54	ND<	0.128
79-34-5	1,1,2,2-Tetrachlorethane	ND<	0.54	ND<	0.079
108-67-8	1,3,5-Trimethyl Benzene	3.4	0.54	0.69	0.111
95-63-6	1,2,4-Trimethyl Benzene	8.3	0.54	1.7	0.111
541-73-1	1,3-Dichlorobenzene	ND<	0.54	ND<	0.091
106-46-7	1,4-Dichlorobenzene	ND<	0.54	ND<	0.091
100-44-7	Chlorotoluene	ND<	0.54	ND<	0.105
95-50-1	1,2-Dichlorobenzene	ND<	0.54	ND<	0.091
67-64-1	Acetone	ND<	0.54	ND<	0.230
78-93-3	2-Butanone	ND<	0.54	ND<	0.185
108-10-1	4-methyl-2-pentanone	ND<	0.54	ND<	0.133
591-78-6	2-Hexanone	ND<	0.54	ND<	0.133

Surrogate Recovery	% Recovery	
1,2-Dichloroethane-D4 (SS1)	84	70-130
Toluene-d8 (SS2)	70	70-130
4- Bromofluorobenzene (SS3)	78	70-130

ND- Not detected

TR - Trace

*Value outside QC limits due to matrix interfence.

Approved by: _____ Date: 01/19/00

ANALYTICAL RESULTS

AAI RFS #: 0000402

Client Name: Foster Wheeler Environmental
Project Name: Naval Weapons Station - Earle
Project #: ---
Matrix: Air/Canister

Date(s) Sampled: 12/31/99
Date(s) Analyzed: 1/10/00
Analytical Method: CARB/EPA
Chemist: JK

	Units	16 (A) VD99-08 0000402 -001	16 (A) VD99-09 0000402 -002	16 (B) VD99-07 0000402 -003	Method Blank
EPA 8015mod					
TPH as gasoline	(ppm(v))	214	ND<10	36	ND<10

	Units	16 (A) VD99-08 0000402 -001	16 (A) VD99-09 0000402 -002	16 (B) VD99-07 0000402 -003	Method Blank
EPA 8015mod					
TPH as gasoline	(mg/m3)	752	16	127	ND<1.0

Approved by: _____ Date: 01/18/00

QUALITY CONTROL

AAI RFS #: 0000402

Client Name: Foster Wheeler Environmental
Project Name: Naval Weapons Station - Earle
Project #: ---
Matrix: Air/Canister

Date(s) Sampled: 12/31/99
Date(s) Analyzed: 1/10/00
Analytical Method: CARB/EPA
Chemist: JK

	Sample Result 0000402-001 (ppm(v))	Duplicate Result 0000402-001 (ppm(v))	RPD (%)	Quality Control Limits (%)
EPA 8015mod				
TPH as gasoline	214	250	16	30

	Sample Result 0000402-001 (mg/m3)	Duplicate Result 0000402-001 (mg/m3)	RPD (%)	Quality Control Limits (%)
EPA 8015mod				
TPH as gasoline	752	878	15	30

Approved by: _____ Date: 01/17/00

Performance Analytical Inc.
Air Quality Laboratory
A Division of Columbia Analytical Services, Inc.
An Employee Owned Company

2665 Park Center Drive, Suite D
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Chain of Custody Record
Analytical Services Request

Client / Address: Foster Wheeler Enviro Y, One Oxford Valley Suite 200, Langhorne, PA 19047	Phone: 215 702-4015	Fax: (215) 702-4045	~~PAI~~ Project No.: AAI PROJECT # 0000402
Client Project Name / Location: Naval Weapons Station - Earle Colts Neck NJ	Client Project No.		
Contact: Mike Heffr.	Sampler (Signature):	P. O. No.	

ANALYSES: TPH, VOCs

Client Sample ID	Date Collected	Time Collected	Lab Sample No.	Type of Sample	Container ID (Serial#)	Regulator ID (Serial#)	TPH	VOCs			Expected Turnaround Time	Remarks
16(A)VD99-08	12/31/99	9:00	-001	Air							72hrs.	
16(A)VD99-09	12/31/99	9:05	-002	↓								
16(B)VD99-07	12/31/99	9:30	-003	↓								

	Date	Time		Date	Time
Relinquished by : (Signature)	12/31/99	13:00	Received by : (Signature) Leticia Zelaya	01/04/00	1000
Relinquished by : (Signature)			Received by : (Signature)		
Relinquished by : (Signature)			Received by : (Signature)		

White Copy : Accompanies Sampler Yellow Copy : Sampler

VOLATILE ORGANIC ANALYSIS

CLIENT NAME:	Foster Wheeler Environmental	**CLIENT SAMPLE ID:**	Method Blank
PROJECT #:	---	**AAI RFS#**	0000402
PROJECT NAME:	Naval Weapons Station - Earle	**AAI ID#:**	Method Blank
MATRIX:	Air/Canister		
SAMPLE VOLUME:	0.005 Liter	**DATE SAMPLED:**	N/A
INITIAL PRESSURE:	1.00 psia	**DATE RECEIVED:**	1/4/00
FINAL PRESSURE:	1.00 psia	**DATE ANALYZED:**	1/5/00
PRES. DILUTION :	1.00		
DILUTION FACTOR:	1	**ANALYTICAL METHOD:**	EPA TO14 (GC/MS)

CAS NUMBER	COMPOUND	CONCENTRATION mg/m3	PQL	ppm(v)	PQL
74-87-3	Chloromethane	ND<	1.0	ND<	0.484
74-83-9	Bromomethane	ND<	1.0	ND<	0.258
75-01-04	Vinyl Chloride	ND<	1.0	ND<	0.391
75-00-3	Chloroethane	ND<	1.0	ND<	0.379
75-69-4	Freon 11	ND<	1.0	ND<	0.178
75-35-4	1,1-Dichloroethene	ND<	1.0	ND<	0.252
76-13-1	Freon 113	ND<	1.0	ND<	0.131
75-09-2	Methylene Chloride	ND<	1.0	ND<	0.288
75-35-3	1,1-Dichloroethane	ND<	1.0	ND<	0.247
156-60-5	trans-1,2-Dichloroethene	ND<	1.0	ND<	0.252
156-59-2	cis-1,2-Dichloroethene	ND<	1.0	ND<	0.252
67-66-3	Chloroform	ND<	1.0	ND<	0.205
71-55-6	1,1,1-Trichloroethane	ND<	1.0	ND<	0.183
56-23-5	Carbon Tetrachloride	ND<	1.0	ND<	0.159
71-43-2	Benzene	ND<	1.0	ND<	0.313
107-06-2	1,2-Dichloroethane	ND<	1.0	ND<	0.247
79-01-6	Trichloroethene	ND<	1.0	ND<	0.186
78-87-5	1,2-Dichloropropane	ND<	1.0	ND<	0.216
10061-02-6	trans-1,3-Dichloropropene	ND<	1.0	ND<	0.220
108-88-3	Toluene	ND<	1.0	ND<	0.265
10061-01-5	cis-1,3-Dichloropropene	ND<	1.0	ND<	0.220
79-00-5	1,1-2-Trichloroethane	ND<	1.0	ND<	0.183
127-18-4	Tetrachloroethene	ND<	1.0	ND<	0.148
106-93-4	Ethylene Dibromide	ND<	1.0	ND<	0.130
108-90-7	Chlorobenzene	ND<	1.0	ND<	0.217
100-41-4	Ethylbenzene	ND<	1.0	ND<	0.230
1330-20-7	m,p-Xylene	ND<	1.0	ND<	0.230
95-47-6	o-Xylene	ND<	1.0	ND<	0.230
100-42-5	Styrene	ND<	1.0	ND<	0.235
79-34-5	1,1,2,2-Tetrachlorethane	ND<	1.0	ND<	0.146
108-67-8	1,3,5-Trimethyl Benzene	ND<	1.0	ND<	0.203
95-63-6	1,2,4-Trimethyl Benzene	ND<	1.0	ND<	0.203
541-73-1	1,3-Dichlorobenzene	ND<	1.0	ND<	0.166
106-46-7	1,4-Dichlorobenzene	ND<	1.0	ND<	0.166
100-44-7	Chlorotoluene	ND<	1.0	ND<	0.193
95-50-1	1,2-Dichlorobenzene	ND<	1.0	ND<	0.166
67-64-1	Acetone	ND<	1.0	ND<	0.422
78-93-3	2-Butanone	ND<	1.0	ND<	0.340
108-10-1	4-methyl-2-pentanone	ND<	1.0	ND<	0.245
591-78-6	2-Hexanone	ND<	1.0	ND<	0.244

Surrogate Recovery	% Recovery	
1,2-Dichloroethane-D4 (SS1)	92	70-130
Toluene-d8 (SS2)	118	70-130
4- Bromofluorobenzene (SS3)	88	70-130

ND- Not detected

TR - Trace

*Value outside QC limits due to matrix interfence.

Approved by: _____ Date: 01/17/00

January
2000
Air

PHONE (714) 751-3210 FAX (714) 751-6414

3190-A AIRPORT LOOP DRIVE COSTA MESA, CALIFORNIA 92626

AAI RFS #: 0003402

February 16, 2000

Foster Wheeler Environmental
One Oxford Valley, Suite 200
Langhorne, PA 19047

Project Name: Naval Weapons - Earle
Project Number: ---

Attention: Mike Heffron

Apollo Analytics Inc., has received the following sample(s):

Date Received	Quantity	Matrix
February 3, 2000	3	Air/Canister

The sample(s) received were analyzed for total petroleum hydrocarbons as gasoline using an HP gas chromatograph equipped with a flame ionization detector (GC/FID) and volatile organics by GC/MS using EPA method TO-14.

The results of these analyses and the quality control are enclosed. If you have any questions please do not hesitate to call (714) 751-3210.

