GW - 55

MONITORING REPORTS

DATE: 2003

THRIFTWAY REFINERY
626 Road 5500
Bloomfield, New Mexico

March 2004

Prepared by
BILLINGS & ASSOCIATES, INC

2003 ANNUAL GROUNDWATER MONITOR REPORT

Prepared for
NEW MEXICO OIL CONSERVATION DIVISION
Mr. Wayne Price, Project Manager, Santa Fe Office
&
Mr. Denny Foust, Aztec, Office

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1.0 INTRODUCTION

Pursuant to and in compliance with the requirements of the New Mexico Oil Conservation Division (NMOCD), Billings & Associates, Inc. (BAI) is pleased to submit the following 2003 Annual Monitoring and Sampling Report for the Thriftway Bloomfield Refinery, located in Bloomfield, N.M. Site is located at 626 County Road 5500. Operated under Discharge Plan GW-055

Submitted report details the monitoring and sampling data activities on refinery property. Water table elevations in monitor wells were collected on select wells in June 2003, November 2003 and January 2004. All wells that could be found and which contained sufficient ground water for measurement were assessed for depth to water. New influent and effluent water samples from the on site air stripper were collected generally monthly throughout 2003.

2.0 MONITORING/SAMPLING ACTIVITIES

BioTech personnel engaged in monitoring and sampling requirements for the Thriftway Bloomfield Refinery located in Bloomfield, New Mexico. Ground water gauging events detailed in this report occurred during June 2003, November 2003 and January 2004.

Air stripper influent and effluent samples from operating tower were collected for later laboratory analysis by EPA Method SW 8021B on a nominally monthly basis in 2003. Influent and effluent samples collected in January 2004 were analyzed for the full suite of Methodologies as outlined below in section 2.2(2.2A). Hard copy of all laboratory data sheets, attendant chain of custody information and Quality Control Data are found in **Appendix A.**

Appendix A contains this same grouping of information on the monitor wells sampled for laboratory analyses in January 2004.

2.1 Ground Water Measurement

At each gauging event, depth to ground water measurements were made and recorded for available monitor wells. A Solonist Probe was used to measure from the survey point at top of casing to identified ground water level. Data was generated to the nearest 100th of a foot. **Table 1A** displays most recent groundwater table information. Historic ground water elevation data has been supplied in previous reports. Ground water measurements were attempted in twenty-nine (29) monitor wells for June 2003 and January 2004 sampling event.

Field data have been corrected to measured elevations, where available, and were used to generate a potentiometric surface (as of the January 2004 sample date). This information is found on **Figure 1**.

2.2 Water Sample Collection

During transfer of water (influent and effluent) to sample container, care is taken to ensure that no head space or air bubbles remain in sample container and that a meniscus is created at top of sample container. Following closure of sample container, the sample was rotated and agitated, further ensuring that the sample container was void of free air.

During the January 2004 ground water sampling event, fifteen (15) monitor well locations were sampled for later laboratory analysis following appropriate purge of bore volumes and rebound time allotment. Samples were analyzed for and by the following methods: Alkalinity, Total (method M2320B), Anions by Ion Chromatography (method E300), Aromatic Volatiles by GC/PID (method SW8021B), Conductivity @ 25C (method E120.1), Hardness, Total (method M2340B), ICP Metals, Dissolved (method SW6010B), ICP Metals, Total (method SW6010B), Mercury, total (method SW7470), pH (method E150.1), Polynuclear Aromatic Hydrocarbons (method SW8270C), Total Dissolved Solids (method CALC) and Total Dissolved Solids (method E160.1). All samples were collected as per accepted New Mexico protocol/regulation.

During January 2004 sampling events, influent and effluent samples were analyzed via the above methods.

Monthly samples collected at influent and effluent ports at the air stripper were assessed by methods 8021B.

2.3 Sample Preservation/Handling

All sample containers were appropriate for required testing and preserved as necessary for the requested analyses. All samples were handled/delivered as per accepted protocols.

2.4 Sample Transport

Following sample collection, each sample container was labeled for origin, time/date of collection, sample type, identification of sampler, preservative used and the requested laboratory analysis. Each sample was then logged for Chain of Custody data sheets. Samples requiring temperature reduction for shipping/transport were then placed in iced cooler.

2.5 Data Base

Historic laboratory data have been presented in previous reports. **Table 2A** details data collected concerning the reporting dates covered in this report. Laboratory data from influent and effluent samples of ICP metals total, mercury, anions, ICP metals dissolved, alkalinity, conductivity, hardness, pH, total dissolved solids (both calculated and in residue) PAH's and volatile organic compounds are found in **Appendix A.** This appendix also contains copies of QA/QC statements and chain of custody information. **Appendix A also** contains laboratory results, QA/QC and chain of custody (COC) information on monitor wells/ground water samples.

3.0 EQUIPMENT DECONTAMINATION

To prevent cross-contamination and ensure valid data, BioTech personnel used strict decontamination protocol. For all monitor well measurement and sample collection, the following method for decontaminating equipment was employed:

- Wash with Alconox and distilled water
- Rinse with distilled water
- Wash with Alconox and distilled water
- Double rinse with distilled water

4.0 DISCUSSION AND RECOMMENDATIONS

Developed ground water flow direction indicates sufficient capture of the ground water contamination is being maintained by the currently operating ground water treatment system. This is in general agreement with historical data.

Figure 2 represents a ground water contour of dissolved benzene as of the January 2004 sampling event. **Figure** 3 displays the MTBE ground water contour for the same sampling event. **Figures 4, 4A, 4B,** in mapped format, indicate the values for conductivity, chlorides and TDS as of the January 2004 sampling event.

Ground water flow is nominally to the west/northwest at an approximate gradient of 0.01ft/ft.

Of the monitor wells sampled, the highest benzene value found was at MW-12 at 17 parts per billion (ppb). Current value is quite close to the previous year. The highest MTBE value assessed during the same monitoring event was found at well MW-20 at 680 ppb. Slightly higher than last year but within range of expectation as well displays a cyclic behavior.

Most recent influent and effluent water samples revealed the following: Influent ranged from 40 ppb to a high of 610 ppb. Effluent was assessed from <0.5 ppb benzene to a maximum of 0.9 ppb.

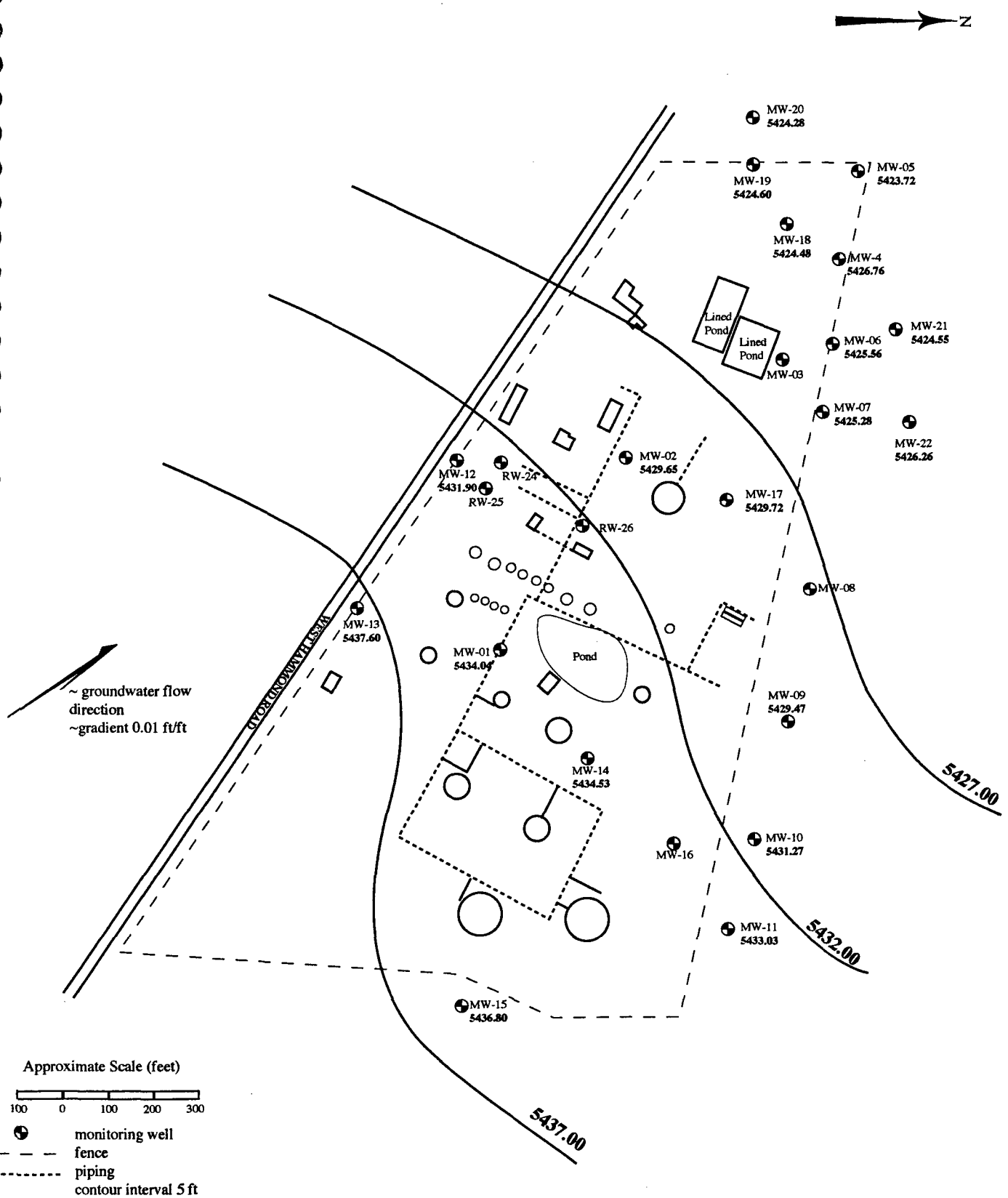
These data indicate an adequately functional stripper system.

BAI believes the currently operating ground water recovery system is maintaining adequate hydraulic capture.

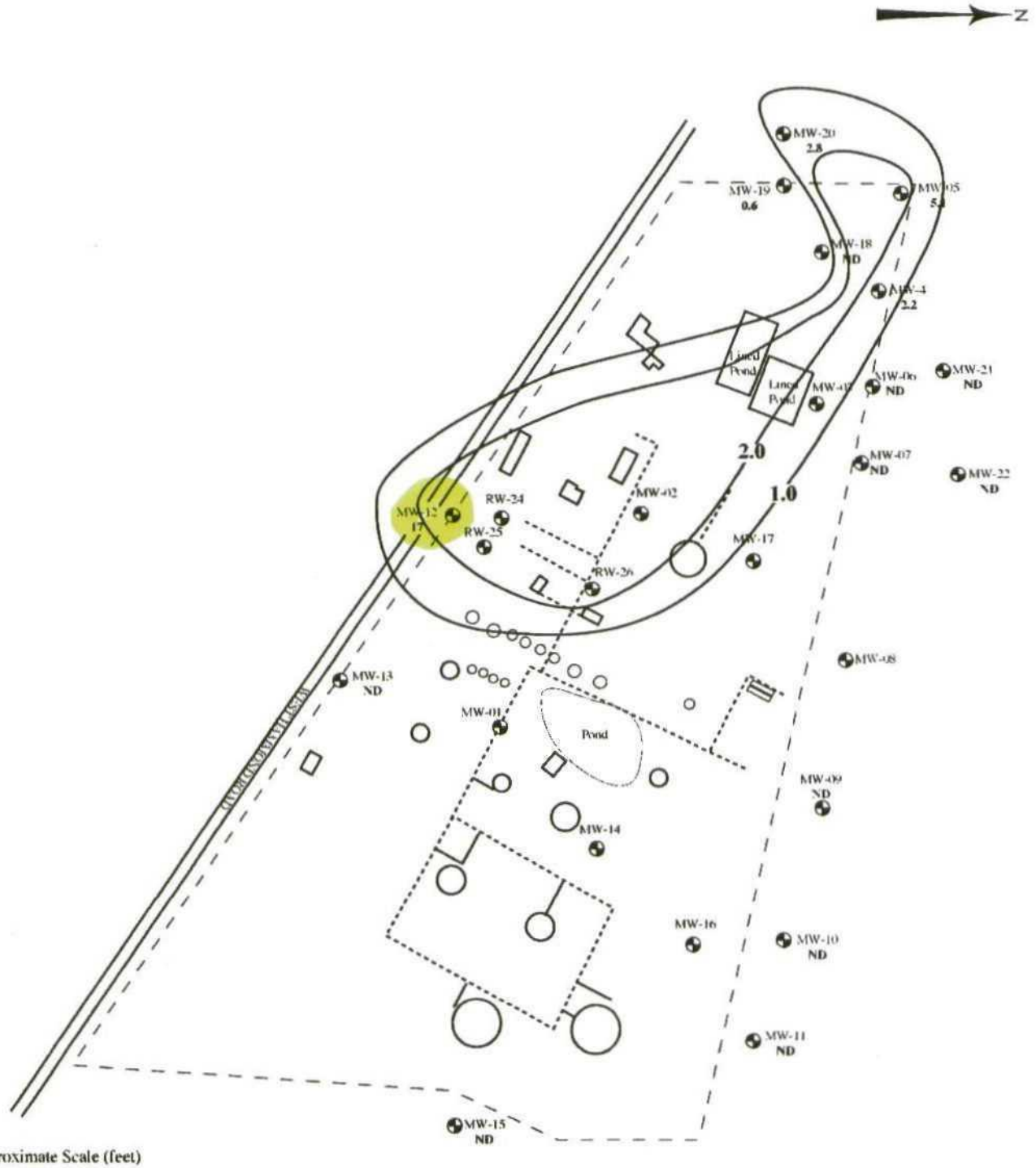
Overall dissolved ground water contamination data indicates site is, at minimum, in stable configuration. Product levels should be watched for trend analysis.

It is BAI's recommendation, based on current and historical data review, no additional work effort is needed beyond continued sampling by BioTech based on approved schedules.

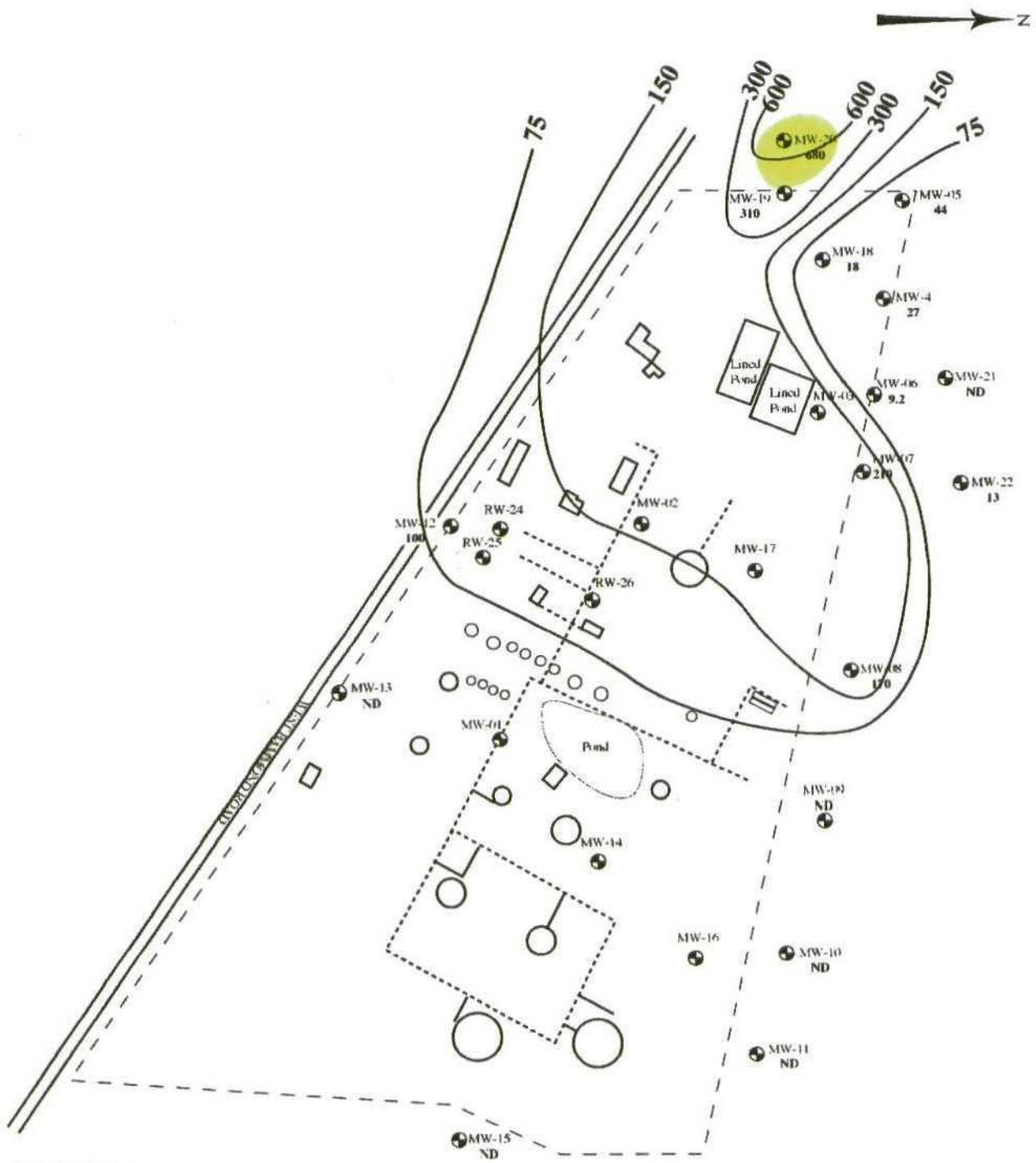
Brad Billings
President
Billings & Associates, Inc.



DRAWN BY: G. Billings	Figure 1	BILLINGS & ASSOCIATES, INC.
DATE: 3/22/2004	Potentiometric Surface (1/19/2004)	
/CASE NO:	Site Name: Thriftway Refinery	
UST FACILITY NO:	Site Location: 626 RD 5500	
	Bloomfield, NM	



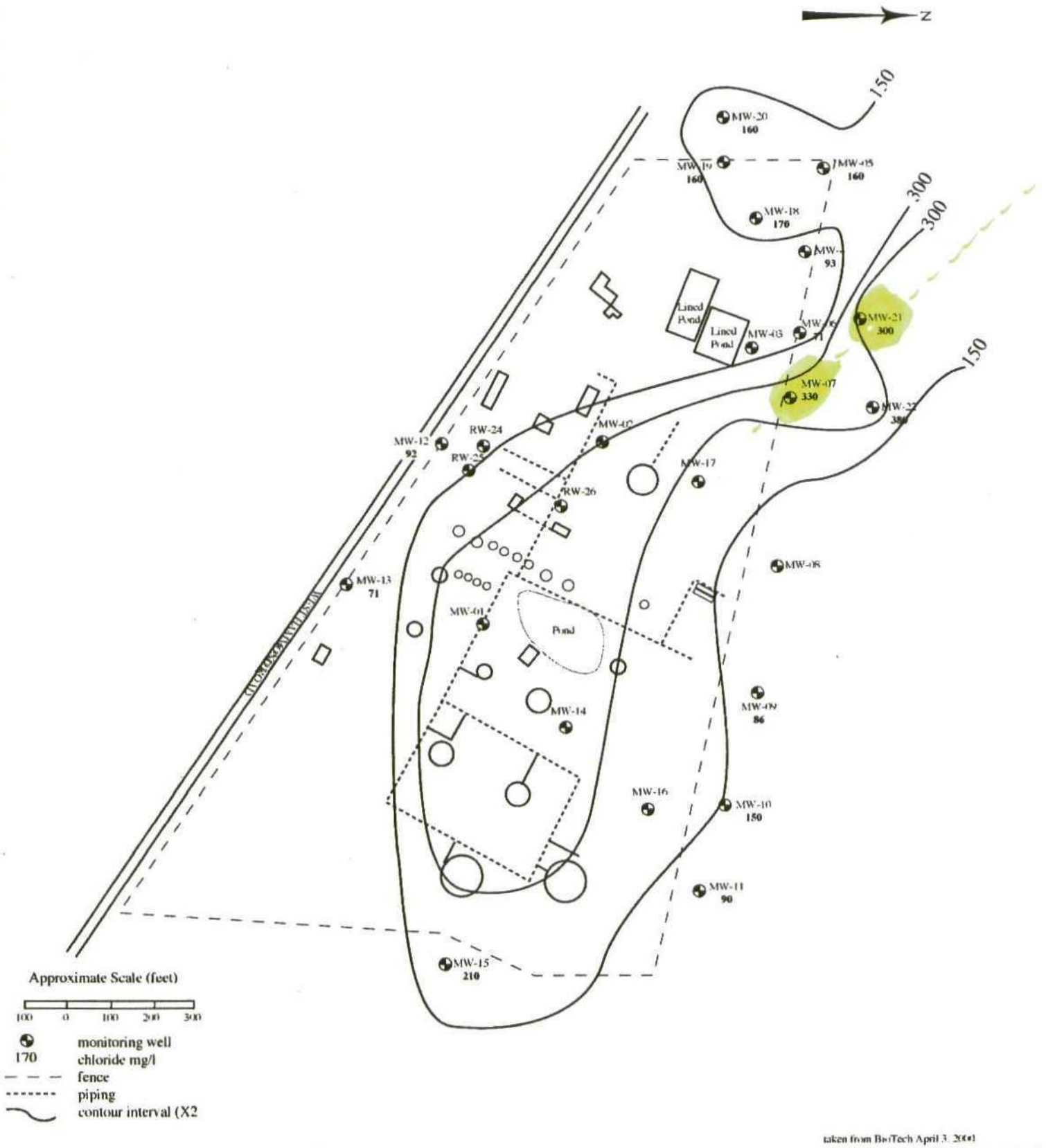
DRAWN BY: G. Billings	Figure 2	
DATE: 3/22/04:	Benzene Contour (1/20/04)	BILLINGS & ASSOCIATES, INC.
UST FACILITY NO:	Site Name: Thriftway Refinery	
	Site Location: 626 RD 5500	
	Bloomfield, NM	



taken from BioTech April 3, 2004

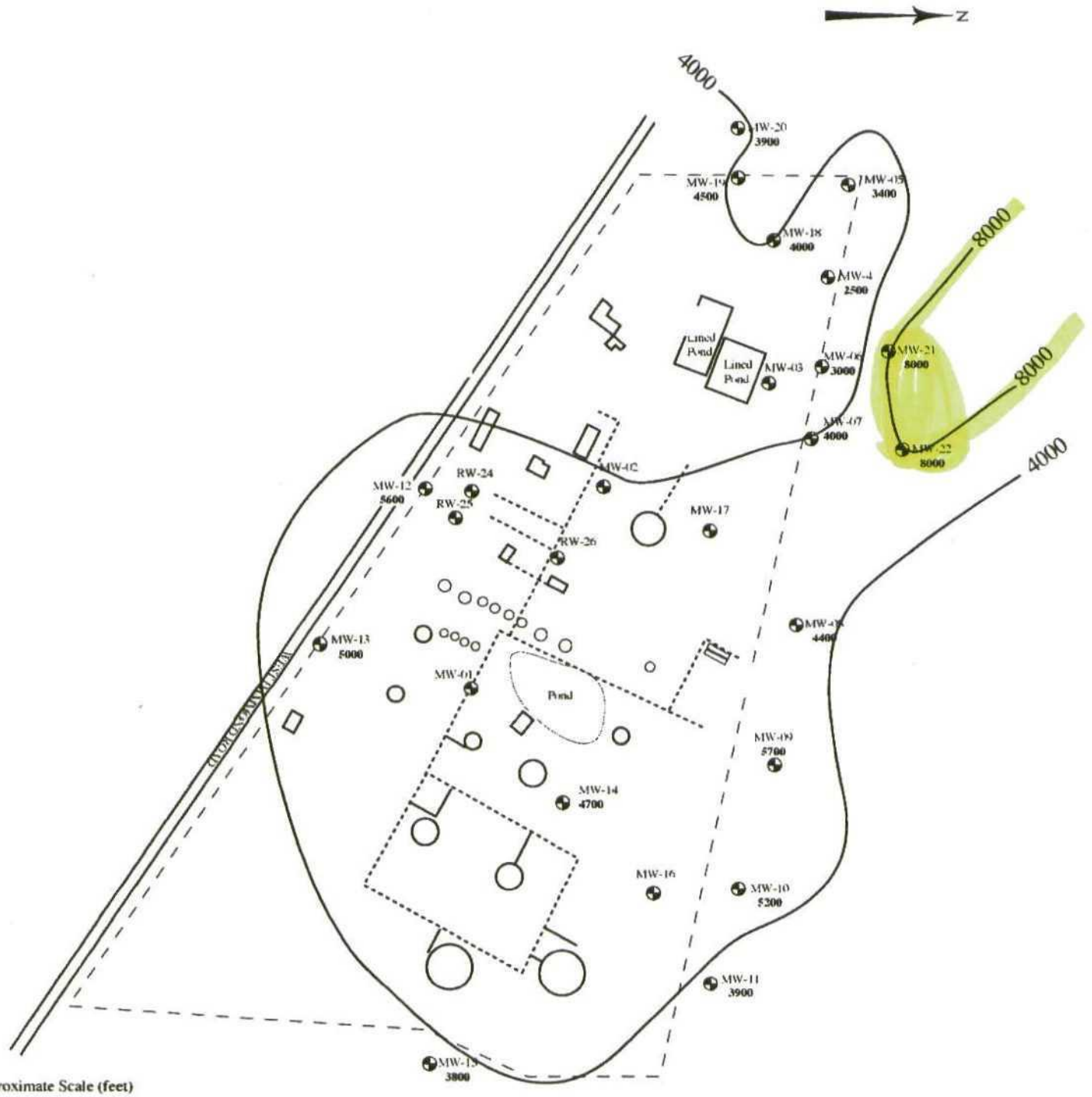
DRAWN BY: G. Billings	Figure 3	BILLINGS & ASSOCIATES, INC.
DATE:3/22/3004	MTBE Contour (1/04)	
CASE NO:	Site Name: Thriftway Refinery	
UST FACILITY NO:	Site Location: 626 RD 5500	
	Bloomfield, NM	

DRAWN BY: G. Billings	Figure 4	
DATE: 3/22/2004	Conductivity Contour (1/04))	BILLINGS & ASSOCIATES, INC.
CASE NO:	Site Name: Thriftway Refinery	
UST FACILITY NO:	Site Location: 626 RD 5500	
	Bloomfield, NM	



taken from BioTech April 3, 2001

DRAWN BY: G. Billings	Figure 4 A	BILLINGS & ASSOCIATES, INC.
DATE:3/22/2004	Chloride Contour (1/04)	
CASE NO:	Site Name: Thriftway Refinery	
UST FACILITY NO:	Site Location: 626 RD 5500	
	Bloomfield, NM	



Approximate Scale (feet)

100 0 100 200 300

monitoring well

fence

piping

1100 TDS mg/l

contour interval X 2

DRAWN BY: G. Billings	Figure 4 B	BILLINGS & ASSOCIATES, INC.
DATE:3/22/2004	TDS Contour (1/04)	
CASE NO:	Site Name: Thriftway Refinery	
UST FACILITY NO:	Site Location: 626 RD 5500	
	Bloomfield, NM	

TABLE 1-A
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA (MOST RECENT)

Well	Date	Time	A/O	O/W	Product Thick	pH	umhos/cm	NTU	DO mg/l	Deg F.	Salinity %	TDs g/L	ORP mv	Purged
MW-01	2.01.02	1244	14.78	14.78										
	2.04.02	1218	9.17	9.18	0.01									
	7.29.02	1629	14.99	14.99										monitor only
	6.06.03	1629	14.31	14.31										monitor only
	01.21.04	1333	15.04	15.04										no sample
MW-02	2.01.02	1133	11.91	11.91										monitor only
	7.29.02	1531	11.97	11.97										monitor only
	6.06.03	1424	12.57	12.57										monitor only
	01.21.04	1211	11.94	13	1.06									no sample
MW-03	2.01.02	1105	6.03	6.03										monitor only
	7.29.02	1510	5.3	6.73	1.43									monitor only
	6.06.03	1217	5	6.1										monitor only
MW-04	5.02.01	1355	4.96	4.96		6.9	1.41	211	2.15	18	0.8	9	-62	5
	7.30.01	1550	5.72	5.72		7	1.56	OR	11.54	25	0.9	10	-9	6
	1.30.02	1501	5.37	5.37										P
	7.25.02	1452	5.7	5.7		7.3	2.54		1.34	84			6.5	P
	11.21.02	1057	5.17	5.17		7.5	1.41		1.8	53.4				P
	06.05.03	1017	4.97	4.97		7.3	2.72		1.09	62				
	01.19.04	1840	5.35	5.35		7	1.119		1.86	48.7				P
MW-05	1.30.02	1523	5.33	5.33										P
	7.25.02	1437	5.73	5.73		7.81	4.78		1.18	69			-30.1	P
	11.21.02	939	5.43	5.43										
	06.05.03	959	5.02	5.02		8	3.07		1.44	59.4				B
	01.19.04	1109	5.25	5.25		7.7	114		2.61	47.6				P
MW-06	5.03.01	1026	5.15	5.15		7.3	1.35	87	5.33	12.7	0.8	9	148	5
	7.30.01	1537	5.86	5.86		7.1	1.57	14	14.21	20.5	0.9	10	-20	6
	1.30.02	1547	5.22	5.22										P
	7.25.02	1010	5.39	5.39		7.2	3.26							
	11.21.02	1317	4.86	4.86		7.5	3.24		0.86	60.8				P
	06.05.03	1027	4.9	4.9		7.5	2.64		1.02	62.6				
	01.19.04	1405	5.14	5.14		7.6	2.235		1.64	52.2				P
MW-07	2.01.02	1042	5.32	5.32										monitor only
	7.29.02	1505	6.11	6.11										monitor only
	06.06.03	1230	9.06	9.06										monitor only
	01.19.04	14.39	9.06	9.06		7	2.827		0.93	49.7				P

TABLE 1-A
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA (MOST RECENT)

Well	Date	Time	A/O	O/W	Product Thick	pH	umhos/cm	NTU	DO mg/l	Deg C.	Salinity %	TDs g/L	ORP mv	Purged
MW-08	5.30.01	954	4.05	4.05		7.1	1.79	219	4.57	11.9	1	11	49	5.2
	7.30.01	1515	5.86	5.86		7	2.61	131	13.34	23.9	1.6	16	171	6
	1.31.02	1042	5.32	5.32					0.36	73.3				P
	7.26.02	1246	5.84	5.84		7.3	6.49		1.24	74.2				P
	11.22.02	935	3.9	3.9		6.8	3.97		0.47	55.6				P
	06.05.03	1358	4.3	4.3		7	3.38		0.75	60.3				B
MW-09	1.30.02													well not found
	7.26.02													well not found
	11.21.02	1601	5.37	5.37		7.5	5.8		0.91	58.3				P
	06.05.03	1322	5.61	5.61		7.5	4.95		0.85	63.8				P
	01.19.04	1505	5.72	5.72		7.3	3.23		1.71	1.71				P
MW-10	1.31.02	1102	5.21	5.21										P
	7.26.02	1259	5.62	5.62		7.4	5.51		1.37	74.4				P
	11.21.02	1424	5.32	5.32		7.3	4.63		0.97	59.1				P
	06.05.03	1336	5.35	5.35		7.6	4.62		0.98	63.3				B
	01.19.04	1528	5.29	5.29		7.3	2.96		1.38	45.8				P
MW-11	1.31.02	1121	5.71	5.71										P
	7.26.02	1310	6.29	6.29		7.4	5.06		1.58	69.8				P
	11.21.02	1440	6.01	6.01		7.39	4.48		0.85	60.3				P
	06.05.03	1315	5.94	5.94		7.8	3.7		1.16	60.7				B
	01.20.04	1136	5.62	5.62		7.3	0.45		3.62	44.5				P
MW-12	1.31.02	1452	14.09	14.09										P
	7.26.02	1121	14.35	14.35		7	3.08		2.74	75.3				P
	12.03.02	1241	14.34	14.34		6.93	4.01		1.21	54.4				P
	06.05.03	1450	13.7	13.72		7.1	5.2		0.98	64.6				P
	01.20.04	1411	14.06	14.19	0.13									no sample
MW-13	5.03.01	1055	16.59	16.59		7	2.33	85	1.83	14.3	1.4	14	164	5
	7.31.01	925	17.19	17.19		7.8	2.4	30	16.07	16.4	1.5	15	190	17.5
	1.31.02	1430	17.25	17.25										P
MW-13	7.26.02	1106	17.54	17.54		7.2	5.51		0.47	66				P
	12.3.02	1155	17.51	17.51		7.3	3.09		0.98	51.6				P
	06.05.03	1436	17.06	17.06		7.3	4.11		0.91	62.4				P
	01.20.04	1244	14.52	14.52		7.3	2.39		1.48	48.5				P
MW-14	2.01.02	1239	12.22	12.22										monitor only
	7.29.02	1636	12.39	13.29										monitor only