Leon Levan
Laboratory Manager

VOLATILE ORGANIC ANALYSIS

CLIENT NAME:	Foster Wheeler Environmental	**CLIENT SAMPLE ID:**	Method Blank
PROJECT #:	---	**AAI RFS#**	0003402
PROJECT NAME:	Naval Weapons - Earle	**AAI ID#:**	Method Blank
MATRIX:	Air/Canister		
SAMPLE VOLUME:	0.005 Liter	**DATE SAMPLED:**	N/A
INITIAL PRESSURE:	1.00 psia	**DATE RECEIVED:**	N/A
FINAL PRESSURE:	1.00 psia	**DATE ANALYZED:**	2/8/00
PRES. DILUTION :	1.00		
DILUTION FACTOR:	1	**ANALYTICAL METHOD:**	EPA TO14 (GC/MS)

CAS NUMBER	COMPOUND	CONCENTRATION mg/m3	PQL	ppm(v)	PQL
74-87-3	Chloromethane	ND<	1.0	ND<	0.484
74-83-9	Bromomethane	ND<	1.0	ND<	0.258
75-01-04	Vinyl Chloride	ND<	1.0	ND<	0.391
75-00-3	Chloroethane	ND<	1.0	ND<	0.379
75-69-4	Freon 11	ND<	1.0	ND<	0.178
75-35-4	1,1-Dichloroethene	ND<	1.0	ND<	0.252
76-13-1	Freon 113	ND<	1.0	ND<	0.131
75-09-2	Methylene Chloride	ND<	1.0	ND<	0.288
75-35-3	1,1-Dichloroethane	ND<	1.0	ND<	0.247
156-60-5	trans-1,2-Dichloroethene	ND<	1.0	ND<	0.252
156-59-2	cis-1,2-Dichloroethene	ND<	1.0	ND<	0.252
67-66-3	Chloroform	ND<	1.0	ND<	0.205
71-55-6	1,1,1-Trichloroethane	ND<	1.0	ND<	0.183
56-23-5	Carbon Tetrachloride	ND<	1.0	ND<	0.159
71-43-2	Benzene	ND<	1.0	ND<	0.313
107-06-2	1,2-Dichloroethane	ND<	1.0	ND<	0.247
79-01-6	Trichloroethene	ND<	1.0	ND<	0.186
78-87-5	1,2-Dichloropropane	ND<	1.0	ND<	0.216
10061-02-6	trans-1,3-Dichloropropene	ND<	1.0	ND<	0.220
108-88-3	Toluene	ND<	1.0	ND<	0.265
10061-01-5	cis-1,3-Dichloropropene	ND<	1.0	ND<	0.220
79-00-5	1,1-2-Trichloroethane	ND<	1.0	ND<	0.183
127-18-4	Tetrachloroethene	ND<	1.0	ND<	0.148
106-93-4	Ethylene Dibromide	ND<	1.0	ND<	0.130
108-90-7	Chlorobenzene	ND<	1.0	ND<	0.217
100-41-4	Ethylbenzene	ND<	1.0	ND<	0.230
1330-20-7	m,p-Xylene	ND<	1.0	ND<	0.230
95-47-6	o-Xylene	ND<	1.0	ND<	0.230
100-42-5	Styrene	ND<	1.0	ND<	0.235
79-34-5	1,1,2,2-Tetrachlorethane	ND<	1.0	ND<	0.146
108-67-8	1,3,5-Trimethyl Benzene	ND<	1.0	ND<	0.203
95-63-6	1,2,4-Trimethyl Benzene	ND<	1.0	ND<	0.203
541-73-1	1,3-Dichlorobenzene	ND<	1.0	ND<	0.166
106-46-7	1,4-Dichlorobenzene	ND<	1.0	ND<	0.166
100-44-7	Chlorotoluene	ND<	1.0	ND<	0.193
95-50-1	1,2-Dichlorobenzene	ND<	1.0	ND<	0.166
67-64-1	Acetone	ND<	1.0	ND<	0.422
78-93-3	2-Butanone	ND<	1.0	ND<	0.340
108-10-1	4-methyl-2-pentanone	ND<	1.0	ND<	0.245
591-78-6	2-Hexanone	ND<	1.0	ND<	0.244

Surrogate Recovery	% Recovery	
1,2-Dichloroethane-D4 (SS1)	122	70-130
Toluene-d8 (SS2)	95	70-130
4- Bromofluorobenzene (SS3)	110	70-130

ND- Not detected

TR - Trace

*Value outside QC limits due to matrix interfence.

Approved by: LB Date: 2/13/00

VOLATILE ORGANIC ANALYSIS

CLIENT NAME:	Foster Wheeler Environmental	**CLIENT SAMPLE ID:**	16 (A) VD 001
PROJECT #:	---	**AAI RFS#**	0003402
PROJECT NAME:	Naval Weapons - Earle	**AAI ID#:**	0003402-001
MATRIX:	Air/Canister		
SAMPLE VOLUME:	0.005 Liter	**DATE SAMPLED:**	2/1/00
INITIAL PRESSURE:	15.20 psia	**DATE RECEIVED:**	2/3/00
FINAL PRESSURE:	18.70 psia	**DATE ANALYZED:**	2/8/00
PRES. DILUTION :	1.23		
DILUTION FACTOR:	1	**ANALYTICAL METHOD:**	EPA TO14 (GC/MS)

CAS NUMBER	COMPOUND	CONCENTRATION mg/m3	PQL	ppm(v)	PQL
74-87-3	Chloromethane	ND<	1.230	ND<	0.596
74-83-9	Bromomethane	ND<	1.230	ND<	0.317
75-01-04	Vinyl Chloride	ND<	1.230	ND<	0.481
75-00-3	Chloroethane	ND<	1.230	ND<	0.466
75-69-4	Freon 11	ND<	1.230	ND<	0.219
75-35-4	1,1-Dichloroethene	ND<	1.230	ND<	0.310
76-13-1	Freon 113	ND<	1.230	ND<	0.161
75-09-2	Methylene Chloride	ND<	1.230	ND<	0.354
75-35-3	1,1-Dichloroethane	ND<	1.230	ND<	0.304
156-60-5	trans-1,2-Dichloroethene	ND<	1.230	ND<	0.310
156-59-2	cis-1,2-Dichloroethene	ND<	1.230	ND<	0.310
67-66-3	Chloroform	ND<	1.230	ND<	0.252
71-55-6	1,1,1-Trichloroethane	ND<	1.230	ND<	0.226
56-23-5	Carbon Tetrachloride	ND<	1.230	ND<	0.196
71-43-2	Benzene	16	1.230	4.9	0.385
107-06-2	1,2-Dichloroethane	ND<	1.230	ND<	0.304
79-01-6	Trichloroethene	ND<	1.230	ND<	0.229
78-87-5	1,2-Dichloropropane	ND<	1.230	ND<	0.266
10061-02-6	trans-1,3-Dichloropropene	ND<	1.230	ND<	0.271
108-88-3	Toluene	19	1.230	5.0	0.327
10061-01-5	cis-1,3-Dichloropropene	ND<	1.230	ND<	0.271
79-00-5	1,1-2-Trichloroethane	ND<	1.230	ND<	0.226
127-18-4	Tetrachloroethene	ND<	1.230	ND<	0.181
106-93-4	Ethylene Dibromide	ND<	1.230	ND<	0.160
108-90-7	Chlorobenzene	ND<	1.230	ND<	0.267
100-41-4	Ethylbenzene	20	1.230	4.6	0.283
1330-20-7	m,p-Xylene	34	1.230	7.9	0.283
95-47-6	o-Xylene	21	1.230	4.9	0.283
100-42-5	Styrene	ND<	1.230	ND<	0.289
79-34-5	1,1,2,2-Tetrachlorethane	ND<	1.230	ND<	0.179
108-67-8	1,3,5-Trimethyl Benzene	39	1.230	7.9	0.250
95-63-6	1,2,4-Trimethyl Benzene	30	1.230	6.2	0.250
541-73-1	1,3-Dichlorobenzene	ND<	1.230	ND<	0.205
106-46-7	1,4-Dichlorobenzene	ND<	1.230	ND<	0.205
100-44-7	Chlorotoluene	ND<	1.230	ND<	0.238
95-50-1	1,2-Dichlorobenzene	ND<	1.230	ND<	0.205
67-64-1	Acetone	ND<	1.230	ND<	0.519
78-93-3	2-Butanone	ND<	1.230	ND<	0.418
108-10-1	4-methyl-2-pentanone	ND<	1.230	ND<	0.301
591-78-6	2-Hexanone	ND<	1.230	ND<	0.300

Surrogate Recovery	% Recovery	
1,2-Dichloroethane-D4 (SS1)	79	70-130
Toluene-d8 (SS2)	92	70-130
4- Bromofluorobenzene (SS3)	114	70-130

ND- Not detected

TR - Trace

*Value outside QC limits due to matrix interfence.

Approved by: LB Date: 2/13/00

VOLATILE ORGANIC ANALYSIS

CLIENT NAME:	Foster Wheeler Environmental	**CLIENT SAMPLE ID:**	16 (A) VD 002
PROJECT #:	---	**AAI RFS#**	0003402
PROJECT NAME:	Naval Weapons - Earle	**AAI ID#:**	0003402-002
MATRIX:	Air/Canister		
SAMPLE VOLUME:	0.01 Liter	**DATE SAMPLED:**	2/1/00
INITIAL PRESSURE:	15.00 psia	**DATE RECEIVED:**	2/3/00
FINAL PRESSURE:	19.10 psia	**DATE ANALYZED:**	2/8/00
PRES. DILUTION :	1.27		
DILUTION FACTOR:	1	**ANALYTICAL METHOD:**	EPA TO14 (GC/MS)

CAS NUMBER	COMPOUND	CONCENTRATION mg/m3	PQL	ppm(v)	PQL
74-87-3	Chloromethane	ND<	0.637	ND<	0.308
74-83-9	Bromomethane	ND<	0.637	ND<	0.164
75-01-04	Vinyl Chloride	ND<	0.637	ND<	0.249
75-00-3	Chloroethane	ND<	0.637	ND<	0.241
75-69-4	Freon 11	ND<	0.637	ND<	0.113
75-35-4	1,1-Dichloroethene	ND<	0.637	ND<	0.161
76-13-1	Freon 113	ND<	0.637	ND<	0.083
75-09-2	Methylene Chloride	ND<	0.637	ND<	0.183
75-35-3	1,1-Dichloroethane	ND<	0.637	ND<	0.157
156-60-5	trans-1,2-Dichloroethene	ND<	0.637	ND<	0.161
156-59-2	cis-1,2-Dichloroethene	ND<	0.637	ND<	0.161
67-66-3	Chloroform	ND<	0.637	ND<	0.130
71-55-6	1,1,1-Trichloroethane	ND<	0.637	ND<	0.117
56-23-5	Carbon Tetrachloride	ND<	0.637	ND<	0.101
71-43-2	Benzene	ND<	0.637	ND<	0.199
107-06-2	1,2-Dichloroethane	ND<	0.637	ND<	0.157
79-01-6	Trichloroethene	ND<	0.637	ND<	0.119
78-87-5	1,2-Dichloropropane	ND<	0.637	ND<	0.138
10061-02-6	trans-1,3-Dichloropropene	ND<	0.637	ND<	0.140
108-88-3	Toluene	ND<	0.637	ND<	0.169
10061-01-5	cis-1,3-Dichloropropene	ND<	0.637	ND<	0.140
79-00-5	1,1-2-Trichloroethane	ND<	0.637	ND<	0.117
127-18-4	Tetrachloroethene	ND<	0.637	ND<	0.094
106-93-4	Ethylene Dibromide	ND<	0.637	ND<	0.083
108-90-7	Chlorobenzene	ND<	0.637	ND<	0.138
100-41-4	Ethylbenzene	ND<	0.637	ND<	0.147
1330-20-7	m,p-Xylene	ND<	0.637	ND<	0.147
95-47-6	o-Xylene	ND<	0.637	ND<	0.147
100-42-5	Styrene	ND<	0.637	ND<	0.150
79-34-5	1,1,2,2-Tetrachlorethane	ND<	0.637	ND<	0.093
108-67-8	1,3,5-Trimethyl Benzene	ND<	0.637	ND<	0.130
95-63-6	1,2,4-Trimethyl Benzene	ND<	0.637	ND<	0.130
541-73-1	1,3-Dichlorobenzene	ND<	0.637	ND<	0.106
106-46-7	1,4-Dichlorobenzene	ND<	0.637	ND<	0.106
100-44-7	Chlorotoluene	ND<	0.637	ND<	0.123
95-50-1	1,2-Dichlorobenzene	ND<	0.637	ND<	0.106
67-64-1	Acetone	ND<	0.637	ND<	0.268
78-93-3	2-Butanone	ND<	0.637	ND<	0.216
108-10-1	4-methyl-2-pentanone	ND<	0.637	ND<	0.156
591-78-6	2-Hexanone	ND<	0.637	ND<	0.155

Surrogate Recovery	% Recovery	
1,2-Dichloroethane-D4 (SS1)	115	70-130
Toluene-d8 (SS2)	96	70-130
4- Bromofluorobenzene (SS3)	111	70-130

ND- Not detected

TR - Trace

*Value outside QC limits due to matrix interfence.

Approved by: LB Date: 2/18/00

VOLATILE ORGANIC ANALYSIS

CLIENT NAME:	Foster Wheeler Environmental	**CLIENT SAMPLE ID:**	16 (B) VD 001
PROJECT #:	---	**AAI RFS#**	0003402
PROJECT NAME:	Naval Weapons - Earle	**AAI ID#:**	0003402-003
MATRIX:	Air/Canister		
SAMPLE VOLUME:	0.05 Liter	**DATE SAMPLED:**	2/1/00
INITIAL PRESSURE:	15.00 psia	**DATE RECEIVED:**	2/3/00
FINAL PRESSURE:	18.80 psia	**DATE ANALYZED:**	2/8-2/14/00
PRES. DILUTION :	1.25		
DILUTION FACTOR:	1	**ANALYTICAL METHOD:**	EPA TO14 (GC/MS)

CAS NUMBER	COMPOUND	CONCENTRATION mg/m3	PQL	ppm(v)	PQL
74-87-3	Chloromethane	ND<	0.125	ND<	0.061
74-83-9	Bromomethane	ND<	0.125	ND<	0.032
75-01-04	Vinyl Chloride	ND<	0.125	ND<	0.049
75-00-3	Chloroethane	ND<	0.125	ND<	0.048
75-69-4	Freon 11	ND<	0.125	ND<	0.022
75-35-4	1,1-Dichloroethene	ND<	0.125	ND<	0.032
76-13-1	Freon 113	ND<	0.125	ND<	0.016
75-09-2	Methylene Chloride	ND<	0.125	ND<	0.036
75-35-3	1,1-Dichloroethane	ND<	0.125	ND<	0.031
156-60-5	trans-1,2-Dichloroethene	ND<	0.125	ND<	0.032
156-59-2	cis-1,2-Dichloroethene	ND<	0.125	ND<	0.032
67-66-3	Chloroform	ND<	0.125	ND<	0.026
71-55-6	1,1,1-Trichloroethane	ND<	0.125	ND<	0.023
56-23-5	Carbon Tetrachloride	ND<	0.125	ND<	0.020
71-43-2	Benzene	1.1	0.125	0.35	0.039
107-06-2	1,2-Dichloroethane	ND<	0.125	ND<	0.031
79-01-6	Trichloroethene	ND<	0.125	ND<	0.023
78-87-5	1,2-Dichloropropane	ND<	0.125	ND<	0.027
10061-02-6	trans-1,3-Dichloropropene	ND<	0.125	ND<	0.028
108-88-3	Toluene	0.68	0.125	0.18	0.033
10061-01-5	cis-1,3-Dichloropropene	ND<	0.125	ND<	0.028
79-00-5	1,1-2-Trichloroethane	ND<	0.125	ND<	0.023
127-18-4	Tetrachloroethene	ND<	0.125	ND<	0.018
106-93-4	Ethylene Dibromide	ND<	0.125	ND<	0.016
108-90-7	Chlorobenzene	ND<	0.125	ND<	0.027
100-41-4	Ethylbenzene	3.0	0.125	0.69	0.029
1330-20-7	m,p-Xylene	6.7	0.125	1.6	0.029
95-47-6	o-Xylene	1.7	0.125	0.39	0.029
100-42-5	Styrene	ND<	0.125	ND<	0.029
79-34-5	1,1,2,2-Tetrachlorethane	ND<	0.125	ND<	0.018
108-67-8	1,3,5-Trimethyl Benzene	16	0.125	3.2	0.026
95-63-6	1,2,4-Trimethyl Benzene	5.8	0.125	1.2	0.026
541-73-1	1,3-Dichlorobenzene	ND<	0.125	ND<	0.021
106-46-7	1,4-Dichlorobenzene	ND<	0.125	ND<	0.021
100-44-7	Chlorotoluene	ND<	0.125	ND<	0.024
95-50-1	1,2-Dichlorobenzene	ND<	0.125	ND<	0.021
67-64-1	Acetone	ND<	0.125	ND<	0.053
78-93-3	2-Butanone	ND<	0.125	ND<	0.043
108-10-1	4-methyl-2-pentanone	ND<	0.125	ND<	0.031
591-78-6	2-Hexanone	ND<	0.125	ND<	0.031

Surrogate Recovery	% Recovery	
1,2-Dichloroethane-D4 (SS1)	89	70-130
Toluene-d8 (SS2)	111	70-130
4- Bromofluorobenzene (SS3)	76	70-130

ND- Not detected

TR - Trace

*Value outside QC limits due to matrix interfence.

Approved by: C3 Date: 2/18/00

VOLATILE ORGANIC ANALYSIS

CLIENT NAME:	Foster Wheeler Environmental	**CLIENT SAMPLE ID:**	16 (B) VD 001
PROJECT #:	---	**AAI RFS#**	0003402
PROJECT NAME:	Naval Weapons - Earle	**AAI ID#:**	0003402-003DUP
MATRIX:	Air/Canister		
SAMPLE VOLUME:	0.05 Liter	**DATE SAMPLED:**	2/1/00
INITIAL PRESSURE:	15.00 psia	**DATE RECEIVED:**	2/3/00
FINAL PRESSURE:	18.80 psia	**DATE ANALYZED:**	2/8-2/14/00
PRES. DILUTION :	1.25		
DILUTION FACTOR:	1	**ANALYTICAL METHOD:**	EPA TO14 (GC/MS)

CAS NUMBER	COMPOUND	CONCENTRATION mg/m3	PQL	ppm(v)	PQL
74-87-3	Chloromethane	ND<	0.125	ND<	0.061
74-83-9	Bromomethane	ND<	0.125	ND<	0.032
75-01-04	Vinyl Chloride	ND<	0.125	ND<	0.049
75-00-3	Chloroethane	ND<	0.125	ND<	0.048
75-69-4	Freon 11	ND<	0.125	ND<	0.022
75-35-4	1,1-Dichloroethene	ND<	0.125	ND<	0.032
76-13-1	Freon 113	ND<	0.125	ND<	0.016
75-09-2	Methylene Chloride	ND<	0.125	ND<	0.036
75-35-3	1,1-Dichloroethane	ND<	0.125	ND<	0.031
156-60-5	trans-1,2-Dichloroethene	ND<	0.125	ND<	0.032
156-59-2	cis-1,2-Dichloroethene	ND<	0.125	ND<	0.032
67-66-3	Chloroform	ND<	0.125	ND<	0.026
71-55-6	1,1,1-Trichloroethane	ND<	0.125	ND<	0.023
56-23-5	Carbon Tetrachloride	ND<	0.125	ND<	0.020
71-43-2	Benzene	1.2	0.125	0.36	0.039
107-06-2	1,2-Dichloroethane	ND<	0.125	ND<	0.031
79-01-6	Trichloroethene	ND<	0.125	ND<	0.023
78-87-5	1,2-Dichloropropane	ND<	0.125	ND<	0.027
10061-02-6	trans-1,3-Dichloropropene	ND<	0.125	ND<	0.028
108-88-3	Toluene	0.43	0.125	0.11	0.033
10061-01-5	cis-1,3-Dichloropropene	ND<	0.125	ND<	0.028
79-00-5	1,1-2-Trichloroethane	ND<	0.125	ND<	0.023
127-18-4	Tetrachloroethene	ND<	0.125	ND<	0.018
106-93-4	Ethylene Dibromide	ND<	0.125	ND<	0.016
108-90-7	Chlorobenzene	ND<	0.125	ND<	0.027
100-41-4	Ethylbenzene	3.1	0.125	0.72	0.029
1330-20-7	m,p-Xylene	5.3	0.125	1.2	0.029
95-47-6	o-Xylene	2.2	0.125	0.50	0.029
100-42-5	Styrene	ND<	0.125	ND<	0.029
79-34-5	1,1,2,2-Tetrachlorethane	ND<	0.125	ND<	0.018
108-67-8	1,3,5-Trimethyl Benzene	14	0.125	2.8	0.026
95-63-6	1,2,4-Trimethyl Benzene	4.0	0.125	0.82	0.026
541-73-1	1,3-Dichlorobenzene	ND<	0.125	ND<	0.021
106-46-7	1,4-Dichlorobenzene	ND<	0.125	ND<	0.021
100-44-7	Chlorotoluene	ND<	0.125	ND<	0.024
95-50-1	1,2-Dichlorobenzene	ND<	0.125	ND<	0.021
67-64-1	Acetone	ND<	0.125	ND<	0.053
78-93-3	2-Butanone	ND<	0.125	ND<	0.043
108-10-1	4-methyl-2-pentanone	ND<	0.125	ND<	0.031
591-78-6	2-Hexanone	ND<	0.125	ND<	0.031

Surrogate Recovery	% Recovery	
1,2-Dichloroethane-D4 (SS1)	137*	70-130
Toluene-d8 (SS2)	94	70-130
4- Bromofluorobenzene (SS3)	98	70-130

ND- Not detected

TR - Trace

*Value outside QC limits due to matrix interfence.

Approved by: _____ Date: 2/13/00

ANALYTICAL RESULTS

AAI RFS #: 0003402

Client Name: Foster Wheeler Environmental
Project Name: Naval Weapons - Earle
Project #: ---
Matrix: Air/Canister

Date(s) Sampled: 2/1/00
Date(s) Analyzed: 2/4/00
Analytical Method: CARB/EPA
Chemist: AS

	Units	16 (A) VD 001 0003402 -001	16 (A) VD 002 0003402 -002	16 (B) VD 001 0003402 -003	Method Blank
EPA 8015mod					
TPH as gasoline	(ppm(v))	85	ND<10	52	ND<10

	Units	16 (A) VD 001 0003402 -001	16 (A) VD 002 0003402 -002	16 (B) VD 001 0003402 -003	Method Blank
EPA 8015mod					
TPH as gasoline	(mg/m3)	300	7.0	184	ND<1.0

Approved by: L3 Date: 2/18/00

QUALITY CONTROL

AAI RFS #: 0003402

Client Name: Foster Wheeler Environmental
Project Name: Naval Weapons - Earle
Project #: ---
Matrix: Air/Canister

Date(s) Sampled: 2/1/00
Date(s) Analyzed: 2/4/00
Analytical Method: CARB/EPA
Chemist: AS

	Sample Result 0003402-003 (ppm(v))	Duplicate Result 0003402-003 (ppm(v))	RPD (%)	Quality Control Limits (%)
EPA 8015mod				
TPH as gasoline	52	53	2	30

	Sample Result 9800000-000 (mg/m3)	Duplicate Result 9800000-000 (mg/m3)	RPD (%)	Quality Control Limits (%)
EPA 8015mod				
TPH as gasoline	184	185	1	30

Approved by: B Date: 2/13/00

CHEMTECH

CHAIN OF CUSTODY RECORD

[redacted] 110 Route 4 Englewood, NJ 07631 (201) 567-6868 Fax (201) 567-1333

[redacted] 285 Campus Plaza 1 Edison, NJ 08837 (732) 225-4111 Fax (732) 225-4110

[redacted] 515 Route 9 South Barnegat, NJ 08005 (609) 698-0199 Fax (609) 698-0910

CHEMTECH JOB NO.: APOLLO ANALYTICAL

CHEMTECH QUOTE NO.:

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Foster Wheeler

ADDRESS: One Oxford Valley, Suite 200

CITY: Langhorne STATE: PA ZIP: 19335

ATTENTION: Mike Heffron

PHONE: 215 702 4015 FAX: 215 702 4045

PROJECT INFORMATION

PROJECT NAME: Naval Weapons - Earle

PROJECT NO.:

PROJECT MANAGER: Mike Heffron

LOCATION: ←

PHONE: FAX:

BILLING INFORMATION

BILL TO: PO #:

ADDRESS:

CITY: STATE: ZIP:

ATTENTION: Sonya Staten PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *

HARD COPY: _____ DAYS *

EDD: _____ DAYS *

* TO BE APPROVED BY CHEMTECH

** NORMAL TURNAROUND TIME - 14 DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESULTS ONLY
- ☐ RESULTS + QC
- ☐ NJ REDUCED
- ☐ NJ CLP
- ☐ USEPA CLP
- ☐ NYS ASP "B"
- ☐ NYS ASP "A"
- ☐ EDD
- ☐ EDD FORMAT: _____

ANALYSIS

TPH VOCs

CHEMTECH SAMPLE ID	SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1. -001	16(A) VD 001	Air		Y	2/1/00	9:00	1										~~A~~ 72-Hour
2. -002	16(A) VD 002	↓			↓	9:05	1										Turn-Around
3. -003	16(B) VD 001					9:30	1										
4.																	AAI RFS#
5.																	0003402
6.																	
7.																	
8.																	