TABLE 1-A
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA (MOST RECENT)

Well	Date	Time	A/O	O/W	Product Thick	pH	umhos/cm	NTU	DO mg/l	Deg C.	Salinity %	TDs g/L	ORP mv	Purged
MW-14	06.06.03	1405	11.95	11.95										monitor only
	01.21.04	1325	12.4	12.4										no sample
MW-15	5.03.01	1135	11.89	11.89		7.3	2.21	145	4.2	12.1	1	10	50	1.4
	01.31.02	1142	12.49	12.49										P
	7.26.02	1328	12.69	12.69		7.7	2.69		1.04	78.4				P
	12.03.02	1335	12.69	12.69		7.55	3.55		1.5	53.9				P
	06.05.03	1420	12.26	12.26		7.7	4.3		1.6	61.5				P
	01.20.04	1156	12.71	12.71		7.3	2.17		1.91	48.2				P
MW-16	2.01.02	1300	5.78	5.78										well not found
	7.26.02													well not found
MW-17	2.01.02	1118	5.78	5.78										monitor only
	7.29.02	1520	5.96	5.96										monitor only
	06.06.03	1240	5.62	5.62										monitor only
	01.21.04	1158	5.85	5.85										no sample
MW-18	5.02.01	1337	4.32	4.32		7.1	1.46	OR	4.26	17.9	0.8	9	-84	5.2
	7.31.01	857	4.84	4.84		7.9	1.44	OR	12.55	19.7	0.09	9	-104	5
	1.30.02	1418	4.61	4.61										P
	7.25.02	1354	4.79	4.79		3.91	3.91		0.33	72.02			-35.6	P
	11.20.02	1419	4.27	4.27		2.97	1.17			58.5				P
	06.05.03	935	4.24	4.24		7.8	3.28		0.86	62				B
	01.19.04	1025	4.62	4.62		7.7	2.58		0.56	51.1				P
MW-19	1.31.02	925	5.87	5.87										
	7.25.02	1416	4.35	4.35		7.05	5.74		1.01	74.92				P
	11.20.02	1547	3.75	3.75		7.2	1.41		1.22	56.9				P
	06.05.03	947	3.9	3.9		7.3	3.51		1.34	61				B
	01.19.04	1138	4.09	4.09		7.4	0.29		2.89	46.6				P
MW-20	1.31.02	947	6.04	6.04										P
	7.26.02	1158	6.31	6.31		7.2	2.95		1.22	79.6				P
	11.20.02	1136	5.85	5.85		7.1	1.9		0.3	55				P
	06.05.03	1045	5.89	5.89		7.1	3.43		1.58	58.1				
	01.20.04	935	6.08	6.08		7.5	0.35		3.23	51.8				P
MW-21	1.30.02	1007	3.41	3.41										P
	7.26.02	1220	4.15	4.15										
	11.22.02	1120	3.51	3.51		7.1	7.58?		0.55	55				P

TABLE 1-A
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA (MOST RECENT)

Well	Date	Time	A/O	O/W	Product Thick	pH	umhos/cm	NTU	DO mg/l	Deg C.	Salinity %	TDs g/L	ORP mv	Purged
MW-21	06.05.03	1100	3.21	3.21		7.2	7.79		0.95	65.4				
	01.20.04	1010	3.57	3.57		7.4	0.31		3.4	46.7				P
MW-22	5.02.01	1438	4.01	4.01		6.9	2	268	3.57	18.4	1.2	12	-24	5.2
	7.31.01	1454	5.25	5.25		6.1	2.8	343	16.1	23.4	1.7	18	-20	5
	1.31.02	1026	4.55	4.55										P
	7.26.02	1231	4.93	4.93		7.3	7.9		1.24	73.01				P
	11.22.02	1029	4.21	4.21		7.5	6.51		0.8	54.62				P
	06.05.03	1118	4.15	4.15		7.3	4.75		0.6	61.5				B
	01.20.04	1050	4.49	4.49		7.1	4.19		0.43	46.4				P
MW-23	2.01.02	1211	DRY	DRY										
	7.29.02	1551	DRY	DRY								moni		
	06.06.03	1332	DRY	DRY										monitor only
	01.210.4	1255	DRY	DRY										no sample
MW-24	2.01.02	1201	16.05	16.05										monitor only
	7.29.02	1544	15.37	15.37										monitor only
	01.210.4	1252	16.22	16.22										no sample
MW-25	2.01.02	1158	15.33	15.33										monitor only
	7.29.02	1549	16.15	16.15										monitor only
	06.06.03	1249	15.5	15.5										monitor only
	01.21.04	1249	15.7	15.7										no sample
MW-27	2.01.02	1214	DRY	DRY										
	7.29.02	1553	DRY	DRY										
	06.06.03	1337	15.4	15.93										monitor only
	01.21.04	12.59	DRY	DRY										no sample
MW-28	2.01.02	1227	15.95	15.95										monitor only
	7.29.02	1556	15.97	15.97										monitor only
	06.06.03	1350	15.77	15.8										monitor only
	01.21.04	1304	16.94	16.96	0.02									no sample
MW-29	2.02.02	1216	15.19	15.19										monitor only
	7.29.02	1605	15.3	15.3										monitor only
	06.06.03	1350	15.77	15.8										monitor only
	01.21.04	1312	15.28	16.05	0.77									no sample
RW-24	2.01.02	1151	16.17	16.17										monitor only

TABLE 1-A
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA (MOST RECENT)

Well	Date	Time	A/O	O/W	Product Thick	pH	umhos/cm	NTU	DO mg/l	Deg C.	Salinity %	TDs g/L	ORP mv	Purged
RW-24	7.29.02	1600	15.78	15.78										monitor only
	06.06.03	1303	15.4	15.4										monitor only
	01.21.04	1234	15.77	16.54	0.77									no sample
RW-25	2.01.02	1154	16.45	16.45										monitor only
	7.29.02	1602	16.55	16.55										monitor only
	06.06.03	1309	16.09	16.09										monitor only
	01.21.04	1241	16.51	16.83	0.32									no sample
RW-26	2.01.02	1142	14.65	14.65										monitor only
	7.29.02	1540	14.11	14.11	0.88									monitor only
	01.21.04	1221	14.24	14.54	0.3									no sample
T-17-1	2.01.02	1230	17.6	17.6										monitor only
	7.29.02	1615	17.73	17.73										monitor only
	06.06.03	1359	17.22	17.22										monitor only
	01.21.04	1319	17.79	17.79										no sample
T-17-3	2.01.02	1232												monitor only
	7.29.02													well destroyed

TABLE 2-A
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER BENZENE & MTBE

	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
Influent (refinery)	5.30.01	200	940	79	290	920
	7.31.01	250	1600	210	520	1610
	11.01.01	270	1200	430	430	1290
	12.4.01		520	240	430	1130
	1.31.02	200	520	120	360	850
	2.28.02	150	890	90	370	1030
	3.29.02	130	690	51	300	879
	4.26.02	310	950	81	310	899
	5.22.02	270	900	63	290	817
	6.24.02	200	770	200	350	158
	8.27.02	170	1500	120	370	800
	9.30.02	110	1200	2200	990	850
	10.29.02	82	310	59	220	380
	11.29.02	86	340	150	260	470
	12.30.02	120	290	280	244	430
	2.03.03	120	390	75	190	220
	3.10.03	110	430	2200	590	1800
	4.02.03	120	540	82	290	580
	4.29.03	130	530	62	240	560
	6.05.03	110	380	71	320	630
	06.30.03	140	510	310	290	550
	8.15.03	<25	40	29	120	190
	10.02.03	80	370	19	270	340
	11.04.03	81	190	11	90	72
	12.23.03	140	610	1200	450	950
	1.20.04	88	300	510	340	790
Effluent(refinery)	5.30.01	5.6	<0.50	<0.50	<0.50	<1.50
	7.31.01	<1.00	0.9	<0.50	<0.50	1.1
	11.01.01	21	4.7	10	3.9	18.5
	12.04.01		<0.50	<0.50	0.6	<1.50
	1.31.02	2.3	0.8	5.1	1.8	8.5
	3.29.02	6.3	1.6	ND	ND	ND
	4.26.02	14	0.7	1	ND	ND
	5.22.02	97	2.9	5.5	0.9	3.7
	6.24.02	24	0.6	0.5	2.1	4
	8.27.02	16	0.6	0.8	ND	1.3
	9.30.02	7.5	ND	0.6	0.6	1.1
	10.29.02	ND	ND	ND	ND	ND
	11.29.02	ND	ND	ND	ND	ND
	12.30.02	ND	ND	2.2	1.3	4.9
	2.04.03	ND	ND	ND	ND	1.8
	3.10.03	5.1	1	5.9	2.3	8.2
	4.02.03	ND	ND	ND	0.8	2.3
	4.29.03	ND	ND	ND	ND	1.4
	6.05.03	ND	<0.6	<0.5	0.6	1.4
	6.30.03	ND	ND	1.3	1.1	4
	8.15.03	ND	ND	ND	ND	ND
	10.02.03	ND	ND	ND	ND	ND
	11.04.03	ND	ND	ND	ND	ND
	12.23.04	3.1	0.9	5.3	1.5	5.4
	1.20.04	2.9	0.9	3.3	1.4	4.8
MW-01	2.4.02	(Product)				
MW-04	7.25.02	31	7.9	ND	0.9	0.6
	11.26.02	18	6.1	ND	ND	1.1
	6.05.03	18	6.6	ND	ND	ND
	11.03.03	17	2.1	ND	ND	ND
	1.19.04	27	2.2	0.6	ND	1.3
MW-05	1.30.02	43	5.1	<0.50	<0.50	<1.50
	7.25.02	51	4.7	ND	ND	ND

TABLE 2-A
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER BENZENE & MTBE

	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
MW-05	11.26.02	47	5.1	ND	ND	ND
	6.05.03	25	1.5	ND	ND	ND
	11.03.03	26	ND	ND	ND	ND
	1.19.04	44	3.8	0.9	ND	1.4
MW-06	1.30.02	2.5	<0.50	<0.50	<0.50	<1.50
	7.26.02	23	3.4	0.7	0.5	ND
	11.26.02	30	ND	ND	ND	ND
	6.05.03	11	0.8	ND	ND	ND
	11.03.03	30	ND	ND	ND	ND
	1.19.04	9.2	ND	0.7	ND	ND
MW-07	1.19.04	210	ND	ND	ND	1.6
MW-08	1.30.02	<1.00	<0.05	<0.50	<0.50	<1.50
	7.26.02	1.4	ND	ND	ND	ND
	11.26.02	230	0.9	ND	ND	ND
	06.05.03	190	1.3	ND	ND	ND
	11.04.03	170	ND	ND	ND	ND
MW-09	1.30.02	26	5.5	1.6	1.7	<1.50
	11.26.02	ND	ND	ND	ND	ND
	6.05.03	ND	ND	ND	ND	ND
	11.04.03	ND	ND	ND	ND	ND
	1.19.04	ND	ND	ND	ND	ND
MW-10	7.26.02	ND	ND	ND	ND	ND
	11.26.02	ND	ND	ND	ND	ND
	6.05.03	ND	ND	ND	ND	ND
	11.04.03	ND	ND	ND	ND	ND
	1.19.04	ND	ND	ND	ND	ND
MW-11	1.30.02	<1.00	<0.50	<0.50	<0.50	<1.50
	7.26.02	ND	ND	ND	ND	ND
	11.26.02	ND	ND	0.6	ND	ND
	6.05.03	ND	ND	ND	ND	ND
	11.04.03	ND	ND	ND	ND	ND
MW-12	1.30.02	110	28	1.8	54	104.6
	7.26.02	140	43	1.7	59	115.1
	12.03.02	120	12	ND	24	35
	06.05.03	88	30	1.1	29	39
	1.20.04	100	17	ND	34	43
MW-13	1.30.02	<1.00	<0.50	<0.50	<0.50	<1.50
	7.26.02	ND	ND	ND	ND	ND
	12.03.02	ND	ND	ND	ND	ND
	06.05.03	ND	ND	ND	ND	ND
	11.04.03	ND	ND	ND	ND	ND
	1.20.04	ND	ND	ND	ND	ND
MW-15	1.30.02	<1.00	<0.50	<0.50	<0.50	<1.50
	7.26.02	ND	ND	ND	ND	ND
	12.03.02	ND	ND	ND	ND	ND
	06.05.03	ND	ND	ND	ND	ND
	11.04.03	ND	ND	ND	ND	ND
	1.20.04	ND	ND	ND	ND	ND
MW-18	1.30.02	18	1	<0.50	<0.50	<1.50
	7.25.02	36	6.9	ND	1.1	0.7
	11.26.02	33	5	ND	ND	ND
	06.05.03	16	2.9	ND	ND	ND
	11.03.03	15	ND	ND	ND	ND

TABLE 2-A
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER BENZENE & MTBE

	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
MW-18	1.19.04	18	0.7	ND	ND	ND
MW-19	1.30.02	530	0.6	0.9	0.8	<1.50
	7.25.02	610	ND	ND	0.9	ND
	11.26.02	310	ND	ND	ND	ND
	6.05.03	420	3.2	ND	ND	ND
	11.03.03	520	ND	ND	ND	ND
	1.19.04	310	0.6	ND	ND	1.7
MW-20	1.30.02	670	1.6	3.7	6.3	1.2
	7.26.02	950	ND	ND	ND	ND
	11.26.02	350	1.6	ND	ND	2
	6.05.03	630	7	ND	7.1	7.2
	11.04.03	480	3.2	ND	ND	5.1
	1.19.04	680	2.8	ND	1.4	3.3
MW-21	1.30.02	44	<0.50	<0.50	<0.50	<1.50
	7.26.02	34	ND	ND	ND	ND
	11.26.02	34	1.4	ND	ND	ND
	06.05.03	14	ND	ND	ND	ND
	11.04.03	25	ND	ND	ND	ND
	1.19.04	ND	ND	ND	ND	ND
MW-22	1.30.02	12	<0.50	<0.50	<0.50	<1.50
	7.26.02	14	ND	ND	ND	ND
	11.26.02	14	ND	ND	ND	ND
	6.05.03	ND	ND	ND	ND	ND
	11.04.03	11	ND	ND	ND	ND
	1.19.04	13	ND	ND	ND	ND

APPENDIX A
Laboratory Analyses
QA/QC Data and COC records

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **302008**
February 07, 2003

BIOTECH REMEDIATION
501 AIRPORT DRIVE SUITE 104
FARMINGTON, NM 87401

Project Name AIRSTRIPPER
Project Number 810

Attention: TERRY GRIFFIN

On 02/04/03 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
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Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: BIOTECH REMEDIATION	PINNACLE ID	: 302008
PROJECT #	: 810	DATE RECEIVED	: 02/04/03
PROJECT NAME	: AIRSTRIPPER	REPORT DATE	: 02/07/03