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	2/02/00	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3.	DATE/TIME:	RECEIVED FOR LAB BY: 3. Leticia Blanco 2/3/00 1000

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non-Compliant ☐ Temp. of Cooler _____

Comments:

Page ____ of ____

Shipment Complete: Yes ____ No ____

Ver. 9-99

WHITE – CHEMTECH COPY FOR RETURN TO CLIENT YELLOW – CHEMTECH COPY PINK – SAMPLER COPY

32754

Feb 2000
Air

PHONE (714) 751-3210 FAX (714) 751-6414

3190-A AIRPORT LOOP DRIVE COSTA MESA, CALIFORNIA 92626

AAI RFS #: 0006101

March 9, 2000

Foster Wheeler Environmental
One Oxford Valley, Suite 200
Langhorne, PA 19047

Project Name: NWS-Earle, Foster Wheeler
Project Number: ---

Attention: Mike Heffron

Apollo Analytics Inc., has received the following sample(s):

Date Received	Quantity	Matrix
March 1, 2000	2	Air/Canister

The sample(s) received were analyzed for total petroleum hydrocarbons as gasoline using an HP gas chromatograph equipped with a flame ionization detector (GC/FID) and volatile organics by GC/MS using EPA method TO-14.

The results of these analyses and the quality control are enclosed. If you have any questions please do not hesitate to call (714) 751-3210.

Leon Levan
Laboratory Manager

VOLATILE ORGANIC ANALYSIS

CLIENT NAME:	Foster Wheeler Environmental	**CLIENT SAMPLE ID:**	Method Blank
PROJECT #:	---	**AAI RFS#**	0006101
PROJECT NAME:	NWS-Earle, Foster Wheeler	**AAI ID#:**	Method Blank
MATRIX:	Air/Canister		
SAMPLE VOLUME:	0.005 Liter	**DATE SAMPLED:**	N/A
INITIAL PRESSURE:	1.00 psia	**DATE RECEIVED:**	N/A
FINAL PRESSURE:	1.00 psia	**DATE ANALYZED:**	3/2/00
PRES. DILUTION :	1.00		
DILUTION FACTOR:	1	**ANALYTICAL METHOD:**	EPA TO14 (GC/MS)

CAS NUMBER	COMPOUND	CONCENTRATION mg/m3	PQL	ppm(v)	PQL
74-87-3	Chloromethane	ND<	1.0	ND<	0.484
74-83-9	Bromomethane	ND<	1.0	ND<	0.258
75-01-04	Vinyl Chloride	ND<	1.0	ND<	0.391
75-00-3	Chloroethane	ND<	1.0	ND<	0.379
75-69-4	Freon 11	ND<	1.0	ND<	0.178
75-35-4	1,1-Dichloroethene	ND<	1.0	ND<	0.252
76-13-1	Freon 113	ND<	1.0	ND<	0.131
75-09-2	Methylene Chloride	ND<	1.0	ND<	0.288
75-35-3	1,1-Dichloroethane	ND<	1.0	ND<	0.247
156-60-5	trans-1,2-Dichloroethene	ND<	1.0	ND<	0.252
156-59-2	cis-1,2-Dichloroethene	ND<	1.0	ND<	0.252
67-66-3	Chloroform	ND<	1.0	ND<	0.205
71-55-6	1,1,1-Trichloroethane	ND<	1.0	ND<	0.183
56-23-5	Carbon Tetrachloride	ND<	1.0	ND<	0.159
71-43-2	Benzene	ND<	1.0	ND<	0.313
107-06-2	1,2-Dichloroethane	ND<	1.0	ND<	0.247
79-01-6	Trichloroethene	ND<	1.0	ND<	0.186
78-87-5	1,2-Dichloropropane	ND<	1.0	ND<	0.216
10061-02-6	trans-1,3-Dichloropropene	ND<	1.0	ND<	0.220
108-88-3	Toluene	ND<	1.0	ND<	0.265
10061-01-5	cis-1,3-Dichloropropene	ND<	1.0	ND<	0.220
79-00-5	1,1-2-Trichloroethane	ND<	1.0	ND<	0.183
127-18-4	Tetrachloroethene	ND<	1.0	ND<	0.148
106-93-4	Ethylene Dibromide	ND<	1.0	ND<	0.130
108-90-7	Chlorobenzene	ND<	1.0	ND<	0.217
100-41-4	Ethylbenzene	ND<	1.0	ND<	0.230
1330-20-7	m,p-Xylene	ND<	1.0	ND<	0.230
95-47-6	o-Xylene	ND<	1.0	ND<	0.230
100-42-5	Styrene	ND<	1.0	ND<	0.235
79-34-5	1,1,2,2-Tetrachlorethane	ND<	1.0	ND<	0.146
108-67-8	1,3,5-Trimethyl Benzene	ND<	1.0	ND<	0.203
95-63-6	1,2,4-Trimethyl Benzene	ND<	1.0	ND<	0.203
541-73-1	1,3-Dichlorobenzene	ND<	1.0	ND<	0.166
106-46-7	1,4-Dichlorobenzene	ND<	1.0	ND<	0.166
100-44-7	Chlorotoluene	ND<	1.0	ND<	0.193
95-50-1	1,2-Dichlorobenzene	ND<	1.0	ND<	0.166
67-64-1	Acetone	ND<	1.0	ND<	0.422
78-93-3	2-Butanone	ND<	1.0	ND<	0.340
108-10-1	4-methyl-2-pentanone	ND<	1.0	ND<	0.245
591-78-6	2-Hexanone	ND<	1.0	ND<	0.244

Surrogate Recovery	% Recovery	
1,2-Dichloroethane-D4 (SS1)	90	70-130
Toluene-d8 (SS2)	96	70-130
4- Bromofluorobenzene (SS3)	67*	70-130

ND- Not detected

TR - Trace

*Value outside QC limits due to matrix interfence.

Approved by: _____ Date: 3/5/00

VOLATILE ORGANIC ANALYSIS

CLIENT NAME:	Foster Wheeler Environmental	**CLIENT SAMPLE ID:**	16 (A) VD003
PROJECT #:	---	**AAI RFS#**	0006101
PROJECT NAME:	NWS-Earle, Foster Wheeler	**AAI ID#:**	0006101-001
MATRIX:	Air/Canister		
SAMPLE VOLUME:	0.01 Liter	**DATE SAMPLED:**	2/29/00
INITIAL PRESSURE:	15.30 psia	**DATE RECEIVED:**	3/1/00
FINAL PRESSURE:	17.10 psia	**DATE ANALYZED:**	3/2/00
PRES. DILUTION :	1.12		
DILUTION FACTOR:	1	**ANALYTICAL METHOD:**	EPA TO14 (GC/MS)

CAS NUMBER	COMPOUND	CONCENTRATION mg/m3	PQL	ppm(v)	PQL
74-87-3	Chloromethane	ND<	0.56	ND<	0.271
74-83-9	Bromomethane	ND<	0.56	ND<	0.144
75-01-04	Vinyl Chloride	ND<	0.56	ND<	0.219
75-00-3	Chloroethane	ND<	0.56	ND<	0.212
75-69-4	Freon 11	ND<	0.56	ND<	0.100
75-35-4	1,1-Dichloroethene	ND<	0.56	ND<	0.141
76-13-1	Freon 113	ND<	0.56	ND<	0.073
75-09-2	Methylene Chloride	ND<	0.56	ND<	0.161
75-35-3	1,1-Dichloroethane	ND<	0.56	ND<	0.138
156-60-5	trans-1,2-Dichloroethene	ND<	0.56	ND<	0.141
156-59-2	cis-1,2-Dichloroethene	ND<	0.56	ND<	0.141
67-66-3	Chloroform	ND<	0.56	ND<	0.114
71-55-6	1,1,1-Trichloroethane	ND<	0.56	ND<	0.102
56-23-5	Carbon Tetrachloride	ND<	0.56	ND<	0.089
71-43-2	Benzene	17	0.56	5.3	0.175
107-06-2	1,2-Dichloroethane	ND<	0.56	ND<	0.138
79-01-6	Trichloroethene	ND<	0.56	ND<	0.104
78-87-5	1,2-Dichloropropane	ND<	0.56	ND<	0.121
10061-02-6	trans-1,3-Dichloropropene	ND<	0.56	ND<	0.123
108-88-3	Toluene	8.8	0.56	2.3	0.148
10061-01-5	cis-1,3-Dichloropropene	ND<	0.56	ND<	0.123
79-00-5	1,1-2-Trichloroethane	ND<	0.56	ND<	0.102
127-18-4	Tetrachloroethene	ND<	0.56	ND<	0.082
106-93-4	Ethylene Dibromide	ND<	0.56	ND<	0.073
108-90-7	Chlorobenzene	ND<	0.56	ND<	0.121
100-41-4	Ethylbenzene	23	0.56	5.3	0.129
1330-20-7	m,p-Xylene	31	0.56	7.1	0.129
95-47-6	o-Xylene	12	0.56	2.7	0.129
100-42-5	Styrene	ND<	0.56	ND<	0.131
79-34-5	1,1,2,2-Tetrachlorethane	ND<	0.56	ND<	0.081
108-67-8	1,3,5-Trimethyl Benzene	14	0.56	2.9	0.114
95-63-6	1,2,4-Trimethyl Benzene	31	0.56	6.3	0.114
541-73-1	1,3-Dichlorobenzene	ND<	0.56	ND<	0.093
106-46-7	1,4-Dichlorobenzene	ND<	0.56	ND<	0.093
100-44-7	Chlorotoluene	ND<	0.56	ND<	0.108
95-50-1	1,2-Dichlorobenzene	ND<	0.56	ND<	0.093
67-64-1	Acetone	ND<	0.56	ND<	0.236
78-93-3	2-Butanone	ND<	0.56	ND<	0.190
108-10-1	4-methyl-2-pentanone	ND<	0.56	ND<	0.137
591-78-6	2-Hexanone	ND<	0.56	ND<	0.136

Surrogate Recovery	% Recovery	
1,2-Dichloroethane-D4 (SS1)	75	70-130
Toluene-d8 (SS2)	95	70-130
4- Bromofluorobenzene (SS3)	98	70-130

ND- Not detected

TR - Trace

*Value outside QC limits due to matrix interfence.