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
302008 - 01	810 INFLUENT	AQUEOUS	02/03/03
302008 - 02	810 EFFLUENT	AQUEOUS	02/03/03
302008 - 03	TRAVEL BLANK	AQUEOUS	02/03/03

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED / 8015 GRO
CLIENT : BIOTECH REMEDIATION PINNACLE I.D.: 302008
PROJECT # : 810
PROJECT NAME : AIRSTRIPPER

SAMPLE I.D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	810 INFLUENT	AQUEOUS	02/03/03	NA	02/04/03	5
02	810 EFFLUENT	AQUEOUS	02/03/03	NA	02/04/03	1
03	TRAVEL BLANK	AQUEOUS	02/03/03	NA	02/04/03	1

PARAMETER	DET. LIMIT	UNITS	810 INFLUENT	810 EFFLUENT	TRAVEL BLANK
FUEL HYDROCARBONS	50	**UG/L**	**4500**	< 50	< 50
HYDROCARBON RANGE			**C6-C14**	C6-C14	C6-C14
HYDROCARBONS QUANTITATED USING			**GASOLINE**	GASOLINE	GASOLINE
BENZENE	0.5	**UG/L**	**390**	< 0.5	< 0.5
TOLUENE	0.5	**UG/L**	**74**	< 0.5	< 0.5
ETHYLBENZENE	0.5	**UG/L**	**190**	< 0.5	< 0.5
TOTAL XYLENES	1.0	**UG/L**	**220**	**1.8**	< 1.0
METHYL-t-BUTYL ETHER	2.5	**UG/L**	**120**	< 2.5	< 2.5
SURROGATE:					
BROMOFLUOROBENZENE (%)			110	98	97
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
NA

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021 MODIFIED / 8015 GRO	PINNACLE I.D.	: 302008
ANK I.D.	: 020403	DATE EXTRACTED	: N/A
LIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 02/04/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: AIRSTRIPPER		

ARAMETER	UNITS	
UEL HYDROCARBONS	UG/L	<50
YDROCARBON RANGE		C6-C14
YDROCARBONS QUANTITATED USING		GASOLINE
ENZENE	UG/L	<0.5
OLUENE	UG/L	<0.5
THYLBENZENE	UG/L	<0.5
OTAL XYLENES	UG/L	<1.0
ETHYL-t-BUTYL ETHER	UG/L	<2.5
URROGATE:		
ROMOFLUOROBENZENE (%)		99
URROGATE LIMITS (80 - 120)		

HEMIST NOTES:
A

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 302008
BATCH I.D. #	: 020403	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 02/04/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: AIRSTRIPPER	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	18.8	94	19.1	96	2	(80 - 120)	20
TOLUENE	<0.5	20.0	19.9	100	20.0	100	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.3	102	20.4	102	0	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	62.6	104	63.2	105	1	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	18.8	94	18.2	91	3	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\%\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

ST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 302008
MSMSD #	: 302007-02	DATE EXTRACTED	: N/A
LIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 02/04/03
OJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: AIRSTRIPPER	UNITS	: UG/L

RAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
ENZENE	<0.5	20.0	19.8	99	18.8	94	5	(80 - 120)	20
OLUENE	<0.5	20.0	21.4	107	20.0	100	7	(80 - 120)	20
THYLBENZENE	<0.5	20.0	21.5	108	20.1	101	7	(80 - 120)	20
TAL XYLENES	<1.0	60.0	66.1	110	61.9	103	7	(80 - 120)	20
ETHYL-t-BUTYL ETHER	<2.5	20.0	20.1	101	19.7	99	2	(70 - 133)	20

EMIST NOTES:
A

$$\text{Recovery} = \frac{\text{(Spike Sample Result - Sample Result)}}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{\text{(Sample Result - Duplicate Result)}}{\text{Average Result}} \times 100$$

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE:__________ PAGE:____ OF ____

PLI Accession #: 302008

PROJECT MANAGER: Terry Griffin

COMPANY: Biotech Remediation

ADDRESS: 501 Airport Dr. Suite 104
Farmington, NM 87401

PHONE: 505-327-4965

FAX:

BILL TO:

COMPANY:

ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	8021 (BTEX)/8015 (Gasoline) MTBE
810 Influent	2-3-3	0929	H_2O		✓
810 Effluent	2-3-3	0935	H_2O		✓
Travel Blank	2-3-3	0900	H_2O		✓

ANALYSIS REQUEST (columns): Petroleum Hydrocarbons (418.1) TRPH; (MOD.8015) Diesel/Direct Inject; (M8015) Gas/Purge & Trap; 8021 (BTEX)/8015 (Gasoline) MTBE; 8021 (BTEX) ☐MTBE ☐TMB ☐PCE; 8021 (TCL); 8021 (EDX); 8021 (HALO); 8021 (CUST); 504.1 EDB ☐ / DBCP ☐; 8260 (TCL) Volatile Organics; 8260 (Full) Volatile Organics; 8260 (CUST) Volatile Organics; 8260 (Landfill) Volatile Organics; Pesticides/PCB (608/8081/8082); Herbicides (615/8151); Base/Neutral/Acid Compounds GC/MS (625/8270); Polynuclear Aromatics (610/8310/8270-SIMS); General Chemistry:; Priority Pollutant Metals (13); Target Analyte List Metals (23); RCRA Metals (8); RCRA Metals by TCLP (Method 1311); Metals:; NUMBER OF CONTAINERS

PROJECT INFORMATION

PROJ. NO.: 810

PROJ. NAME: Air Stripper

P.O. NO.:

SHIPPED VIA:

SAMPLE RECEIPT

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☑

CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

RELINQUISHED BY: 1.
Signature: [signature] Time: 1000
Printed Name: Mike Beaudrault Date: 2-3-3
Company: Biotech
See reverse side (Force Majeure)

RECEIVED BY: 1.
Signature: Time:
Printed Name: Date:
Company:

RELINQUISHED BY: 2.
Signature: Time:
Printed Name: Date:
Company:

RECEIVED BY: (LAB) 2.

PLEASE FILL THIS FORM IN COMPLETELY.

SHADED AREAS ARE FOR LAB USE ONLY.

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **303014**
March 13, 2003

BIOTECH REMEDIATION
501 AIRPORT DRIVE SUITE 104
FARMINGTON, NM 87401

Project Name AIRSTRIPPER
Project Number 810

Attention: TERRY GRIFFIN

On 03/06/03 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure

PINNACLE LABORATORIES

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CLIENT	: BIOTECH REMEDIATION	PINNACLE ID	: 303014
PROJECT #	: 810	DATE RECEIVED	: 03/06/03
PROJECT NAME	: AIRSTRIPPER	REPORT DATE	: 03/13/03

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
303014 - 01	810 INFLUENT	AQUEOUS	03/06/03
303014 - 02	810 EFFLUENT	AQUEOUS	03/06/03

PINNACLE LABORATORIES

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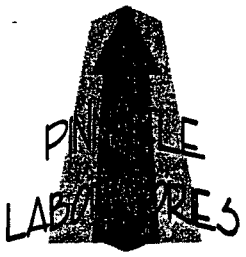
GAS CHROMATOGRAPHY RESULTS

ST : EPA 8021 MODIFIED / 8015 GRO
LIENT : BIOTECH REMEDIATION PINNACLE I.D.: 303014
ROJECT # : 810
ROJECT NAME : AIRSTRIPPER

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
1	810 INFLUENT	AQUEOUS	03/06/03	NA	03/10/03	25
2	810 EFFLUENT	AQUEOUS	03/06/03	NA	03/07/03	1

RAMETER	DET. LIMIT	UNITS	810 INFLUENT	810 EFFLUENT
EL HYDROCARBONS	50	**UG/L**	**12000**	**270**
YDROCARBON RANGE			**C6-C14**	**C6-C14**
YDROCARBONS QUANTITATED USING			**GASOLINE**	**GASOLINE**
NZENE	0.5	**UG/L**	**430**	**1.0**
LUENE	0.5	**UG/L**	**2200**	**5.9**
THYLBENZENE	0.5	**UG/L**	**590**	**2.3**
TAL XYLENES	1.0	**UG/L**	**1800**	**8.2**
ETHYL-t-BUTYL ETHER	2.5	**UG/L**	**110**	**5.1**
RROGATE:				
ROMOFLUOROBENZENE (%)			107	101
RROGATE LIMITS	(80 - 120)			

EMIST NOTES:
A



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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021 MODIFIED / 8015 GRO	PINNACLE I.D.	: 303014
ANK I.D.	: 030703	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 03/07/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: AIRSTRIPPER		

RAMETER	UNITS	
EL HYDROCARBONS	UG/L	<50
YDROCARBON RANGE		C6-C14
YDROCARBONS QUANTITATED USING		GASOLINE
NZENE	UG/L	<0.5
LUENE	UG/L	<0.5
THYLBENZENE	UG/L	<0.5
OTAL XYLENES	UG/L	<1.0
ETHYL-t-BUTYL ETHER	UG/L	<2.5
RROGATE:		
ROMOFLUOROBENZENE (%)		100
URROGATE LIMITS (80 - 120)		

HEMIST NOTES:
/A

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021 MODIFIED / 8015 GRO	PINNACLE I.D.	: 303014
ANK I.D.	: 031003	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 03/10/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: AIRSTRIPPER		

RAMETER	UNITS	
EL HYDROCARBONS	UG/L	<50
YDROCARBON RANGE		C6-C14
YDROCARBONS QUANTITATED USING		GASOLINE
NZENE	UG/L	<0.5
LUENE	UG/L	<0.5
THYLBENZENE	UG/L	<0.5
OTAL XYLENES	UG/L	<1.0
ETHYL-t-BUTYL ETHER	UG/L	<2.5
RROGATE:		
ROMOFLUOROBENZENE (%)		102
URROGATE LIMITS (80 - 120)		

HEMIST NOTES:
A

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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 303014
BATCH I.D. #	: 030703	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 03/07/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: AIRSTRIPPER	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	18.5	93	18.1	91	2	(80 - 120)	20
TOLUENE	<0.5	20.0	19.7	99	19.4	97	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.3	102	20.0	100	1	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	62.7	105	62.0	103	1	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	18.1	91	17.7	89	2	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 303014
BATCH I.D. #	: 031003	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 03/10/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: AIRSTRIPPER	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	16.3	82	18.6	93	13	(80 - 120)	20
TOLUENE	<0.5	20.0	17.7	89	20.2	101	13	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	18.3	92	20.8	104	13	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	56.2	94	64.3	107	13	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	14.8	74	17.7	89	18	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

ST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 303014
MSD #	: 303015-01	DATE EXTRACTED	: N/A
LIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 03/07/03
OJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: AIRSTRIPPER	UNITS	: UG/L

RAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
NZENE	<0.5	20.0	18.5	93	18.7	94	1	(80 - 120)	20
OLUENE	<0.5	20.0	20.0	100	20.3	102	1	(80 - 120)	20
THYLBENZENE	<0.5	20.0	20.6	103	20.7	104	0	(80 - 120)	20
TAL XYLENES	<1.0	60.0	63.6	106	63.9	107	0	(80 - 120)	20
THYL-t-BUTYL ETHER	<2.5	20.0	17.0	85	18.3	92	7	(70 - 133)	20

EMIST NOTES:
A

$$\text{Recovery} = \frac{\text{(Spike Sample Result - Sample Result)}}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{\text{(Sample Result - Duplicate Result)}}{\text{Average Result}} \times 100$$

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 3-6-3 PAGE: 1 OF 1

SHADED AREAS ARE FOR LAB USE ONLY

PROJECT MANAGER: TERRY GRIFFIN

COMPANY: BIOTECH REMEDIATION
ADDRESS: 501 AIRPORT DR.
FARMINGTON, N.M.
PHONE:
FAX:
BILL TO:
COMPANY:
ADDRESS:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject		(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐		8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260-(CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:	
810 INFLUENT	3-6-3	0927	H_2O					✓																							
810 EFLUENT	1	0930	1					✓																							

PROJECT INFORMATION

PROJ. NO.: 810
PROJ. NAME: AIR STRIPPER
P.O. NO.:
SHIPPED VIA:

SAMPLE RECEIPT

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☐

CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

RELINQUISHED BY:
Signature: [signature] Time: 1006
Printed Name: MIKE BEAUDOIN Date: 3-6-3
Company: BIO TECH
See reverse side (Force Majeure)

RELINQUISHED BY:
Signature: Time:
Printed Name: Date:
Company:

RECEIVED BY:
Signature: Time:
Printed Name: Date:
Company:

RECEIVED BY (LAB)

PLEASE FILL THIS FORM IN COMPLETELY.

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **303088**
April 03, 2003

BIOTECH REMEDIATION
501 AIRPORT DRIVE SUITE 104
FARMINGTON, NM 87401

Project Name T-WAY REFINERY AIR STRIPPER
Project Number 810

Attention: TERRY GRIFFIN

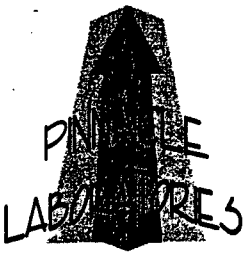
On 03/31/03 Pinnacle Laboratories, Inc., (ADHS License No. AZ0643 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure



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ENT	: BIOTECH REMEDIATION	PINNACLE ID	: 303088
ROJECT #	: 810	DATE RECEIVED	: 03/31/03
ROJECT NAME	: T-WAY REFINERY AIR STRIPPER	REPORT DATE	: 04/03/03

INACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
03088 - 01	810-INFLUENT	AQUEOUS	03/31/03
3088 - 02	810-EFFLUENT	AQUEOUS	03/31/03

PINNACLE LABORATORIES

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Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

ST : EPA 8021 MODIFIED / 8015 GRO
IENT : BIOTECH REMEDIATION PINNACLE I.D.: 303088
ROJECT # : 810
ROJECT NAME : T-WAY REFINERY AIR STRIPPER

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
1	810-INFLUENT	AQUEOUS	03/31/03	NA	04/02/03	25
2	810-EFFLUENT	AQUEOUS	03/31/03	NA	04/02/03	1

RAMETER	DET. LIMIT	UNITS	810-INFLUENT	810-EFFLUENT
EL HYDROCARBONS	50	**UG/L**	**8000**	**290**
YDROCARBON RANGE			**C6-C14**	**C6-C14**
YDROCARBONS QUANTITATED USING			**GASOLINE**	**GASOLINE**
NZENE	0.5	**UG/L**	**540**	< 0.5
LUENE	0.5	**UG/L**	**82**	< 0.5
THYLBENZENE	0.5	**UG/L**	**290**	**0.8**
OTAL XYLENES	1.0	**UG/L**	**580**	**2.3**
ETHYL-t-BUTYL ETHER	2.5	**UG/L**	**120**	< 2.5
RROGATE:				
ROMOFLUOROBENZENE (%)			103	99
URROGATE LIMITS	(80 - 120)			

EMIST NOTES:

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021 MODIFIED / 8015 GRO	PINNACLE I.D.	: 303088
LANK I.D.	: 040203	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 04/02/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: T-WAY REFINERY AIR STRIPPER		

ARAMETER	UNITS	
EL HYDROCARBONS	UG/L	<50
DROCARBON RANGE		C6-C14
YDROCARBONS QUANTITATED USING		GASOLINE
NZENE	UG/L	<0.5
LUENE	UG/L	<0.5
HYLBENZENE	UG/L	<0.5
TAL XYLENES	UG/L	<1.0
ETHYL-t-BUTYL ETHER	UG/L	<2.5
RROGATE:		
OMOFLUOROBENZENE (%)		98
RROGATE LIMITS (80 - 120)		

EMIST NOTES:
A

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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

ST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 303088
CH I.D. #	: 040203	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 04/02/03
OJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
OJECT NAME	: T-WAY REFINERY AIR STRIPPER	UNITS	: UG/L

RAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
NZENE	<0.5	20.0	17.3	87	17.7	89	2	(80 - 120)	20
LUENE	<0.5	20.0	19.1	96	19.6	98	3	(80 - 120)	20
THYLBENZENE	<0.5	20.0	19.9	100	20.4	102	2	(80 - 120)	20
TAL XYLENES	<1.0	60.0	61.6	103	63.0	105	2	(80 - 120)	20
THYL-t-BUTYL ETHER	<2.5	20.0	16.1	81	16.2	81	1	(70 - 133)	20

EMIST NOTES:

$$\%\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

ST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 303088
MSD #	: 303088-02	DATE EXTRACTED	: N/A
LIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 04/02/03
OJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: T-WAY REFINERY AIR STRIPPER	UNITS	: UG/L

RAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
NZENE	<0.5	20.0	17.1	86	17.6	88	3	(80 - 120)	20
LUENE	<0.5	20.0	19.9	100	20.5	103	3	(80 - 120)	20
THYLBENZENE	0.8	20.0	20.2	97	20.8	100	3	(80 - 120)	20
TAL XYLENES	2.3	60.0	62.6	101	64.5	104	3	(80 - 120)	20
THYL-t-BUTYL ETHER	<2.5	20.0	17.0	85	18.1	91	6	(70 - 133)	20

EMIST NOTES:

$$\text{ecovery} = \frac{\text{(Spike Sample Result - Sample Result)}}{\text{Spike Concentration}} \times 100$$

$$\text{PD (Relative Percent Difference)} = \frac{\text{(Sample Result - Duplicate Result)}}{\text{Average Result}} \times 100$$

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: _____ PAGE: ___ OF ___

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: Terry Griffin

COMPANY: Biotech Remediation Inc
ADDRESS: 501 Airport Dr. Suite 104
Farmington, NM. 87401
PHONE: 505-327-4935
FAX:
BILL TO:
COMPANY:
ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX
810 - Influent	3-31-13	0947	H2O
810 - Effluent	"	0950	"

ANALYSIS REQUEST

Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:	
			✓																						
			✓																						

PROJECT INFORMATION

PROJ. NO.: 810
PROJ. NAME: T-Way Refinery
P.O. NO.: Air Stripper
SHIPPED VIA:

(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☐
CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER
METHANOL PRESERVATION ☐
COMMENTS: FIXED FEE ☐

RELINQUISHED BY:

Signature: [signature] Time: 1013
Printed Name: Mike Bergquist Date: 3-31-13
Company: Biotech
See reverse side (Force Majeure)

RECEIVED BY:

Signature: Time:
Printed Name: Date:
Company:

RELINQUISHED BY:

Signature: Time:
Printed Name: Date:
Company:

RECEIVED BY:

Signature: Time:
Printed Name: Date:
Company:

PINNACLE LABORATORIES

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Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **304161**
May 14, 2003

BIOTECH REMEDIATION
501 AIRPORT DRIVE SUITE 104
FARMINGTON, NM 87401

Project Name AIRSTRIPPER
Project Number 810

Attention: TERRY GRIFFIN

On 04/29/03 Pinnacle Laboratories, Inc., (ADHS License No. AZ0643), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure

PINNACLE LABORATORIES

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Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: BIOTECH REMEDIATION	PINNACLE ID	: 304161
PROJECT #	: 810	DATE RECEIVED	: 04/29/03
PROJECT NAME	: AIRSTRIPPER	REPORT DATE	: 05/14/03

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
304161 - 01	810-INFLUENT	AQUEOUS	04/29/03
304161 - 02	810-EFFLUENT	AQUEOUS	04/29/03
304161 - 03	TRAVEL BLANK	AQUEOUS	03/20/03

PINNACLE LABORATORIES

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Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

EST : EPA 8021 MODIFIED / 8015 GRO
IENT : BIOTECH REMEDIATION PINNACLE I.D.: 304161
ROJECT # : 810
ROJECT NAME : AIRSTRIPPER

AMPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED		DIL. FACTOR
	810-INFLUENT	AQUEOUS	04/29/03	NA	05/08/03		10
	810-EFFLUENT	AQUEOUS	04/29/03	NA	05/06/03		1
	TRAVEL BLANK	AQUEOUS	03/20/03	NA	05/06/03	T1	1

RAMETER	DET. LIMIT	UNITS	810-INFLUENT	810-EFFLUENT	TRAVEL BLANK
EL HYDROCARBONS	**50**	**UG/L**	**5100**	**340**	< 50
YDROCARBON RANGE			**C6-C14**	**C6-C14**	C6-C14
YDROCARBONS QUANTITATED USING			**GASOLINE**	**GASOLINE**	GASOLINE
NZENE	**0.5**	**UG/L**	**530**	< 0.5	< 0.5
OLUENE	**0.5**	**UG/L**	**62**	< 0.5	< 0.5
THYLBENZENE	**0.5**	**UG/L**	**240**	< 0.5	< 0.5
OTAL XYLENES	**1.0**	**UG/L**	**560**	**1.4**	< 1.0
ETHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**130**	< 2.5	< 2.5
URROGATE:					
ROMOFLUOROBENZENE (%)			108	103	98
URROGATE LIMITS	(80 - 120)				

EMIST NOTES:
= Trip Blank was received past the 14 day hold time.

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021 MODIFIED / 8015 GRO		
LANK I.D.	: 050603	PINNACLE I.D.	: 304161
IENT	: BIOTECH REMEDIATION	DATE EXTRACTED	: N/A
ROJECT #	: 810	DATE ANALYZED	: 05/06/03
ROJECT NAME	: AIRSTRIPPER	SAMPLE MATRIX	: AQUEOUS

RAMETER	UNITS	
EL HYDROCARBONS	UG/L	<50
YDROCARBON RANGE		C6-C14
YDROCARBONS QUANTITATED USING		GASOLINE
NZENE	UG/L	<0.5
OLUENE	UG/L	<0.5
THYLBENZENE	UG/L	<0.5
OTAL XYLENES	UG/L	<1.0
ETHYL-t-BUTYL ETHER	UG/L	<2.5
RROGATE:		
ROMOFLUOROBENZENE (%)		99
URROGATE LIMITS (80 - 120)		

HEMIST NOTES:
A

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021 MODIFIED / 8015 GRO		
ANK I.D.	: 050803	PINNACLE I.D.	: 304161
IENT	: BIOTECH REMEDIATION	DATE EXTRACTED	: N/A
ROJECT #	: 810	DATE ANALYZED	: 05/08/03
ROJECT NAME	: AIRSTRIPPER	SAMPLE MATRIX	: AQUEOUS

RAMETER	UNITS	
EL HYDROCARBONS	UG/L	<50
YDROCARBON RANGE		C6-C14
DROCARBONS QUANTITATED USING		GASOLINE
NZENE	UG/L	<0.5
LUENE	UG/L	<0.5
THYLBENZENE	UG/L	<0.5
TAL XYLENES	UG/L	<1.0
ETHYL-t-BUTYL ETHER	UG/L	<2.5
RROGATE:		
ROMOFLUOROBENZENE (%)		103
URROGATE LIMITS (80 - 120)		

EMIST NOTES:
A

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021 MODIFIED		
BATCH I.D. #	: 050603	PINNACLE I.D.	: 304161
CLIENT	: BIOTECH REMEDIATION	DATE EXTRACTED	: N/A
PROJECT #	: 810	DATE ANALYZED	: 05/06/03
PROJECT NAME	: AIRSTRIPPER	SAMPLE MATRIX	: AQUEOUS
		UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	19.8	99	19.5	98	2	(80 - 120)	20
TOLUENE	<0.5	20.0	19.8	99	19.7	99	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.1	101	20.1	101	0	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	61.1	102	60.9	102	0	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	17.4	87	17.4	87	0	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021 MODIFIED		
BATCH I.D. #	: 050803	PINNACLE I.D.	: 304161
CLIENT	: BIOTECH REMEDIATION	DATE EXTRACTED	: N/A
PROJECT #	: 810	DATE ANALYZED	: 05/08/03
PROJECT NAME	: AIRSTRIPPER	SAMPLE MATRIX	: AQUEOUS
		UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	20.2	101	20.0	100	1	(80 - 120)	20
TOLUENE	<0.5	20.0	20.5	103	20.2	101	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.4	107	21.1	106	1	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	63.6	106	62.5	104	2	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	17.5	88	17.5	88	0	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\%\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
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Phone (505) 344-3777
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GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

EST : EPA 8021 MODIFIED
MSD # : 304161-02
LIENT : BIOTECH REMEDIATION
ROJECT # : 810
OJECT NAME : AIRSTRIPPER

PINNACLE I.D. : 304161
DATE EXTRACTED : N/A
DATE ANALYZED : 05/06/03
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

RAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
NZENE	<0.5	20.0	19.9	100	19.4	97	3	(80 - 120)	20
OLUENE	<0.5	20.0	20.5	103	20.2	101	1	(80 - 120)	20
THYLBENZENE	<0.5	20.0	20.5	103	20.2	101	1	(80 - 120)	20
TAL XYLENES	1.4	60.0	62.0	101	61.4	100	1	(80 - 120)	20
ETHYL-t-BUTYL ETHER	<2.5	20.0	19.6	98	18.4	92	6	(70 - 133)	20

EMIST NOTES:
/A

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 4-29-3 PAGE: 1 OF 1

PROJECT MANAGER: Terry Griffin

COMPANY: Biotech Remediation Inc.
ADDRESS: 501 Airport Dr. Suite 104
Farmington, NM. 87401
PHONE: 505-327-4965
FAX:

BILL TO:
COMPANY:
ADDRESS:

Sample ID	Date	Time	Matrix	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:
810-Influent	4-29-3	0914	H_2O				✓																				
810-Effluent	↓	0917	↓				✓																				
Travel Blank	3-20-3	1100	↓				✓																				

PROJ. NO.: 810
PROJ. NAME: Air Stripper
P.O. NO.:
SHIPPED VIA:

(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☑
CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER
METHANOL PRESERVATION ☐
COMMENTS: FIXED FEE ☐

Ice Present

RELINQUISHED BY: 1.
Signature: [signature] Time: 1000
Printed Name: Mike Beaudreault Date: 4-29-3
Company: Biotech
See reverse side (Force Majeure)

Signature: Time:
Printed Name: Date:
Company:

RELINQUISHED BY: 2.
Signature: Time:
Printed Name: Date:
Company:

PLEASE FILL THIS FORM IN COMPLETELY.

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Pinnacle Lab ID number **306027**
June 17, 2003

BIOTECH REMEDIATION
501 AIRPORT DRIVE SUITE 104
FARMINGTON, NM 87401

Project Name T-WAY REFINERY
Project Number 810

Attention: TERRY GRIFFIN

On 06/06/03 Pinnacle Laboratories Inc., (ADHS Lincense No. AZ0643), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure

PINNACLE LABORATORIES

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CLIENT	: BIOTECH REMEDIATION	PINNACLE ID	: 306027
PROJECT #	: 810	DATE RECEIVED	: 06/06/03
PROJECT NAME	: T-WAY REFINERY	REPORT DATE	: 06/17/03

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
306027 - 01	MW-18	AQUEOUS	06/05/03
306027 - 02	MW-19	AQUEOUS	06/05/03
306027 - 03	MW-05	AQUEOUS	06/05/03
306027 - 04	MW-04	AQUEOUS	06/05/03
306027 - 05	MW-06	AQUEOUS	06/05/03
306027 - 06	MW-20	AQUEOUS	06/05/03
306027 - 07	MW-21	AQUEOUS	06/05/03
306027 - 08	MW-22	AQUEOUS	06/05/03
306027 - 09	MW-09	AQUEOUS	06/05/03
306027 - 10	MW-10	AQUEOUS	06/05/03
306027 - 11	MW-11	AQUEOUS	06/05/03
306027 - 12	MW-08	AQUEOUS	06/05/03
306027 - 13	MW-15	AQUEOUS	06/05/03
306027 - 14	MW-13	AQUEOUS	06/05/03
306027 - 15	MW-12	AQUEOUS	06/05/03
306027 - 16	INFLUENT	AQUEOUS	06/05/03
306027 - 17	EFFLUENT	AQUEOUS	06/05/03

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GAS CHROMATOGRAPHY RESULTS

ST : EPA 8021B MODIFIED / 8015B GRO
ENT : BIOTECH REMEDIATION PINNACLE I.D.: 306027
OJECT # : 810
OJECT NAME : T-WAY REFINERY

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
	MW-18	AQUEOUS	06/05/03	NA	06/10/03	1
	MW-19	AQUEOUS	06/05/03	NA	06/10/03	1
	MW-05	AQUEOUS	06/05/03	NA	06/10/03	1

RAMETER	DET. LIMIT	UNITS	MW-18	MW-19	MW-05
EL HYDROCARBONS	**0.050**	**MG/L**	**0.16**	**0.50**	**0.066**
YDROCARBON RANGE			**C6-C14**	**C6-C14**	**C6-C14**
YDROCARBONS QUANTITATED USING			**GASOLINE**	**GASOLINE**	**GASOLINE**
NZENE	**0.5**	**UG/L**	**2.9**	**3.2**	**1.5**
LUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
THYLBENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TAL XYLENES	1.0	UG/L	< 1.0	< 1.0	< 1.0
THYL-t-BUTYL ETHER	**2.5**	**UG/L**	**16**	**420 - D5**	**25**
RROGATE:					
OMOFLUOROBENZENE (%)			100	99	96
RROGATE LIMITS	(80 - 120)				

EMIST NOTES:
= Reported from a 5X dilution run on 06-10-03.

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GAS CHROMATOGRAPHY RESULTS

ST : EPA 8021B MODIFIED / 8015B GRO
IENT : BIOTECH REMEDIATION PINNACLE I.D.: 306027
ROJECT # : 810
ROJECT NAME : T-WAY REFINERY

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
1	MW-04	AQUEOUS	06/05/03	NA	06/10/03	1
2	MW-06	AQUEOUS	06/05/03	NA	06/10/03	1
3	MW-20	AQUEOUS	06/05/03	NA	06/10/03	5

RAMETER	DET. LIMIT	UNITS	MW-04	MW-06	MW-20
UEL HYDROCARBONS	**0.050**	**MG/L**	**0.20**	**0.063**	**2.0**
YDROCARBON RANGE			**C6-C14**	**C6-C14**	**C6-C14**
TDROCARBONS QUANTITATED USING			**GASOLINE**	**GASOLINE**	**GASOLINE**
NZENE	**0.5**	**UG/L**	**6.6**	**0.8**	**7.0**
OLUENE	0.5	UG/L	< 0.5	< 0.5	< 2.5
THYLBENZENE	**0.5**	**UG/L**	< 0.5	< 0.5	**7.1**
TAL XYLENES	**1.0**	**UG/L**	< 1.0	< 1.0	**7.2**
THYL-t-BUTYL ETHER	**2.5**	**UG/L**	**18**	**11**	**630**
URROGATE:					
ROMOFLUOROBENZENE (%)			99	100	107
RROGATE LIMITS	(80 - 120)				

EMIST NOTES:

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GAS CHROMATOGRAPHY RESULTS

ST : EPA 8021B MODIFIED / 8015B GRO
IENT : BIOTECH REMEDIATION PINNACLE I.D.: 306027
ROJECT # : 810
ROJECT NAME : T-WAY REFINERY

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
	MW-21	AQUEOUS	06/05/03	NA	06/10/03	1
	MW-22	AQUEOUS	06/05/03	NA	06/10/03	1
	MW-09	AQUEOUS	06/05/03	NA	06/10/03	1

RAMETER	DET. LIMIT	UNITS	MW-21	MW-22	MW-09
UEL HYDROCARBONS	0.050	MG/L	< 0.050	< 0.050	< 0.050
YDROCARBON RANGE			C6-C14	C6-C14	C6-C14
YDROCARBONS QUANTITATED USING			GASOLINE	GASOLINE	GASOLINE
ENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
OLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
THYLBENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TAL XYLENES	1.0	UG/L	< 1.0	< 1.0	< 1.0
ETHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**14**	< 2.5	< 2.5
URROGATE:					
ROMOFLUOROBENZENE (%)			97	95	98
RROGATE LIMITS	(80 - 120)				

EMIST NOTES:
A

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GAS CHROMATOGRAPHY RESULTS

EST : EPA 8021B MODIFIED / 8015B GRO
LIENT : BIOTECH REMEDIATION PINNACLE I.D.: 306027
ROJECT # : 810
OJECT NAME : T-WAY REFINERY