Approved by: _____ Date: 3/6/00

VOLATILE ORGANIC ANALYSIS

CLIENT NAME:	Foster Wheeler Environmental	**CLIENT SAMPLE ID:**	16 (A) VD004
PROJECT #:	---	**AAI RFS#**	0006101
PROJECT NAME:	NWS-Earle, Foster Wheeler	**AAI ID#:**	0006101-002
MATRIX:	Air/Canister		
SAMPLE VOLUME:	0.025 Liter	**DATE SAMPLED:**	2/29/00
INITIAL PRESSURE:	15.00 psia	**DATE RECEIVED:**	3/1/00
FINAL PRESSURE:	17.10 psia	**DATE ANALYZED:**	3/6/00
PRES. DILUTION :	1.14		
DILUTION FACTOR:	1	**ANALYTICAL METHOD:**	EPA TO14 (GC/MS)

CAS NUMBER	COMPOUND	CONCENTRATION mg/m3	PQL	ppm(v)	PQL
74-87-3	Chloromethane	ND<	0.23	ND<	0.110
74-83-9	Bromomethane	ND<	0.23	ND<	0.059
75-01-04	Vinyl Chloride	ND<	0.23	ND<	0.089
75-00-3	Chloroethane	ND<	0.23	ND<	0.086
75-69-4	Freon 11	ND<	0.23	ND<	0.041
75-35-4	1,1-Dichloroethene	ND<	0.23	ND<	0.058
76-13-1	Freon 113	ND<	0.23	ND<	0.030
75-09-2	Methylene Chloride	ND<	0.23	ND<	0.066
75-35-3	1,1-Dichloroethane	ND<	0.23	ND<	0.056
156-60-5	trans-1,2-Dichloroethene	ND<	0.23	ND<	0.058
156-59-2	cis-1,2-Dichloroethene	ND<	0.23	ND<	0.058
67-66-3	Chloroform	ND<	0.23	ND<	0.047
71-55-6	1,1,1-Trichloroethane	ND<	0.23	ND<	0.042
56-23-5	Carbon Tetrachloride	ND<	0.23	ND<	0.036
71-43-2	Benzene	ND<	0.23	ND<	0.071
107-06-2	1,2-Dichloroethane	ND<	0.23	ND<	0.056
79-01-6	Trichloroethene	ND<	0.23	ND<	0.042
78-87-5	1,2-Dichloropropane	ND<	0.23	ND<	0.049
10061-02-6	trans-1,3-Dichloropropene	ND<	0.23	ND<	0.050
108-88-3	Toluene	ND<	0.23	ND<	0.061
10061-01-5	cis-1,3-Dichloropropene	ND<	0.23	ND<	0.050
79-00-5	1,1-2-Trichloroethane	ND<	0.23	ND<	0.042
127-18-4	Tetrachloroethene	ND<	0.23	ND<	0.034
106-93-4	Ethylene Dibromide	ND<	0.23	ND<	0.030
108-90-7	Chlorobenzene	ND<	0.23	ND<	0.050
100-41-4	Ethylbenzene	ND<	0.23	ND<	0.053
1330-20-7	m,p-Xylene	ND<	0.23	ND<	0.053
95-47-6	o-Xylene	ND<	0.23	ND<	0.053
100-42-5	Styrene	ND<	0.23	ND<	0.054
79-34-5	1,1,2,2-Tetrachlorethane	ND<	0.23	ND<	0.033
108-67-8	1,3,5-Trimethyl Benzene	ND<	0.23	ND<	0.046
95-63-6	1,2,4-Trimethyl Benzene	ND<	0.23	ND<	0.046
541-73-1	1,3-Dichlorobenzene	ND<	0.23	ND<	0.038
106-46-7	1,4-Dichlorobenzene	ND<	0.23	ND<	0.038
100-44-7	Chlorotoluene	ND<	0.23	ND<	0.044
95-50-1	1,2-Dichlorobenzene	ND<	0.23	ND<	0.038
67-64-1	Acetone	ND<	0.23	ND<	0.096
78-93-3	2-Butanone	ND<	0.23	ND<	0.077
108-10-1	4-methyl-2-pentanone	ND<	0.23	ND<	0.056
591-78-6	2-Hexanone	ND<	0.23	ND<	0.056

Surrogate Recovery	% Recovery	
1,2-Dichloroethane-D4 (SS1)	55*	70-130
Toluene-d8 (SS2)	100	70-130
4- Bromofluorobenzene (SS3)	95	70-130

ND- Not detected

TR - Trace

*Value outside QC limits due to matrix interfence.

Approved by: B Date: 3/5/00

ANALYTICAL RESULTS

AAI RFS #: 0006101

Client Name: Foster Wheeler Environmental
Project Name: NWS-Earle, Foster Wheeler
Project #: ---
Matrix: Air/Canister

Date(s) Sampled: 2/29/00
Date(s) Analyzed: 3/8/00
Analytical Method: CARB/EPA
Chemist: AS

	Units	16 (A) VD003 0006101 -001	16 (A) VD004 0006101 -002	Method Blank
EPA 8015mod				
TPH as gasoline	(ppm(v))	187	12	ND<10

	Units	16 (A) VD003 0006101 -001	16 (A) VD004 0006101 -002	Method Blank
EPA 8015mod				
TPH as gasoline	(mg/m3)	660	43	ND<1.0

Approved by: B Date: 3/9/00

QUALITY CONTROL

AAI RFS #: 0006101

Client Name: Foster Wheeler Environmental
Project Name: NWS-Earle, Foster Wheeler
Project #: ---
Matrix: Air/Canister

Date(s) Sampled: 2/29/00
Date(s) Analyzed: 3/8/00
Analytical Method: CARB/EPA
Chemist: AS

	Sample Result 0006101-002 (ppm(v))	**Duplicate Result** 0006101-002 (ppm(v))	**RPD** (%)	**Quality C ntrol Limits** (%)
EPA 8015m d				
TPH as gasoline	12	11	9	30

	Sample Result 0006101-002 (mg/m3)	**Duplicate Result** 0006101-002 (mg/m3)	**RPD** (%)	**Quality Control Limits** (%)
EPA 8015mod				
TPH as gasoline	43	39	10	30

Approved by: [illegible] Date: 3/5/00

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

4/19/2000

BIOSLURPER UNIT 1		
		AVERAGE
TPH INFLUENT* (mg/L):	140	16(A)EW99w64
TPH EFFLUENT* (mg/L):		16)A)EW99W65
GALLONS GROUNDWATER TREATED:	4283	
* as per analytical average if more than one sample		
	5.004384	=POUNDS OF TPH

BIOSLURPER UNIT 2		
		AVERAGE
TPH INFLUENT* (mg/L):	99	16(B)EW99W48
TPH EFFLUENT* (mg/L):	0.68	16(B)EW99W49
GALLONS GROUNDWATER TREATED:	3113	
* as per analytical average if more than one sample		
	2.554439	=POUNDS OF TPH

POUNDS OF TPH=
Gallons Groundwater Treated * (3.785 L/gal) *(TPH INFLUENT (mg/L) -TPH EFFLUENT (mg/l))*0.001g/mg*0.002205 pounds/g)

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

4/19/2000

BIOSLURPER UNIT 1		
		AVERAGE
TPH INFLUENT* (mg/L):	303	16(A)EW01
TPH EFFLUENT* (mg/L):	0	16(A)EW02
GALLONS GROUNDWATER TREATED:	3393	
* as per analytical average if more than one sample		
	8.58027	=POUNDS OF TPH

BIOSLURPER UNIT 2		
		AVERAGE
TPH INFLUENT* (mg/L):	0.774	16(B)EW01
TPH EFFLUENT* (mg/L):	0	16(b)EW02
GALLONS GROUNDWATER TREATED:	896	
* as per analytical average if more than one sample		
	0.005788	=POUNDS OF TPH

POUNDS OF TPH=
Gallons Groundwater Treated * (3.785 L/gal) *(TPH INFLUENT (mg/L) -TPH EFFLUENT (mg/l))*0.001g/mg*0.002205 pounds/g)

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

4/19/2000

BIOSLURPER UNIT 1		
		AVERAGE
TPH INFLUENT* (mg/L):	418	16(A)EW03
TPH EFFLUENT* (mg/L):	0	16(A)EW04
GALLONS GROUNDWATER TREATED:	4618	
* as per analytical average if more than one sample		
	16.11034	=POUNDS OF TPH

POUNDS OF TPH=
Gallons Groundwater Treated * (3.785 L/gal) *(TPH INFLUENT (mg/L) -TPH EFFLUENT (mg/l))*0.001g/mg*0.002205 pounds/g)

CHEMTECH

CHAIN OF CUSTODY RECORD

Please check one

☐ 110 Route 4, Englewood, NJ 07631, (201) 567-6868, Fax (201) 567-1333

☑ 205 Campus Plaza 1, Edison, NJ 08837, (732) 225-4111, Fax (732) 225-4110

☐ 515 Route 9 South, Barnegat, NJ 08005, (609) 698-0199, Fax (609) 698-0910

CHEMTECH JOB NO.: LG398 NJ

CHEMTECH QUOTE NO.:

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Foster Wheeler Enviro

ADDRESS: One Oxford Valley S. Ste 200

CITY: Langhorne STATE: PA ZIP: 19335

ATTENTION: Mike Heffron

PHONE: (215) 702-4015 FAX: (215) 702-4045

PROJECT INFORMATION

PROJECT NAME: NWS - Earle

PROJECT NO.: (Bioslurpers)

PROJECT MANAGER: Mike Heffron

LOCATION: Langhorne PA

PHONE: (215) 702 4015 FAX: 4045

BILLING INFORMATION

BILL TO: Foster Wheel PO #:

ADDRESS: One Oxford Valley S. Ste 200

CITY: Langhorne STATE: PA ZIP: 19047

ATTENTION: Sonya Staley PHONE:

DATA TURNAROUND INFORMATION

FAX: 3 DAYS *

HARD COPY: 14 DAYS *

EDD: DAYS *

* TO BE APPROVED BY CHEMTECH

** NORMAL TURNAROUND TIME - 14 DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP

☐ RESULTS + QC ☐ NYS ASP "B"

☑ NJ REDUCED ☐ NYS ASP "A"

☐ NJ CLP ☐ EDD

☐ EDD FORMAT:

ANALYSIS

TPH

PRESERVATIVES

CHEMTECH SAMPLE ID	SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 (A)	2	3	4	5	6	7	8	9	COMMENTS
1. 11311	16(A) EW99W64	AQ		Y	12/1/99	8:45	1	Y									72 hr.
2. 11312	16(A) EW99W65	↓		Y	↓	8:48	1	Y									
3. 11313	16(B) EW99W48	↓		Y	↓		1	Y									
4. 11314	16(B) EW99W49	↓		Y	↓		1	Y									
5.																	
6.																	
7.																	
8.																	

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:
1. [illegible]	12/3/99	1. FedEx.
2. [illegible]	01/03/00 10 00	2.
3. [illegible]	01/03/00 1000	3. Synny Patel.