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
	MW-10	AQUEOUS	06/05/03	NA	06/10/03	1
	MW-11	AQUEOUS	06/05/03	NA	06/10/03	1
	MW-08	AQUEOUS	06/05/03	NA	06/11/03	1

RAMETER	DET. LIMIT	UNITS	MW-10	MW-11	MW-08
EL HYDROCARBONS	**0.050**	**MG/L**	< 0.050	< 0.050	**0.23**
DROCARBON RANGE			C6-C14	C6-C14	**C6-C14**
DROCARBONS QUANTITATED USING			GASOLINE	GASOLINE	**GASOLINE**
NZENE	**0.5**	**UG/L**	< 0.5	< 0.5	**1.3**
LUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
HYLBENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TAL XYLENES	1.0	UG/L	< 1.0	< 1.0	< 1.0
THYL-t-BUTYL ETHER	**2.5**	**UG/L**	< 2.5	< 2.5	**190**
RROGATE:					
DMOFLUOROBENZENE (%)			98	97	99
RROGATE LIMITS	(80 - 120)				

EMIST NOTES:

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GAS CHROMATOGRAPHY RESULTS

EST : EPA 8021B MODIFIED / 8015B GRO
IENT : BIOTECH REMEDIATION PINNACLE I.D.: 306027
ROJECT # : 810
ROJECT NAME : T-WAY REFINERY

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
	MW-15	AQUEOUS	06/05/03	NA	06/11/03	1
	MW-13	AQUEOUS	06/05/03	NA	06/11/03	1
	MW-12	AQUEOUS	06/05/03	NA	06/11/03	1

RAMETER	DET. LIMIT	UNITS	MW-15	MW-13	MW-12
EL HYDROCARBONS	**0.050**	**MG/L**	< 0.050	< 0.050	**0.97**
DROCARBON RANGE			C6-C14	C6-C14	**C6-C14**
DROCARBONS QUANTITATED USING			GASOLINE	GASOLINE	**GASOLINE**
NZENE	**0.5**	**UG/L**	< 0.5	< 0.5	**30**
LUENE	**0.5**	**UG/L**	< 0.5	< 0.5	**1.1**
HYLBENZENE	**0.5**	**UG/L**	< 0.5	< 0.5	**29**
AL XYLENES	**1.0**	**UG/L**	< 1.0	< 1.0	**39**
THYL-t-BUTYL ETHER	**2.5**	**UG/L**	< 2.5	< 2.5	**88**
RROGATE:					
OMOFLUOROBENZENE (%)			96	98	119
RROGATE LIMITS	(80 - 120)				

EMIST NOTES:

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GAS CHROMATOGRAPHY RESULTS

ST : EPA 8021B MODIFIED / 8015B GRO
LIENT : BIOTECH REMEDIATION PINNACLE I.D.: 306027
ROJECT # : 810
ROJECT NAME : T-WAY REFINERY

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
	INFLUENT	AQUEOUS	06/05/03	NA	06/11/03	25
	EFFLUENT	AQUEOUS	06/05/03	NA	06/11/03	1

RAMETER	DET. LIMIT	UNITS	INFLUENT	EFFLUENT
EL HYDROCARBONS	**0.050**	**MG/L**	**6.7**	**0.10**
DROCARBON RANGE			**C6-C14**	**C6-C14**
YDROCARBONS QUANTITATED USING			**GASOLINE**	**GASOLINE**
NZENE	**0.5**	**UG/L**	**380**	< 0.6
LUENE	**0.5**	**UG/L**	**71**	< 0.5
THYLBENZENE	**0.5**	**UG/L**	**320**	**0.6**
TAL XYLENES	**1.0**	**UG/L**	**630**	**1.4**
ETHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**110**	< 2.5
RROGATE:				
OMOFLUOROBENZENE (%)			110	98
RROGATE LIMITS	(80 - 120)			

EMIST NOTES:
A

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021B MODIFIED / 8015B GRO	PINNACLE I.D.	: 306027
ANK I.D.	: 061003	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 06/10/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: T-WAY REFINERY		

RAMETER	UNITS	
EL HYDROCARBONS	MG/L	<0.050
YDROCARBON RANGE		C6-C14
YDROCARBONS QUANTITATED USING		GASOLINE
NZENE	UG/L	<0.5
LUENE	UG/L	<0.5
HYLBENZENE	UG/L	<0.5
TAL XYLENES	UG/L	<1.0
ETHYL-t-BUTYL ETHER	UG/L	<2.5
RROGATE:		
OMOFLUOROBENZENE (%)		98
RROGATE LIMITS (80 - 120)		

EMIST NOTES:
A

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021B MODIFIED / 8015B GRO	PINNACLE I.D.	: 306027
LANK I.D.	: 061103	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 06/11/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: T-WAY REFINERY		

ARAMETER	UNITS	
EL HYDROCARBONS	MG/L	<0.050
DROCARBON RANGE		C6-C14
YDROCARBONS QUANTITATED USING		GASOLINE
ENZENE	UG/L	<0.5
OLUENE	UG/L	<0.5
HYLBENZENE	UG/L	<0.5
TAL XYLENES	UG/L	<1.0
ETHYL-t-BUTYL ETHER	UG/L	<2.5
URROGATE:		
ROMOFLUOROBENZENE (%)		100
RROGATE LIMITS (80 - 120)		

EMIST NOTES:
/A

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

EST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 306027
ATCH I.D. #	: 061003	DATE EXTRACTED	: N/A
LIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 06/10/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: T-WAY REFINERY	UNITS	: UG/L

ARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
ENZENE	<0.5	20.0	18.6	93	18.7	94	1	(80 - 120)	20
OLUENE	<0.5	20.0	19.8	99	19.9	100	1	(80 - 120)	20
THYLBENZENE	<0.5	20.0	21.2	106	21.2	106	0	(80 - 120)	20
OTAL XYLENES	<1.0	60.0	63.1	105	63.5	106	1	(80 - 120)	20
ETHYL-t-BUTYL ETHER	<2.5	20.0	16.7	84	17.1	86	2	(70 - 133)	20

HEMIST NOTES:
/A

$$\%\ \text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

EST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 306027
ATCH I.D. #	: 061103	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 06/11/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: T-WAY REFINERY	UNITS	: UG/L

RAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
ENZENE	<0.5	20.0	18.5	93	18.4	92	1	(80 - 120)	20
OLUENE	<0.5	20.0	19.8	99	19.6	98	1	(80 - 120)	20
THYLBENZENE	<0.5	20.0	21.2	106	20.9	105	1	(80 - 120)	20
TAL XYLENES	<1.0	60.0	63.7	106	62.6	104	2	(80 - 120)	20
ETHYL-t-BUTYL ETHER	<2.5	20.0	15.8	79	15.8	79	0	(70 - 133)	20

EMIST NOTES:
/A

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

ST	: EPA 8015B GRO	PINNACLE I.D.	: 306027
ATCH I.D. #	: 061003	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 06/10/03
OJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: T-WAY REFINERY	UNITS	: MG/L

RAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
EL HYDROCARBONS	<0.050	1.00	0.959	96	0.920	92	4	(80 - 120)	20
YDROCARBON RANGE		C6-C14							
DROCARBONS QUANTITATED USING		GASOLINE							

EMIST NOTES:
A

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 306027
BATCH I.D. #	: 061103	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 06/11/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<0.050	1.00	0.975	98	0.939	94	4	(80 - 120)	20
HYDROCARBON RANGE		C6-C14							
HYDROCARBONS QUANTITATED USING		GASOLINE							

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

EST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 306027
MSMSD #	: 306027-10	DATE EXTRACTED	: N/A
LIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 06/10/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: T-WAY REFINERY	UNITS	: UG/L

ARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
ENZENE	<0.5	20.0	18.7	94	17.9	90	4	(80 - 120)	20
OLUENE	<0.5	20.0	20.1	101	19.4	97	4	(80 - 120)	20
THYLBENZENE	<0.5	20.0	21.4	107	20.3	102	5	(80 - 120)	20
TAL XYLENES	<1.0	60.0	64.0	107	60.9	102	5	(80 - 120)	20
ETHYL-t-BUTYL ETHER	<2.5	20.0	16.4	82	15.6	78	5	(70 - 133)	20

EMIST NOTES:
A

$$\text{Recovery} = \frac{\text{(Spike Sample Result - Sample Result)}}{\text{Spike Concentration}} \times 100$$

$$\text{RD (Relative Percent Difference)} = \frac{\text{(Sample Result - Duplicate Result)}}{\text{Average Result}} \times 100$$

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

EST	: EPA 8015B GRO	PINNACLE I.D.	: 306027
/MSD #	: 306027-11	DATE EXTRACTED	: N/A
LIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 06/10/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: T-WAY REFINERY	UNITS	: MG/L

ARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
EL HYDROCARBONS	<0.050	1.00	0.935	94	0.917	92	2	(80 - 120)	20
DROCARBON RANGE		C6-C14							
YDROCARBONS QUANTITATED USING		GASOLINE							

EMIST NOTES:
/A

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 6-5-3 PAGE: 1 OF 2

SHADED AREAS ARE FOR LAB USE ONLY

PROJECT MANAGER:

COMPANY: BIOTECH REMEDIATION INC.
ADDRESS: 501 AIRPORT DR. SUITE 104
FARMINGTON, NM. 87401
PHONE: 505-327-4965
FAX:
BILL TO:
COMPANY:
ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject		(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐		8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:		NUMBER OF CONTAINERS
MW-18	6-5-3	0935	H_2O						✓																								
MW-19		0947							✓																								
MW-05		0959							✓																								
MW-04		1017							✓																								
MW-06		1027							✓																								
MW-20		1045							✓																								
MW-21		1100							✓																								
MW-22		1118							✓																								
MW-09		1322							✓																								
MW-10	↓	1336	↓						✓																								

PROJECT INFORMATION

PROJ. NO.: 810
PROJ. NAME: T-Way Refinery
P.O. NO.:
SHIPPED VIA:

SAMPLE RECEIPT

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☐
CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER
METHANOL PRESERVATION ☐
COMMENTS: FIXED FEE ☐

RELINQUISHED BY: 1.
Signature: M.B. Time: 0900
Printed Name: M Bearman Date: 6-6-3
Company: BIOTECH
See reverse side (Force Majeure)

RECEIVED BY:
Signature: Time:
Printed Name: Date:
Company:

RELINQUISHED BY: 2.
Signature: Time:
Printed Name: Date:
Company:

RECEIVED BY: (LAB)

PLEASE FILL THIS FORM IN COMPLETELY.

American Environmental Network (NM), Inc.

CHAIN OF CUSTODY
(Continuation Sheet)

PAGE 2 OF 2

CLIENT: BIOTECH REMEDIATION INC
P.O. NUMBER
AEN(NM) Accession #: 306027

CLIENT SAMPLE ID	[illegible]	DATE AND TIME	MATRIX	8015/8021						[illegible]	[illegible]
MW-11		6-5-3 1315	H^2O	✓							
MW-08		↓ 1358	↓	✓							
MW-15		1420		✓							
MW-13		1436		✓							
MW-12		1450		✓							
INFLUENT		1520		✓							
EFFLUENT		1526		✓							

SAMPLES RELINQUISHED BY (SIGNATURE)	DATE AND TIME	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE AND TIME
[signature]	6-6-3 0900		
SAMPLES RECEIVED BY (SIGNATURE)	DATE AND TIME		

DISTRIBUTION: White - AEN (NM), Canary - Originator

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **307003**
July 11, 2003

BIOTECH REMEDIATION
501 AIRPORT DRIVE SUITE 104
FARMINGTON, NM 87401

Project Name THRIFTWAY REFINERY
Project Number 810

Attention: TERRY GRIFFIN

On- 07/01/03 Pinnacle Laboratories Inc., (ADHS Lincense No. AZ0643), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: BIOTECH REMEDIATION	PINNACLE ID	: 307003
PROJECT #	: 810	DATE RECEIVED	: 07/01/03
PROJECT NAME	: THRIFTWAY REFINERY	REPORT DATE	: 07/11/03

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
307003 - 01	810-INFLUENT	AQUEOUS	06/30/03
307003 - 02	810-EFFLUENT	AQUEOUS	06/30/03

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

EST : EPA 8021B MODIFIED / 8015B GRO
LIENT : BIOTECH REMEDIATION — PINNACLE I.D. : 307003
ROJECT # : 810 — ANALYST : BP
ROJECT NAME : THRIFTWAY REFINERY

AMPLE D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
–	810-INFLUENT	AQUEOUS	06/30/03	NA	07/03/03	10
	810-EFFLUENT	AQUEOUS	06/30/03	NA	07/03/03	1

ARAMETER	DET. LIMIT	UNITS	810-INFLUENT	810-EFFLUENT
UEL HYDROCARBONS	**50**	**MG/L**	**7.1**	**0.11**
YDROCARBON RANGE			**C6-C10**	**C6-C10**
YDROCARBONS QUANTITATED USING			**GASOLINE**	**GASOLINE**
ENZENE	**0.5**	**UG/L**	**510**	< 0.5
OLUENE	**0.5**	**UG/L**	**310**	**1.3**
THYLBENZENE	**0.5**	**UG/L**	**290**	**1.1**
OTAL XYLENES	**1.0**	**UG/L**	**550**	**4.0**
ETHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**140**	< 2.5
URROGATE:				
ROMOFLUOROBENZENE (%)			111	103
URROGATE LIMITS	(80 - 120)			

EMIST NOTES:
/A

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021B MODIFIED / 8015B GRO	PINNACLE I.D.	: 307003
LANK I.D.	: 070303	DATE EXTRACTED	: N/A
LIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 07/03/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: THRIFTWAY REFINERY	ANALYST	: BP

ARAMETER	UNITS	
UEL HYDROCARBONS	MG/L	<0.050
YDROCARBON RANGE		C6-C10
YDROCARBONS QUANTITATED USING		GASOLINE
ENZENE	UG/L	<0.5
OLUENE	UG/L	<0.5
THYLBENZENE	UG/L	<0.5
OTAL XYLENES	UG/L	<1.0
ETHYL-t-BUTYL ETHER	UG/L	<2.5
URROGATE:		
ROMOFLUOROBENZENE (%)		99
URROGATE LIMITS (80 - 120)		

EMIST NOTES:
A

PINNACLE LABORATORIES

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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 307003
BATCH I.D. #	: 070303	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 07/03/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THRIFTWAY REFINERY	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	20.7	104	20.5	103	1	(80 - 120)	20
TOLUENE	<0.5	20.0	21.0	105	20.9	105	0	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.5	108	21.2	106	1	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	63.3	106	62.2	104	2	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	23.9	120	23.3	117	3	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\%\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 307003
MSMD #	: 307017-01	DATE EXTRACTED	: N/A
LIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 07/03/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: THRIFTWAY REFINERY	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
ENZENE	<0.5	20.0	20.5	103	20.0	100	2	(80 - 120)	20
OLUENE	<0.5	20.0	20.5	103	20.2	101	1	(80 - 120)	20
THYLBENZENE	<0.5	20.0	21.1	106	20.9	105	1	(80 - 120)	20
OTAL XYLENES	<1.0	60.0	62.2	104	61.5	103	1	(80 - 120)	20
ETHYL-t-BUTYL ETHER	<2.5	20.0	22.9	115	22.8	114	0	(70 - 133)	20

HEMIST NOTES:
A

$$\%\text{ Recovery} = \frac{\text{(Spike Sample Result - Sample Result)}}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{\text{(Sample Result - Duplicate Result)}}{\text{Average Result}} \times 100$$

PINNACLE LABORATORIES

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Albuquerque, New Mexico 87107
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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: 8015B GRO	PINNACLE I.D.	: 307003
BATCH I.D. #	: 070303	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 07/03/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THRIFTWAY REFINERY	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<0.050	1.00	0.914	91	0.935	94	2	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							
HYDROCARBONS QUANTITATED USING		GASOLINE							

CHEMIST NOTES:
N/A

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: 8015B GRO	PINNACLE I.D.	: 307003
MSMSD #	: 307003-02	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 07/03/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: THRIFTWAY REFINERY	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	0.11	1.00	0.971	86	0.976	87	1	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							
HYDROCARBONS QUANTITATED USING		GASOLINE							

CHEMIST NOTES:

$$\%\text{ Recovery} = \frac{\text{(Spike Sample Result - Sample Result)}}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{\text{(Sample Result - Duplicate Result)}}{\text{Average Result}} \times 100$$

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 6-30-3 PAGE: 1 OF 1

PROJECT MANAGER:

COMPANY: Biotech Remediation Inc.
ADDRESS: 501 Airport Dr. Suite 109
Formington, NM. 87401
PHONE: 505-327-4965
FAX:
BILL TO:
COMPANY:
ADDRESS:

Sample ID	Date	Time	Matrix	Lab ID	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:
810 - Influent	6-30-3	1020	H2O					✓																				
810 - Effluent	|	10/24	|					✓																				

PROJ. NO.: 810
PROJ. NAME: Thriftway, Refinery
P.O. NO.:
SHIPPED VIA:

(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☐
CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER
METHANOL PRESERVATION ☐
COMMENTS: FIXED FEE ☐

RELINQUISHED BY: 1
Signature: [signature] Time: 1055
Printed Name: Mike Beaupreau Date: 6-30-3
Company: Biotech.
See reverse side (Force Majeure)

RELINQUISHED BY: 2
Signature: Time:
Printed Name: Date:
Company:

Signature: Time:
Printed Name: Date:
Company:

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PINNACLE LABORATORIES

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Fax (505) 344-4413

Pinnacle Lab ID number **308073**
September 08, 2003

BIOTECH REMEDIATION
501 AIRPORT DRIVE SUITE 104
FARMINGTON, NM 87401

Project Name AIRSTRIPPER
Project Number 810

Attention: TERRY GRIFFIN

On 08/15/03 Pinnacle Laboratories Inc., (ADHS Lincense No. AZ0643), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: BIOTECH REMEDIATION	PINNACLE ID	: 308073
PROJECT #	: 810	DATE RECEIVED	: 08/15/03
PROJECT NAME	: AIRSTRIPPER	REPORT DATE	: 09/08/03

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
308073 - 01	810 INFLUENT	AQUEOUS	08/15/03
308073 - 02	810 EFFLUENT	AQUEOUS	08/15/03

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

EST : EPA 8021B MODIFIED / 8015B GRO
LIENT : BIOTECH REMEDIATION — PINNACLE I.D. : 308073
ROJECT # : 810 — ANALYST : BP
OJECT NAME : AIRSTRIPPER

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
—	810 INFLUENT	AQUEOUS	08/15/03	NA	08/21/03	10
	810 EFFLUENT	AQUEOUS	08/15/03	NA	08/21/03	1

RAMETER	DET. LIMIT	UNITS	810 INFLUENT	810 EFFLUENT
UEL HYDROCARBONS	**0.050**	**MG/L**	**1.7**	< 0.050
YDROCARBON RANGE			**C6-C10**	C6-C10
YDROCARBONS QUANTITATED USING			**GASOLINE**	GASOLINE
NZENE	**0.5**	**UG/L**	**40**	< 0.5
OLUENE	**0.5**	**UG/L**	**29**	< 0.5
THYLBENZENE	**0.5**	**UG/L**	**120**	< 0.5
TAL XYLENES	**1.0**	**UG/L**	**190**	< 1.0
THYL-t-BUTYL ETHER	2.5	UG/L	< 25	< 2.5
URROGATE:				
OMOFLUOROBENZENE (%)			108	99
RROGATE LIMITS	(80 - 120)			

EMIST NOTES:
A

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021B MODIFIED / 8015B GRO	PINNACLE I.D.	: 308073
BLANK I.D.	: 082003	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 08/20/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: AIRSTRIPPER	ANALYST	: BP

PARAMETER	UNITS	
FUEL HYDROCARBONS	MG/L	<0.050
HYDROCARBON RANGE		C6-C10
HYDROCARBONS QUANTITATED USING		GASOLINE
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0
METHYL-t-BUTYL ETHER	UG/L	<2.5
SURROGATE:		
BROMOFLUOROBENZENE (%)		101
SURROGATE LIMITS (80 - 120)		

CHEMIST NOTES:
NA

PINNACLE LABORATORIES

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Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 308073
BATCH I.D. #	: 082003	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 08/20/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: AIRSTRIPPER	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	18.2	91	17.9	90	2	(80 - 120)	20
TOLUENE	<0.5	20.0	20.2	101	20.0	100	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.9	110	21.7	109	1	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	64.3	107	63.7	106	1	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	16.8	84	16.7	84	1	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\%\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE LABORATORIES

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Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: 8015B GRO	PINNACLE I.D.	: 308073
BATCH I.D. #	: 082003	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 08/20/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: AIRSTRIPPER	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<0.050	1.00	0.969	97	0.998	100	3	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							
HYDROCARBONS QUANTITATED USING		GASOLINE							

CHEMIST NOTES:
N/A

$$\%\ \text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 308073
MSMSD #	: 308071-01	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 08/20/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: AIRSTRIPPER	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	18.0	90	18.1	91	1	(80 - 120)	20
TOLUENE	<0.5	20.0	20.2	101	21.5	108	6	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.8	109	23.9	120	9	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	64.2	107	68.4	114	6	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	17.2	86	17.6	88	2	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE LABORATORIES

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Albuquerque, New Mexico 87107
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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: 8015B GRO	PINNACLE I.D.	: 308073
MSMSD #	: 308073-02	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 08/21/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: AIRSTRIPPER	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<0.050	1.00	1.07	107	1.02	102	5	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							
HYDROCARBONS QUANTITATED USING		GASOLINE							

CHEMIST NOTES:
NA

$$\%\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: _____ PAGE: ____ OF ____

PROJECT MANAGER: JERRY GRIFFIN

COMPANY: BIOTECH REMEDIATION INC.

ADDRESS: 501 AIRPORT DR. SUITE 104

PHONE: 505-327-4965

FAX:

BILL TO:

COMPANY:

ADDRESS:

				Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:	NUMBER OF CONTAINERS
BIO INFLUENT	8-15-3	0910	H2O				✓																						
BIO EFFLUENT	"	0914	"				✓																						

PROJECT INFORMATION

PROJ. NO.: 810

PROJ. NAME: AIR SPARGER

P.O. NO.:

SHIPPED VIA:

SPECIAL HANDLING OR SPECIAL REPORTING REQUIREMENTS

(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☐

CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

RELINQUISHED BY: 1.

Signature: [signature] Time: 1000

Printed Name: M. BENPARAMI Date: 8-15-03

Company: BIOTECH

See reverse side (Force Majeure)

RELINQUISHED BY: 2.

Signature: Time:

Printed Name: Date:

Company:

RECEIVED BY: 1.

Signature: Time:

Printed Name: Date:

Company:

RECEIVED BY: 2.

PLEASE FILL THIS FORM IN COMPLETELY.

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **310036**
October 22, 2003

BIOTECH REMEDIATION
501 AIRPORT DRIVE SUITE 104
FARMINGTON, NM 87401

Project Name AIRSTRIPPER MONTHLY
Project Number 810

Attention: TERRY GRIFFIN

On 10/03/03 Pinnacle Laboratories Inc., (ADHS Lincense No. AZ0643), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure

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Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: BIOTECH REMEDIATION	PINNACLE ID	: 310036
PROJECT #	: 810	DATE RECEIVED	: 10/03/03
PROJECT NAME	: AIRSTRIPPER MONTHLY	REPORT DATE	: 10/22/03

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
310036 - 01	INFLUENT	AQUEOUS	10/02/03
310036 - 02	EFFLUENT	AQUEOUS	10/02/03

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

ST : EPA 8021B MODIFIED / 8015B GRO
IENT : BIOTECH REMEDIATION — PINNACLE I.D. : 310036
ROJECT # : 810 — ANALYST : BP
ROJECT NAME : AIRSTRIPPER MONTHLY

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
	INFLUENT	AQUEOUS	10/02/03	NA	10/08/03	10
	EFFLUENT	AQUEOUS	10/02/03	NA	10/08/03	1

RAMETER	DET. LIMIT	UNITS	INFLUENT	EFFLUENT
EL HYDROCARBONS	0.10	MG/L	5.2	< 0.10
YDROCARBON RANGE			C6-C10	C6-C10
YDROCARBONS QUANTITATED USING			GASOLINE	GASOLINE
NZENE	0.5	UG/L	370	< 0.5
LUENE	0.5	UG/L	19	< 0.5
THYLBENZENE	0.5	UG/L	270	< 0.5
OTAL XYLENES	1.0	UG/L	340	< 1.0
ETHYL-t-BUTYL ETHER	2.5	UG/L	80	< 2.5
RROGATE:				
ROMOFLUOROBENZENE (%)			112	96
URROGATE LIMITS	(80 - 120)			

EMIST NOTES:
A

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021B MODIFIED / 8015B GRO	PINNACLE I.D.	: 310036
ANK I.D.	: 100703	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 10/07/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: AIRSTRIPPER MONTHLY	ANALYST	: BP

RAMETER	UNITS	
EL HYDROCARBONS	MG/L	<0.10
YDROCARBON RANGE		C6-C10
YDROCARBONS QUANTITATED USING		GASOLINE
NZENE	UG/L	<0.5
LUENE	UG/L	<0.5
THYLBENZENE	UG/L	<0.5
OTAL XYLENES	UG/L	<1.0
ETHYL-t-BUTYL ETHER	UG/L	<2.5
RROGATE:		
ROMOFLUOROBENZENE (%)		99
URROGATE LIMITS (80 - 120)		

EMIST NOTES:
A

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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 310036
BATCH #	: 100703	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 10/07/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: AIRSTRIPPER MONTHLY	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	21.8	109	21.6	108	1	(80 - 120)	20
TOLUENE	<0.5	20.0	21.0	105	21.1	106	0	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	22.3	112	21.4	107	4	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	63.2	105	63.5	106	0	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	21.4	107	21.4	107	0	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\%\text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

EST	: EPA 8015B GRO	PINNACLE I.D.	: 310036
ATCH #	: 100703	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 10/07/03
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: AIRSTRIPPER MONTHLY	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
UEL HYDROCARBONS	<0.10	1.00	0.927	93	0.995	100	7	(70 - 130)	20
YDROCARBON RANGE		C6-C10							
YDROCARBONS QUANTITATED USING		GASOLINE							

EMIST NOTES:
A

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 310036
MSMSD #	: 310035-01	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 10/07/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: AIRSTRIPPER MONTHLY	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	21.9	110	21.9	110	0	(80 - 120)	20
TOLUENE	<0.5	20.0	22.1	111	22.1	111	0	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.8	109	21.9	110	0	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	65.4	109	66.2	110	1	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	22.2	111	22.2	111	0	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\%\text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 310036
MS/MSD #	: 310035-01	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 10/07/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: AIRSTRIPPER MONTHLY	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<0.10	1.00	1.00	100	0.980	98	2	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							
HYDROCARBONS QUANTITATED USING		GASOLINE							

CHEMIST NOTES:
N/A

$$\%\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 10-2-03 PAGE: 1 OF 1

PLL Accession #: 310036

PROJECT MANAGER: Terry Griffin

COMPANY: Biotech Remediation

ADDRESS: 501 Airport Dr. Suite 104

PHONE:

FAX:

BILL TO:

COMPANY:

ADDRESS:

SAMPLES ARE FOR LAB USE ONLY

SAMPLE ID	DATE	TIME	MATRIX	NUMBER OF CONTAINERS
Influent	10-2-3	1031	H2O	1
Effluent	1	1036	1	1

ANALYSIS REQUEST

Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:		
			✓																							
			✓																							

PROJECT INFORMATION

PROJ. NO.: 810

PROJ. NAME: Air Stripper

P.O. NO.: Monthly

SHIPPED VIA:

SAMPLE RECEIPT

TOTAL CONTAINERS:

CONDITION:

COOLER TEMP:

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☐

CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.
Signature: Time: 0900	Signature: Time:
Printed Name: Mike Bernardelli Date: 10-3-3	Printed Name: Date:
Company: Biotech	Company:
See reverse side (Force Majeure)	
RECEIVED BY: 1.	RECEIVED BY: (LAB) 2.
Signature: Time:	Signature: Time:
Printed Name: Date:	Printed Name: Date:
Company:	Company:

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Entered
3/22/04 gd

Pinnacle Lab ID number **311020**
December 02, 2003

BIOTECH REMEDIATION
501 AIRPORT DRIVE SUITE 104
FARMINGTON, NM 87401

Project Name T-WAY REFINERY
Project Number 810

Attention: TERRY GRIFFIN

On 11/05/03 Pinnacle Laboratories Inc., (ADHS Lincense No. AZ0643), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure

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Phone (505) 344-3777
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CLIENT	: BIOTECH REMEDIATION	PINNACLE ID	: 311020
PROJECT #	: 810	DATE RECEIVED	: 11/05/03
PROJECT NAME	: T-WAY REFINERY	REPORT DATE	: 12/02/03

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
311020 - 01	MW-18	AQUEOUS	11/03/03
311020 - 02	MW-05	AQUEOUS	11/03/03
311020 - 03	MW-19	AQUEOUS	11/03/03
311020 - 04	MW-04	AQUEOUS	11/03/03
311020 - 05	MW-06	AQUEOUS	11/03/03
311020 - 06	MW-20	AQUEOUS	11/04/03
311020 - 07	MW-21	AQUEOUS	11/04/03
311020 - 08	MW-22	AQUEOUS	11/04/03
311020 - 09	MW-08	AQUEOUS	11/04/03
311020 - 10	MW-08A	AQUEOUS	11/04/03
311020 - 11	MW-09	AQUEOUS	11/04/03
311020 - 12	MW-10	AQUEOUS	11/04/03
311020 - 13	MW-11	AQUEOUS	11/04/03
311020 - 14	MW-15	AQUEOUS	11/04/03
311020 - 15	MW-13	AQUEOUS	11/04/03
311020 - 16	AIRSTRIPPER INFLUENT	AQUEOUS	11/04/03
311020 - 17	EFFLUENT	AQUEOUS	11/04/03

PINNACLE LABORATORIES

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Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021B MODIFIED
CLIENT : BIOTECH REMEDIATION — PINNACLE I.D. : 311020
PROJECT # : 810 — ANALYST : BP
PROJECT NAME : T-WAY REFINERY

SAMPLE I.D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
[illegible]	MW-20	AQUEOUS	11/04/03	NA	11/18/03	5
[illegible]	AIRSTRIPPER INFLUENT	AQUEOUS	11/04/03	NA	11/18/03	5

PARAMETER	DET. LIMIT	UNITS	MW-20	AIRSTRIPPER INFLUENT
BENZENE	**1.0**	**UG/L**	**3.2**	**190**
TOLUENE	**1.0**	**UG/L**	**< 2.5**	**11**
ETHYLBENZENE	**1.0**	**UG/L**	**< 2.5**	**90**
TOTAL XYLENES	**2.0**	**UG/L**	**5.1**	**72**
METHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**480 - D25**	**81**
SURROGATE:				
BROMOFLUOROBENZENE (%)			97	94
SURROGATE LIMITS	(80 - 120)			

CHEMIST NOTES:
D25 = Reported from a 25X dilution run on 11-18-03.