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non-Compliant ☐ Temp. of Cooler _____

Comments:

Page _____ of _____

Shipment Complete: Yes _____ No _____

Ver. 9-99

WHITE – CHEMTECH COPY FOR RETURN TO CLIENT YELLOW – CHEMTECH COPY PINK – SAMPLER COPY

27800

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSIS

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 01/14/00

PROJECT # L6398NJ

SAMPLE NUMBER- 11311
DATE SAMPLED- 12/31/99
DATE RECEIVED- 01/03/00
DELIVERED BY- FEDEX

SAMPLE ID- 16(A)EW99W64
TIME SAMPLED- 0845 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- SP SAMPLE MATRIX- WW

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	1664	01/07/00		JAA	140	mg/l

LABORATORY DIRECTOR _____

000010

☐ 110 Route 4
Englewood, New Jersey 07631
Phone: 201.567.6868 Fax: 201.567.1333

☑ 205 Campus Plaza 1
Edison, NJ 08837
Phone: 732.225.4111 Fax: 732.225.4110

CHEMTECH
NYSDOH Certification No. 10624
NJDEP Certification No. 02548

ANALAB-ICM Division
NYSDOH Certification No. 11376
NJDEP Certification No. 12531

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSIS

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 01/14/00

PROJECT # L6398NJ

SAMPLE NUMBER- 11312
DATE SAMPLED- 12/31/99
DATE RECEIVED- 01/03/00
DELIVERED BY- FEDEX

SAMPLE ID- 16(A)EW99W65
TIME SAMPLED- 0848 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- SP SAMPLE MATRIX- WW

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	1664	01/07/00		JAA	<0.5	mg/l

LABORATORY DIRECTOR _____

000011

☐ 110 Route 4
Englewood, New Jersey 07631
Phone: 201.567.6868 Fax: 201.567.1333

☑ 205 Campus Plaza 1
Edison, NJ 08837
Phone: 732.225.4111 Fax: 732.225.4110

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LABORATORY REPORT

REPORT OF ANALYSIS

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 01/14/00

PROJECT # L6398NJ

SAMPLE NUMBER- 11313
DATE SAMPLED- 12/31/99
DATE RECEIVED- 01/03/00
DELIVERED BY- FEDEX

SAMPLE ID- 16(B)EW99W48
SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- SP SAMPLE MATRIX- WW

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	1664	01/07/00		JAA	99	mg/l

LABORATORY DIRECTOR _____

000012

☐ 110 Route 4
Englewood, New Jersey 07631
Phone: 201.567.6868 Fax: 201.567.1333

☑ 205 Campus Plaza 1
Edison, NJ 08837
Phone: 732.225.4111 Fax: 732.225.4110

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ANALAB-ICM Division
NYSDOH Certification No. 11376
NJDEP Certification No. 12531

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LABORATORY REPORT

REPORT OF ANALYSIS

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 01/14/00

PROJECT # L6398NJ

SAMPLE NUMBER- 11314
DATE SAMPLED- 12/31/99
DATE RECEIVED- 01/03/00
DELIVERED BY- FEDEX

SAMPLE ID- 16(B)EW99W49
SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- SP SAMPLE MATRIX- WW

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	1664	01/07/00		JAA	0.68	mg/l

LABORATORY DIRECTOR

000013

☐ 110 Route 4
Englewood, New Jersey 07631
Phone: 201.567.6868 Fax: 201.567.1333

☑ 205 Campus Plaza 1
Edison, NJ 08837
Phone: 732.225.4111 Fax: 732.225.4110

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NJDEP Certification No. 02548

ANALAB-ICM Division
NYSDOH Certification No. 11376
NJDEP Certification No. 12531

CHEMTECH

facsimile transmittal

DATE 2/4/00

NUMBER OF PAGES 2

NAME: Mike Heffron

FAX# 215-702-4045

COMPANY: Foster Wheeler

RE: Naval Weapon Sta

SENT BY:

LALIT RAYTHATTHA

COMMENT: Analytical Data JAN 2000
WATER VOC/TPH

PROJECT # L6774NJ

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL
US AT (732) 225-4111 AS SOON AS POSSIBLE.
205 CAMPUS PLAZA 1, RARITAN CENTER, EDISON, NJ, 08837

IN BUSINESS FOR THE ENVIRONMENT

CHEMTECH
CHAIN OF CUSTODY RECORD

☐ 110 Route 4, Englewood, NJ 07631, (201) 567-6868, Fax (201) 567-1333
☐ 205 Campus Plaza 1, Edison, NJ 08837, (732) 225-4111, Fax (732) 225-4110
☐ 515 Route 9 South, Barnegat, NJ 08005, (609) 698-0199, Fax (609) 698-0910

CHEMTECH JOB NO.: L6174NJ
CHEMTECH QUOTE NO.:

CLIENT INFORMATION (REPORT TO BE SENT TO:)
COMPANY: Foster Wheeler
ADDRESS: One Oxford Valley, Suite 200
CITY: Langhorne STATE: PA ZIP: 19047
ATTENTION: Mike Heffron
PHONE: 215 702 4015 FAX: 215 702-4045

PROJECT INFORMATION
PROJECT NAME: Naval Weapons Station Earle
PROJECT NO.:
PROJECT MANAGER: Mike Heffron
LOCATION: ←
PHONE: FAX:

BILLING INFORMATION
BILL TO: Foster Wheeler PO #:
ADDRESS: One Oxford Valley, Suite 200
CITY: Langhorne STATE: PA ZIP: 19047
ATTENTION: Sandy Stella PHONE:

DATA TURNAROUND INFORMATION
FAX: 3 DAYS *
HARD COPY: 14 DAYS *
EDD: DAYS *
* TO BE APPROVED BY CHEMTECH
** NORMAL TURNAROUND TIME - 14 DAYS

DATA DELIVERABLE INFORMATION
☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ NYS ASP "B"
☐ NJ REDUCED ☐ NYS ASP "A"
☐ NJ CLP ☐ EDD
☐ EDD FORMAT:

ANALYSIS: TPH, VOCs + MTBE

PRESERVATIVES: A

CHEMTECH SAMPLE ID	SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
1. 12988	16(A)EW01	H_2O		Y	2/1/00	9:00	3	X	X								
2. 89	16(A)EW02	↓		Y	↓	9:05	3	X	X								① 72-hr. Turnaround
3. 90	16(B) EW01			Y		9:15	3	X	X								
4. 91	16(B) EW02			Y		9:20	3	X	X								
5																	
6.																	
7.																	
8.																	

COMMENTS: ◄ - Specify Preservatives
A - HCl B - HNO_3
C - H_2SO_4 D - NaOH
E - ICE F - Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:
1.	2/1/00 930	1.
2.	2/1/00 1000	2.
3.	2/1/00	RECEIVED FOR LAB BY:

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non-Compliant ☐ Temp. of Cooler 4.4
Comments:

Page 1 of 1 Shipment Complete: Yes ___ No ___

Ver. 9-99 WHITE – CHEMTECH COPY FOR RETURN TO CLIENT YELLOW – CHEMTECH COPY PINK – SAMPLER COPY

32755

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
16(A)EW01

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No.: L6774NJ Site: Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12988

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00013.D

Level: (low/med) Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-71-6	Dichlorodifluoromethane	1.8	U
74-87-3	Chloromethane	1.8	U
75-01-4	Vinyl Chloride	1.3	U
74-83-9	Bromomethane	1.7	U
75-00-3	Chloroethane	2	U
107-02-8	Acrolein	5	U
75-69-4	Trichlorofluoromethane	1.3	U
75-35-4	1,1-Dichloroethene	0.6	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	0.7	U
156-60-5	trans-1,2-Dichloroethene	0.7	U
107-13-1	Acrylonitrile	5	U
75-34-3	1,1-Dichloroethane	0.4	U
594-20-7	2,2-Dichloropropane	1	U
156-59-2	cis-1,2-dichloroethene	0.8	U
74-97-5	Bromochloromethane	0.9	U
67-66-3	Chloroform	0.8	U
71-55-6	1,1,1-Trichloroethane	0.9	U
108-05-4	Vinyl Acetate	5	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1.5	U
563-58-6	1,1-Dichloropropene	0.7	U
71-43-2	Benzene	110	
107-06-2	1,2-Dichloroethane	0.9	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	0.9	U
75-27-4	Bromodichloromethane	0.6	U
110-07-3	2-Chloroethyl Vinyl Ether	5	U
10061-01-5	cis-1,3-Dichloropropene	0.1	U
108-88-3	Toluene	47	
10061-02-6	trans-1,3-Dichloropropene	0.2	U

FEB 04 '00 15:07 FR CHEMTECH-EDISON 908 225 5135 TO 12157224045 P.23/22

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
16(A)EW01

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No.: L6774NJ Site: Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12988

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00013.D

Level: (low/med) Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
79-00-5	1,1,2-Trichloroethane	0.9	U
108-10-1	4-Methyl-2-Pentanone	5	U
127-18-4	Tetrachloroethene	0.9	U
142-28-9	1,3-Dichloropropane	0.9	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1.2	U
591-78-6	2-Hexanone	5	U
108-90-7	Chlorobenzene	0.9	U
630-20-6	1,1,1,2-Tetrachloroethane	0.9	U
100-41-4	Ethylbenzene	130	
136777-61-2	m&p-xylenes	450	
95-47-6	o-xylene	190	
100-42-5	Styrene	0.5	U
75-25-2	Bromoform	0.5	U
98-82-8	isopropylbenzene	24	
108-86-1	Bromobenzene	0.7	U
79-34-5	1,1,2,2-Tetrachloroethane	1.1	U
96-18-4	1,2,3-Trichloropropane	1.1	U
103-65-1	n-Propylbenzene	41	
95-49-8	2-Chlorotoluene	1	U
106-43-4	4-Chlorotoluene	0.9	U
108-67-8	1,3,5-Trimethylbenzene	110	
98-06-6	tert-Butylbenzene	0.7	U
95-63-6	1,2,4-Trimethylbenzene	420	E
135-98-8	sec-Butylbenzene	22	
541-73-1	1,3-Dichlorobenzene	1	U
99-87-6	4-Isopropyltoluene	17	
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	0.8	U
104-51-8	n-Butylbenzene	1.2	U
96-12-8	1,2-Dibromo-3-chloropropane	1.4	U
120-82-1	1,2,4-Trichlorobenzene	0.8	U
87-68-3	Hexachlorobutadiene	1	U

PRELIMINARY RESULTS
Subject to change upon further data quality review

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
16(A)EW01

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No.: L6774NJ Site: Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12988

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00013.D

Level: (low/med) Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
91-20-3	Naphtnalene	640	E
87-61-6	1,2,3-Trichlorobenzene	0.7	U
1634-04-4	MTBE	5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
16(A)EW01

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No. L677 Site: Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12988

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00013.D

Level: (low/med) Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 10 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 108-87-2	Cyclohexane, methyl-	14.10	25	J
2. 111-65-9	Octane	16.16	23	J
3. 1678-91-7	Cyclohexane, ethyl-	18.05	20	J
4. 2213-23-2	Heptane, 2,4-dimethyl-	18.19	25	J
5. 3178-29-8	Heptane, 4-propyl-	18.46	21	J
6. 111-84-2	Nonane	19.28	58	J
7. 3769-23-1	1-Hexene, 4-methyl-	20.98	90	J
8. 5911-04-6	Nonane, 3-methyl-	21.27	21	J
9. 611-14-3	Benzene, 1-ethyl-2-methyl-	22.51	26	J
10. 112-40-3	Dodecane	26.39	34	J
11.				
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CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSIS

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 02/04/00

PROJECT # L6774NJ

SAMPLE NUMBER- 12988
DATE SAMPLED- 02/01/00
DATE RECEIVED- 02/01/00
DELIVERED BY- CHEM

SAMPLE ID- 16(A)EW01
TIME SAMPLED- 0900 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- WW

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	418.1	02/01/00		JAA	303	mg/l

LABORATORY DIRECTOR _____

110 Route 4
Englewood, New Jersey 07631
Phone: 201.567.6988 Fax: 201.567.1333

205 Campus Plaza 1
Edison, NJ 08837
Phone: 732.225.4111 Fax: 732.225.4110

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NJDEP Certification No. 02548

ANALAB-ICM Division
NYSDOH Certification No. 11376
NJDEP Certification No. 12531

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
16(A)EW02

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No.: L6774NJ Site: Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12989

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00014.D

Level: (low/med) Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-71-8	Dichlorodifluoromethane	1.8	U
74-87-3	Chloromethane	1.8	U
75-01-4	Vinyl Chloride	1.3	U
74-83-9	Bromomethane	1.7	U
75-00-3	Chloroethane	2	U
107-02-8	Acrolein	5	U
75-69-4	Trichlorofluoromethane	1.3	U
75-35-4	1,1-Dichloroethene	0.6	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	0.7	U
156-60-5	trans-1,2-Dichloroethene	0.7	U
107-13-1	Acrylonitrile	5	U
75-34-3	1,1-Dichloroethane	0.4	U
594-20-7	2,2-Dichloropropane	1	U
156-59-2	cis-1,2-dichloroethene	0.8	U
74-97-5	Bromochloromethane	0.9	U
67-66-3	Chloroform	0.8	U
71-55-6	1,1,1-Trichloroethane	0.9	U
108-05-4	Vinyl Acetate	5	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1.5	U
563-58-6	1,1-Dichloropropene	0.7	U
71-43-2	Benzene	0.9	U
107-06-2	1,2-Dichloroethane	0.9	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	0.9	U
75-27-4	Bromodichloromethane	0.6	U
110-07-3	2-Chloroethyl Vinyl Ether	5	U
10061-01-5	cis-1,3-Dichloropropene	0.1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	0.2	U

FEB 04 '00 15:08 FR CHEMTECH-EDISON 908 225 5185 TO 12157024045 P.08/22

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

16(A)EW02

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No.: L6774NJ Site: Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12989

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00014.D

Level: (low/med) Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
79-00-5	1,1,2-Trichloroethane	0.9	U
108-10-1	4-Methyl-2-Pentanone	5	U
127-18-4	Tetrachloroethene	0.9	U
142-28-9	1,3-Dichloropropane	0.9	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1.2	U
591-78-6	2-Hexanone	5	U
108-90-7	Chlorobenzene	0.9	U
630-20-6	1,1,1,2-Tetrachloroethane	0.9	U
100-41-4	Ethylbenzene	0.9	U
136777-61-2	m&p-xylenes	1.3	U
95-47-6	o-xylene	0.9	U
100-42-5	Styrene	0.5	U
75-25-2	Bromoform	0.5	U
98-82-8	isopropylbenzene	1	U
108-86-1	Bromobenzene	0.7	U
79-34-5	1,1,2,2-Tetrachloroethane	1.1	U
96-18-4	1,2,3-Trichloropropane	1.1	U
103-65-1	n-Propylbenzene	0.9	U
95-49-8	2-Chlorotoluene	1	U
106-43-4	4-Chlorotoluene	0.9	U
108-67-8	1,3,5-Trimethylbenzene	1.1	U
98-06-6	tert-Butylbenzene	0.7	U
95-63-6	1,2,4-Trimethylbenzene	1.1	U
135-98-8	sec-Butylbenzene	0.6	U
541-73-1	1,3-Dichlorobenzene	1	U
99-87-6	4-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	0.8	U
104-51-8	n-Butylbenzene	1.2	U
96-12-8	1,2-Dibromo-3-chloropropane	1.4	U
120-82-1	1,2,4-Trichlorobenzene	0.8	U
87-68-3	Hexachlorobutadiene	1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
16(A)EW02

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No.: L6774NJ Site: _____ Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12989

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00014.D

Level: (low/med) _____ Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
91-20-3	Naphthalene	96	
87-61-6	1,2,3-Trichlorobenzene	0.7	U
1634-04-4	MTBE	5	U

FEB 04 '00 15:08 FR CHEMTECH-EDISON 908 225 5185 TO 12157024045 P.10/22

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

16(A)EW02

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No. L677 Site: Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12989

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00014.D

Level: (low/med) Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units:

Number TICs found: 8 (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 629-78-7	Heptadecane	28.63	28	J
2. 589-43-5	Hexane, 2,4-dimethyl-	30.20	12	J
3. 17301-28-9	Undecane, 3,6-dimethyl-	30.53	41	J
4. 629-59-4	Tetradecane	31.34	69	J
5. 91-57-6	Naphthalene, 2-methyl-	32.59	63	J
6. 75-07-0	Acetaldehyde	33.04	8.9	J
7.	Unknown	33.20	15	J
8. 4453-90-1	1,4-Methanonaphthalene, 1,4-	33.54	14	J
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CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSIS

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 02/04/00

PROJECT # 16774NJ

SAMPLE NUMBER- 12989
DATE SAMPLED- 02/01/00
DATE RECEIVED- 02/01/00
DELIVERED BY- CHEM

SAMPLE ID- 16(A)EW02
TIME SAMPLED 0905 SAMPLER CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- WW

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	418.1	02/01/00		JAA	<0.50	mg/l

LABORATORY DIRECTOR _____

110 Route 4
Englewood, New Jersey 07631
Phone: 201.567.6868 Fax: 201.567 1333

205 Campus Plaza 1
Edison, NJ 08837
Phone: 732.225.4111 Fax: 732 225.4110

CHEMTECH
NYSDOH Certification No. 10624
NJDEP Certification No. 02548

ANALAB-ICM Division
NYSDOH Certification No. 11376
NJDEP Certification No. 12531

FEB 04 '00 15:09 FR CHEMTECH-EDISON 908 225 5135 TO 12157024045 P.12/22

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
16(B)EW01

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No.: L6774NJ Site: Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12990

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00015.D

Level: (low/med) Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-71-8	Dichlorodifluoromethane	1.8	U
74-87-3	Chloromethane	1.8	U
75-01-4	Vinyl Chloride	1.3	U
74-83-9	Bromomethane	1.7	U
75-00-3	Chloroethane	2	U
107-02-8	Acrolein	5	U
75-69-4	Trichlorofluoromethane	1.3	U
75-35-4	1,1-Dichloroethene	0.6	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	0.7	U
156-60-5	trans-1,2-Dichloroethene	0.7	U
107-13-1	Acrylonitrile	5	U
75-34-3	1,1-Dichloroethane	0.4	U
594-20-7	2,2-Dichloropropane	1	U
156-59-2	cis-1,2-dichloroethene	0.8	U
74-97-5	Bromochloromethane	0.9	U
67-66-3	Chloroform	0.8	U
71-55-6	1,1,1-Trichloroethane	0.9	U
108-05-4	Vinyl Acetate	5	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1.5	U
563-58-6	1,1-Dichloropropene	0.7	U
71-43-2	Benzene	7.5	
107-06-2	1,2-Dichloroethane	0.9	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	0.9	U
75-27-4	Bromodichloromethane	0.6	U
110-07-3	2-Chloroethyl Vinyl Ether	5	U
10061-01-5	cis-1,3-Dichloropropene	0.1	U
108-88-3	Toluene	2.4	
10061-02-6	trans-1,3-Dichloropropene	0.2	U

PRELIMINARY RESULTS
Subject to change upon further data quality review

FEB 04 '00 15:09 FR CHEMTECH-EDISON 908 225 5185 TO 12152/02404S P.15/22

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
16(B)EW01

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No.: L6774NJ Site: _____ Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12990

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00015.D

Level: (low/med) _____ Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
79-00-5	1,1,2-Trichloroethane	0.9	U
108-10-1	4-Methyl-2-Pentanone	5	U
127-18-4	Tetrachloroethene	0.9	U
142-28-9	1,3-Dichloropropane	0.9	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1.2	U
591-78-6	2-Hexanone	5	U
108-90-7	Chlorobenzene	0.9	U
630-20-6	1,1,1,2-Tetrachloroethane	0.9	U
100-41-4	Ethylbenzene	26	
136777-61-2	m&p-xylenes	62	
95-47-6	o-xylene	45	
100-42-5	Styrene	0.5	U
75-25-2	Bromoform	0.5	U
98-82-8	isopropylbenzene	1	U
108-86-1	Bromobenzene	0.7	U
79-34-5	1,1,2,2-Tetrachloroethane	1.1	U
96-18-4	1,2,3-Trichloropropane	1.1	U
103-65-1	n-Propylbenzene	3	
95-49-8	2-Chlorotoluene	1	U
106-43-4	4-Chlorotoluene	0.9	U
108-67-8	1,3,5-Trimethylbenzene	32	
98-06-6	tert-Butylbenzene	0.7	U
95-63-6	1,2,4-Trimethylbenzene	130	
135-98-8	sec-Butylbenzene	0.6	U
541-73-1	1,3-Dichlorobenzene	1	U
99-87-6	4-Isopropyltoluene	3.9	
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	0.8	U
104-51-8	n-Butylbenzene	1.2	U
96-12-8	1,2-Dibromo-3-chloropropane	1.4	U
120-82-1	1,2,4-Trichlorobenzene	0.8	U
87-68-3	Hexachlorobutadiene	1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
16(B)EW01

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No.: L6774NJ Site: Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12990

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00015.D

Level: (low/med) Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
91-20-3	Naphthalene	320	E
87-61-6	1,2,3-Trichlorobenzene	0.7	U
1634-04-4	MTBE	5	U

FORM I VOA

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
16(B)EW01

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No. L677 Site: Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12990

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00015.D

Level: (low/med) Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units:
(ug/L or ug/Kg) ug/L

Number TICs found: 10

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 611-14-3	Benzene, 1-ethyl-2-methyl-	22.51	23	J
2. 611-14-3	Benzene, 1-ethyl-2-methyl-	23.16	10	J
3. 496-11-7	Indane	24.92	13	J
4. 1758-88-9	Benzene, 2-ethyl-1,4-dimethy	26.38	14	J
5. 933-98-2	Benzene, 1-ethyl-2,3-dimethy	27.37	13	J
6. 27133-93-3	2,3-Dihydro-1-methylindene	27.61	18	J
7. 119-64-2	Naphthalene, 1,2,3,4-tetrahy	28.16	14	J
8. 91-57-6	Naphthalene, 2-methyl-	32.59	12	J
9. 264-09-5	Benzocycloheptatriene	32.61	14	J
10.	Unknown	33.57	14	J
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FEB 04 '00 15:10 FR CHEMTECH-EDISON 908 225 5185 TO 12157024045 P.16/22

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSIS

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 02/04/00

PROJECT # L6774NJ

SAMPLE NUMBER- 12590
DATE SAMPLED- 02/01/00
DATE RECEIVED- 02/01/00
DELIVERED BY- CHEM

SAMPLE ID- 16(B)EW01
TIME SAMPLED- 0915 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- WW

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	418.1	02/01/00		JAA	0.774	mg/l

LABORATORY DIRECTOR _____

110 Route 4
Englewood, New Jersey 07631
Phone: 201.567.6868 Fax: 201.567.1333

205 Campus Plaza 1
Edison, NJ 08837
Phone: 732.225.4111 Fax 732 225.4110

CHEMTECH
NYSDOH Certification No. 10624
NJDEP Certification No. 02548

ANALAB-ICM Division
NYSDOH Certification No 11376
NJDEP Certification No. 12531

FEB 04 '00 15:10 FR CHEMTECH-EDISON 908 225 5185 TO 12152024045 P.11/22

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
16(B)EW02

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No.: L6774NJ Site: Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12991

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00016.D

Level: (low/med) Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-71-8	Dichlorodifluoromethane	1.8	U
74-87-3	Chloromethane	1.8	U
75-01-4	Vinyl Chloride	1.3	U
74-83-9	Bromomethane	1.7	U
75-00-3	Chloroethane	2	U
107-02-8	Acrolein	5	U
75-69-4	Trichlorofluoromethane	1.3	U
75-35-4	1,1-Dichloroethene	0.6	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	0.7	U
156-60-5	trans-1,2-Dichloroethene	0.7	U
107-13-1	Acrylonitrile	5	U
75-34-3	1,1-Dichloroethane	0.4	U
594-20-7	2,2-Dichloropropane	1	U
156-59-2	cis-1,2-dichloroethene	0.8	U
74-97-5	Bromochloromethane	0.9	U
67-66-3	Chloroform	0.8	U
71-55-6	1,1,1-Trichloroethane	0.9	U
108-05-4	Vinyl Acetate	5	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1.5	U
563-58-6	1,1-Dichloropropene	0.7	U
71-43-2	Benzene	0.9	U
107-06-2	1,2-Dichloroethane	0.9	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	0.9	U
75-27-4	Bromodichloromethane	0.6	U
110-07-3	2-Chloroethyl Vinyl Ether	5	U
10061-01-5	cis-1,3-Dichloropropene	0.1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	0.2	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
16(B)EW02

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No.: L6774NJ Site: Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12991

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00016.D

Level: (low/med) Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
79-00-5	1,1,2-Trichloroethane	0.9	U
108-10-1	4-Methyl-2-Pentanone	5	U
127-18-4	Tetrachloroethene	0.9	U
142-28-9	1,3-Dichloropropane	0.9	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1.2	U
591-78-6	2-Hexanone	5	U
108-90-7	Chlorobenzene	0.9	U
630-20-6	1,1,1,2-Tetrachloroethane	0.9	U
100-41-4	Ethylbenzene	0.9	U
136777-61-2	m&p-xylenes	1.3	U
95-47-6	o-xylene	0.9	U
100-42-5	Styrene	0.5	U
75-25-2	Bromoform	0.5	U
98-82-8	isopropylbenzene	1	U
108-86-1	Bromobenzene	0.7	U
79-34-5	1,1,2,2-Tetrachloroethane	1.1	U
96-18-4	1,2,3-Trichloropropane	1.1	U
103-65-1	n-Propylbenzene	0.9	U
95-49-8	2-Chlorotoluene	1	U
106-43-4	4-Chlorotoluene	0.9	U
108-67-8	1,3,5-Trimethylbenzene	1.1	U
98-06-6	tert-Butylbenzene	0.7	U
95-63-6	1,2,4-Trimethylbenzene	1.1	U
135-98-8	sec-Butylbenzene	0.6	U
541-73-1	1,3-Dichlorobenzene	1	U
99-87-6	4-Isopropyltoluene	0.5	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	0.8	U
104-51-8	n-Butylbenzene	1.2	U
96-12-8	1,2-Dibromo-3-chloropropane	1.4	U
120-82-1	1,2,4-Trichlorobenzene	0.8	U
87-68-3	Hexachlorobutadiene	1	U

FEB 04 '00 15:10 FR CHEMTECH-EDISON 908 225 5185 TO 12157024045 P.19/22

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
16(B)EW02

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No.: L6774NJ Site: _____ Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12991

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00016.D

Level: (low/med) _____ Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
91-20-3	Naphthalene	54	
87-61-6	1,2,3-Trichlorobenzene	0.7	U

FEB 04 '00 15:10 FR CHEMTECH-EDISON 908 225 5185 TO 12157024045 P.20/22

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

16(B)EW02

Lab Name: CHEMTECH

Contract: FOSTER WHEELER

Project No.: L6774NJ

Site:

Location: NW-EARLE

Group: 16 (A) EW

Matrix: (soil/water) WATER

Lab Sample ID: O12991

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

Lab File ID: M00016.D

Level: (low/med)

Date Received: 2/1/00

% Moisture: not dec. 100

Date Analyzed: 2/3/00

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
91-20-3	Naphthalene	54	
87-61-6	1,2,3-Trichlorobenzene	0.7	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

16(B)EW02

Lab Name: CHEMTECH Contract: FOSTER WHEELER

Project No. L677 Site: _____ Location: NW-EARLE Group: 16 (A) EW

Matrix: (soil/water) WATER Lab Sample ID: O12991

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M00016.D

Level: (low/med) _____ Date Received: 2/1/00

% Moisture: not dec. 100 Date Analyzed: 2/3/00

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units:

Number TICs found: 4 (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 108-08-7	Pentane, 2,4-dimethyl-	31.36	6.5	J
2. 91-57-6	Naphthalene, 2-methyl-	32.60	32	J
3.	Unknown	33.55	7.4	J
4.	Unknown	33.59	9.1	J
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CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSIS

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 02/04/00

PROJECT # 16774NJ

SAMPLE NUMBER- 12991
DATE SAMPLED- 02/01/00
DATE RECEIVED- 02/01/00
DELIVERED BY- CHEM

SAMPLE ID- 16(B)EW02
TIME SAMPLED- 0920 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY AD SAMPLE MATRIX- WW

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	418.1	02/01/00		JAA	<0.50	mg/l

LABORATORY DIRECTOR _____

110 Route 4
Englewood, New Jersey 07631
Phone: 201.567.6868 Fax: 201.567.1333

205 Campus Plaza 1
Edison, NJ 08837
Phone: 732.225.4111 Fax: 732.225.4110

CHEMTECH
NYSDOH Certification No. 10624
NJDEP Certification No. 02548

ANALAB-ICM Division
NYSDOH Certification No. 11376
NJDEP Certification No. 12531

CHEMTECH

facsimile transmittal

DATE 3/7/00

NAME: Mike Heffner

COMPANY: F.W.

NUMBER OF PAGES 5

FAX# 215-702-4446

RE :

SENT BY :

- Lalit

COMMENT: Analytical Data

PROJECT # L7175N5

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US AT (732) 225-4111 AS SOON AS POSSIBLE.
205 CAMPUS PLAZA 1, RARITAN CENTER, EDISON, NJ. 08837

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CHEMTECH

CHAIN OF CUSTODY RECORD

☐ 110 Route 4, Englewood, NJ 07631, (201) 567-6868, Fax (201) 567-1333

☒ 205 Campus Plaza 1, Edison, NJ 08837, (732) 225-4111, Fax (732) 225-4110

☐ 515 Route 9 South, Barnegat, NJ 08005, (609) 698-0199, Fax (609) 698-0910

CHEMTECH JOB NO: L-7175 NJ

CHEMTECH QUOTE NO:

CLIENT INFORMATION (REPORT TO BE SENT TO:)

COMPANY: FOSTER WHEELER ENVIR.

ADDRESS: ONE OXFORD VALLEY SUITE 202

CITY: LANGHORNE STATE: PA ZIP: 19047

ATTENTION: MIKE HEFFRON

PHONE: 215-702-4015 FAX: -4045

PROJECT INFORMATION

PROJECT NAME: NUS - EARLE

PROJECT NO.:

PROJECT MANAGER: MIKE HEFFRON

LOCATION: COLTS NECK NJ

PHONE: — FAX: —

BILLING INFORMATION

BILL TO: FOSTER WHEELER PO #: 023214

ADDRESS:

CITY: STATE: ZIP:

ATTENTION: Sonya PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *

HARD COPY: _____ DAYS *

EDD: 72 hr DAYS *

* TO BE APPROVED BY CHEMTECH

** NORMAL TURNAROUND TIME - 14 DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP

☐ RESULTS + QC ☐ NYS ASP "B"

☒ NJ REDUCED ☐ NYS ASP "A"

☐ NJ CLP ☐ EDD

☐ EDD FORMAT: _____

ANALYSIS

1 TPHC 2 TCLP Lead 3 4 5 6 7 8 9

CHEMTECH SAMPLE ID	SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1. 14907	16(A) EW00003	AQ		X	2-24-00	800	1	X									
2. 108	16(A) EW00004	AQ		X	2-24-00	805	1	X									
3. 109	PSRM01	SOL		X	2-25-00	9:20	1			X							
4																	
5																	
6.																	
7.																	
8.																	

A – Specify Preservatives: A – HCl, B – HNO_3, C – H_2SO_4, D – NaOH, E – ICE, F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. C Dolan	2-24-00 1300	1. DHL
RELINQUISHED BY: 2. DHL	DATE/TIME: 2/01/00 12:15	RECEIVED BY: 2. Sunny Reilly
RELINQUISHED BY: 3.	DATE/TIME: 03/01/00 12	RECEIVED FOR LAB BY: 3. [illegible]

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non-Compliant ☐ Temp. of Cooler 5.0

Comments: COC # 112431

Page 1 of 1

Shipment Complete: Yes _____ No _____

Ver. 9 99 WHITE – CHEMTECH COPY FOR RETURN TO CLIENT YELLOW – CHEMTECH COPY PINK – SAMPLER COPY

32033

MAR 07 2000 15:35 PAGE.02 7322254110 CHEMTECH Fax:7322254110 Mar 7 2000 15:41 P.02

ANALYSIS REPORT
1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE #

PSRM01

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: L7175T

Matrix (soil/water): SOIL Lab Sample ID: 14909TS

Level (low/med): LOW Date Received: 03/01/00

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	30.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TCLP EXTRACT

FORM I - IN ILM03.0

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-

DATE: 03/03/00

PROJECT # L7175 NJ

SAMPLE NUMBER- 14907
DATE SAMPLED- 02/29/00
DATE RECEIVED- 03/01/00
DELIVERED BY- DHL

SAMPLE ID- 16(A)EW00W3
TIME SAMPLED- 0800 SAMPLER- CLIENT
TIME RECEIVED- 1215
RECEIVED BY- AD SAMPLE MATRIX- WW

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	418.1	03/03/00		JAA	<0.5	mg/l

LABORATORY DIRECTOR _____

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Englewood, New Jersey 07631
Phone: 201.567.6868 Fax: 201.567.1333

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Edison, NJ 08837
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CHEMTECH
NYSDOH Certification No. 10624
NJDEP Certification No. 02548

ANALAB-ICM Division
NYSDOH Certification No. 11376
NJDEP Certification No. 12531

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-

DATE: 03/03/00

PROJECT # L7175 NJ

SAMPLE NUMBER- 14908
DATE SAMPLED- 02/29/00
DATE RECEIVED- 03/01/00
DELIVERED BY- DHL

SAMPLE ID- 16(A)EW00W4
TIME SAMPLED- 0805 SAMPLER- CLIENT
TIME RECEIVED- 1215
RECEIVED BY- AD SAMPLE MATRIX- WW

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	418.1	03/03/00		JAA	<0.5	mg/l

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