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 311020
BLANK I.D.	: 111803	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/18/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	ANALYST	: BP

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0
METHYL-t-BUTYL ETHER	UG/L	<2.5
SURROGATE:		
BROMOFLUOROBENZENE (%)		101
SURROGATE LIMITS	(80 - 120)	

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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Albuquerque, New Mexico 87107
Phone (505) 344-3777
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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 311020
BATCH #	: 111803	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/18/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMIT
BENZENE	<0.5	10.0	10.1	101	10.3	103	2	(80 - 120)	20
TOLUENE	<0.5	10.0	9.85	99	9.73	97	1	(80 - 120)	20
ETHYLBENZENE	<0.5	10.0	10.2	102	10.3	103	1	(80 - 120)	20
TOTAL XYLENES	<1.0	30.0	30.8	103	30.9	103	0	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	10.0	9.94	99	9.77	98	2	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE LABORATORIES

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Albuquerque, New Mexico 87107
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Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8260B MODIFIED
CLIENT : BIOTECH REMEDIATION
PROJECT # : 810
PROJECT NAME : T-WAY REFINERY

PINNACLE I.D. : 311020
ANALYST : BP

SAMPLE I.D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	MW-18	AQUEOUS	11/03/03	NA	11/17/03	1
02	MW-05	AQUEOUS	11/03/03	NA	11/17/03	1
03	MW-19	AQUEOUS	11/03/03	NA	11/17/03	1

PARAMETER	DET. LIMIT	UNITS	MW-18	MW-05	MW-19
BENZENE	1.0	UG/L	< 1.0	< 1.0	< 1.0
TOLUENE	1.0	UG/L	< 1.0	< 1.0	< 1.0
ETHYLBENZENE	1.0	UG/L	< 1.0	< 1.0	< 1.0
TOTAL XYLENES	2.0	UG/L	< 2.0	< 2.0	< 2.0
METHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**15**	**26**	**520 - D5**
SURROGATE:					
BROMOFLUOROBENZENE (%)			98	96	97
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
D5 = Reported from a 5X dilution run on 11-17-03.

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8260B MODIFIED
CLIENT : BIOTECH REMEDIATION
PROJECT # : 810
PROJECT NAME : T-WAY REFINERY

PINNACLE I.D. : 311020
ANALYST : BP

SAMPLE I.D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	MW-04	AQUEOUS	11/03/03	NA	11/17/03	1
06	MW-06	AQUEOUS	11/03/03	NA	11/17/03	1

PARAMETER	DET. LIMIT	UNITS	MW-04	MW-06
BENZENE	**1.0**	**UG/L**	**2.1**	< 1.0
TOLUENE	**1.0**	**UG/L**	< 1.0	< 1.0
ETHYLBENZENE	**1.0**	**UG/L**	< 1.0	< 1.0
TOTAL XYLENES	**2.0**	**UG/L**	< 2.0	< 2.0
METHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**17**	**30**
SURROGATE:				
BROMOFLUOROBENZENE (%)			97	94
SURROGATE LIMITS	(80 - 120)			

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8260B MODIFIED
CLIENT : BIOTECH REMEDIATION — PINNACLE I.D. : 311020
PROJECT # : 810 — ANALYST : BP
PROJECT NAME : T-WAY REFINERY

SAMPLE I.D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
17	MW-21	AQUEOUS	11/04/03	NA	11/17/03	1
18	MW-22	AQUEOUS	11/04/03	NA	11/17/03	1
19	MW-08	AQUEOUS	11/04/03	NA	11/17/03	1

PARAMETER	DET. LIMIT	UNITS	MW-21	MW-22	MW-08
BENZENE	1.0	UG/L	< 1.0	< 1.0	< 1.0
TOLUENE	1.0	UG/L	< 1.0	< 1.0	< 1.0
ETHYLBENZENE	1.0	UG/L	< 1.0	< 1.0	< 1.0
TOTAL XYLENES	2.0	UG/L	< 2.0	< 2.0	< 2.0
METHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**25**	**11**	**170**
SURROGATE:					
BROMOFLUOROBENZENE (%)			94	90	91
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8260B MODIFIED
CLIENT : BIOTECH REMEDIATION
PROJECT # : 810
PROJECT NAME : T-WAY REFINERY

PINNACLE I.D. : 311020
ANALYST : BP

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
10	MW-08A	AQUEOUS	11/04/03	NA	11/17/03	1
11	MW-09	AQUEOUS	11/04/03	NA	11/18/03	1
12	MW-10	AQUEOUS	11/04/03	NA	11/18/03	1

PARAMETER	DET. LIMIT	UNITS	MW-08A	MW-09	MW-10
BENZENE	1.0	UG/L	< 1.0	< 1.0	< 1.0
TOLUENE	1.0	UG/L	< 1.0	< 1.0	< 1.0
ETHYLBENZENE	1.0	UG/L	< 1.0	< 1.0	< 1.0
TOTAL XYLENES	2.0	UG/L	< 2.0	< 2.0	< 2.0
METHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**170**	< 2.5	< 2.5
SURROGATE:					
BROMOFLUOROBENZENE (%)			89	99	98
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8260B MODIFIED
CLIENT : BIOTECH REMEDIATION
PROJECT # : 810
PROJECT NAME : T-WAY REFINERY

PINNACLE I.D. : 311020
ANALYST : BP

SAMPLE I.D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
13	MW-11	AQUEOUS	11/04/03	NA	11/18/03	1
14	MW-15	AQUEOUS	11/04/03	NA	11/18/03	1
15	MW-13	AQUEOUS	11/04/03	NA	11/18/03	1

PARAMETER	DET. LIMIT	UNITS	MW-11	MW-15	MW-13
BENZENE	1.0	UG/L	< 1.0	< 1.0	< 1.0
TOLUENE	1.0	UG/L	< 1.0	< 1.0	< 1.0
ETHYLBENZENE	1.0	UG/L	< 1.0	< 1.0	< 1.0
TOTAL XYLENES	2.0	UG/L	< 2.0	< 2.0	< 2.0
METHYL-t-BUTYL ETHER	2.5	UG/L	< 2.5	< 2.5	< 2.5
SURROGATE:					
BROMOFLUOROBENZENE (%)			103	96	95
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
NA

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GAS CHROMATOGRAPHY RESULTS

EST : EPA 8260B MODIFIED
LIENT : BIOTECH REMEDIATION
ROJECT # : 810
ROJECT NAME : T-WAY REFINERY

PINNACLE I.D. : 311020
ANALYST : BP

AMPLE D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
17	EFFLUENT	AQUEOUS	11/04/03	NA	11/18/03	1

ARAMETER	DET. LIMIT	UNITS	EFFLUENT
ENZENE	1.0	UG/L	< 1.0
OLUENE	1.0	UG/L	< 1.0
THYLBENZENE	1.0	UG/L	< 1.0
OTAL XYLENES	2.0	UG/L	< 2.0
ETHYL-t-BUTYL ETHER	2.5	UG/L	< 2.5

URROGATE:
ROMOFLUOROBENZENE (%) 96
URROGATE LIMITS (80 - 120)

HEMIST NOTES:
/A

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8260B MODIFIED	PINNACLE I.D.	: 311020
BLANK I.D.	: 111703E	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/17/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	ANALYST	: BP

PARAMETER	UNITS	
BENZENE	UG/L	<1.0
TOLUENE	UG/L	<1.0
ETHYLBENZENE	UG/L	<1.0
TOTAL XYLENES	UG/L	<2.0
METHYL-t-BUTYL ETHER	UG/L	<2.5

SURROGATE:
BROMOFLUOROBENZENE (%) 96
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8260B MODIFIED	PINNACLE I.D.	: 311020
BLANK I.D.	: 111803E	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/18/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	ANALYST	: BP

PARAMETER	UNITS	
BENZENE	UG/L	<1.0
TOLUENE	UG/L	<1.0
ETHYLBENZENE	UG/L	<1.0
TOTAL XYLENES	UG/L	<2.0
METHYL-t-BUTYL ETHER	UG/L	<2.5
SURROGATE:		
BROMOFLUOROBENZENE (%)		97
SURROGATE LIMITS	(80 - 120)	

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8260B MODIFIED	PINNACLE I.D.	: 311020
BLANK I.D.	: 111703A	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/17/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	ANALYST	: BP

PARAMETER	UNITS	
BENZENE	UG/L	<1.0
TOLUENE	UG/L	<1.0
ETHYLBENZENE	UG/L	<1.0
TOTAL XYLENES	UG/L	<2.0
METHYL-t-BUTYL ETHER	UG/L	<2.5

SURROGATE:
BROMOFLUOROBENZENE (%) 99
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8260B MODIFIED	PINNACLE I.D.	: 311020
BATCH #	: 111703E	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/17/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMIT
BENZENE	<1.0	20.0	19.8	99	19.3	97	3	(80 - 120)	20
TOLUENE	<1.0	20.0	19.4	97	18.8	94	3	(80 - 120)	20
ETHYLBENZENE	<1.0	20.0	20.2	101	19.8	99	2	(80 - 120)	20
TOTAL XYLENES	<2.0	60.0	60.1	100	58.7	98	2	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	20.0	100	19.3	97	4	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8260B MODIFIED	PINNACLE I.D.	: 311020
BATCH #	: 111803E	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/18/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMIT
BENZENE	<1.0	20.0	19.3	97	19.5	98	1	(80 - 120)	20
TOLUENE	<1.0	20.0	19.1	96	19.0	95	1	(80 - 120)	20
ETHYLBENZENE	<1.0	20.0	19.9	100	19.9	100	0	(80 - 120)	20
TOTAL XYLENES	<2.0	60.0	58.4	97	58.1	97	1	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	20.0	100	19.8	99	1	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\%\ \text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8260B MODIFIED	PINNACLE I.D.	: 311020
BATCH #	: 111703A	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/17/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<1.0	20.0	19.9	100	19.8	99	1	(80 - 120)	20
TOLUENE	<1.0	20.0	19.7	99	19.5	98	1	(80 - 120)	20
ETHYLBENZENE	<1.0	20.0	20.0	100	20.1	101	0	(80 - 120)	20
TOTAL XYLENES	<2.0	60.0	59.4	97	59.7	100	1	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	20.1	101	20.0	100	0	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8260B MODIFIED	PINNACLE I.D.	: 311020
MSMSD #	: 311020-01	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/17/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<1.0	20.0	20.7	104	20.8	104	0	(80 - 120)	20
TOLUENE	<1.0	20.0	19.6	98	19.5	98	1	(80 - 120)	20
ETHYLBENZENE	<1.0	20.0	20.4	102	20.4	102	0	(80 - 120)	20
TOTAL XYLENES	<2.0	60.0	60.2	100	59.3	99	2	(80 - 120)	20
METHYL-t-BUTYL ETHER	15	20.0	33.9	95	33.1	91	2	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015B GRO
CLIENT : BIOTECH REMEDIATION
PROJECT # : 810
PROJECT NAME : T-WAY REFINERY

PINNACLE I.D. : 311020
ANALYST : BP

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	MW-18	AQUEOUS	11/03/03	NA	11/17/03	1
02	MW-05	AQUEOUS	11/03/03	NA	11/17/03	1
03	MW-19	AQUEOUS	11/03/03	NA	11/17/03	1

PARAMETER	DET. LIMIT	UNITS	MW-18	MW-05	MW-19
FUEL HYDROCARBONS	**0.10**	**MG/L**	**0.13**	**0.11**	**0.83**
HYDROCARBON RANGE			**C6-C10**	**C6-C10**	**C6-C10**
HYDROCARBONS QUANTITATED USING			**GASOLINE**	**GASOLINE**	**GASOLINE**

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015B GRO
CLIENT : BIOTECH REMEDIATION — PINNACLE I.D. : 311020
PROJECT # : 810 — ANALYST : BP
PROJECT NAME : T-WAY REFINERY

SAMPLE I.D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	MW-04	AQUEOUS	11/03/03	NA	11/17/03	1
06	MW-06	AQUEOUS	11/03/03	NA	11/17/03	1
20	MW-20	AQUEOUS	11/04/03	NA	11/18/03	5

PARAMETER	DET. LIMIT	UNITS	MW-04	MW-06	MW-20
FUEL HYDROCARBONS	**0.10**	**MG/L**	**0.17**	**0.11**	**1.8**
HYDROCARBON RANGE			**C6-C10**	**C6-C10**	**C6-C10**
HYDROCARBONS QUANTITATED USING			**GASOLINE**	**GASOLINE**	**GASOLINE**

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS

EST : EPA 8015B GRO
LIENT : BIOTECH REMEDIATION
ROJECT # : 810
ROJECT NAME : T-WAY REFINERY

PINNACLE I.D. : 311020
ANALYST : BP

AMPLE D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
7	MW-21	AQUEOUS	11/04/03	NA	11/17/03	1
8	MW-22	AQUEOUS	11/04/03	NA	11/17/03	1
	MW-08	AQUEOUS	11/04/03	NA	11/17/03	1

ARAMETER	DET. LIMIT	UNITS	MW-21	MW-22	MW-08
UEL HYDROCARBONS	**0.10**	**MG/L**	< 0.10	< 0.10	**0.30**
YDROCARBON RANGE			C6-C10	C6-C10	**C6-C10**
YDROCARBONS QUANTITATED USING			GASOLINE	GASOLINE	**GASOLINE**

HEMIST NOTES:
/A

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015B GRO
CLIENT : BIOTECH REMEDIATION — PINNACLE I.D. : 311020
PROJECT # : 810 — ANALYST : BP
PROJECT NAME : T-WAY REFINERY

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
10	MW-08A	AQUEOUS	11/04/03	NA	11/17/03	1
11	MW-09	AQUEOUS	11/04/03	NA	11/17/03	1
12	MW-10	AQUEOUS	11/04/03	NA	11/17/03	1

PARAMETER	DET. LIMIT	UNITS	MW-08A	MW-09	MW-10
FUEL HYDROCARBONS	**0.10**	**MG/L**	**0.28**	< 0.10	< 0.10
HYDROCARBON RANGE			**C6-C10**	C6-C10	C6-C10
HYDROCARBONS QUANTITATED USING			**GASOLINE**	GASOLINE	GASOLINE

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015B GRO
CLIENT : BIOTECH REMEDIATION
PROJECT # : 810
PROJECT NAME : T-WAY REFINERY

PINNACLE I.D. : 311020
ANALYST : BP

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
13	MW-11	AQUEOUS	11/04/03	NA	11/17/03	1
14	MW-15	AQUEOUS	11/04/03	NA	11/17/03	1
15	MW-13	AQUEOUS	11/04/03	NA	11/18/03	1

PARAMETER	DET. LIMIT	UNITS	MW-11	MW-15	MW-13
FUEL HYDROCARBONS	**0.10**	**MG/L**	**0.14**	< 0.10	< 0.10
HYDROCARBON RANGE			**C6-C10**	C6-C10	C6-C10
HYDROCARBONS QUANTITATED USING			**GASOLINE**	GASOLINE	GASOLINE

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015B GRO
CLIENT : BIOTECH REMEDIATION
PROJECT # : 810
PROJECT NAME : T-WAY REFINERY

PINNACLE I.D. : 311020
ANALYST : BP

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
16	AIRSTRIPPER INFLUENT	AQUEOUS	11/04/03	NA	11/18/03	20
17	EFFLUENT	AQUEOUS	11/04/03	NA	11/18/03	1

PARAMETER	DET. LIMIT	UNITS	AIRSTRIPPER INFLUENT	EFFLUENT
FUEL HYDROCARBONS	**0.10**	**MG/L**	**3.5**	< 0.10
HYDROCARBON RANGE			**C6-C10**	C6-C10
HYDROCARBONS QUANTITATED USING			**GASOLINE**	GASOLINE

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 311020
BLANK I.D.	: 111603	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/16/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	ANALYST	: BP

PARAMETER	UNITS	
FUEL HYDROCARBONS	MG/L	<0.10
HYDROCARBON RANGE		C6-C10
HYDROCARBONS QUANTITATED USING		GASOLINE

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
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Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 311020
BLANK I.D.	: 111703A	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/17/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	ANALYST	: BP

PARAMETER	UNITS	
FUEL HYDROCARBONS	MG/L	<0.10
HYDROCARBON RANGE		C6-C10
HYDROCARBONS QUANTITATED USING		GASOLINE

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 311020
BATCH #	: 111603	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/16/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMIT
FUEL HYDROCARBONS	<0.10	1.00	0.950	95	0.945	95	1	(70-130)	20
HYDROCARBON RANGE		C6-C10							

HYDROCARBONS QUANTITATED USING GASOLINE

CHEMIST NOTES:
N/A

$$\frac{\text{(Spike Sample Result - Sample Result)}}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{\text{(Sample Result - Duplicate Result)}}{\text{Average Result}} \times 100$$

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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 311020
BATCH #	: 111703A	DATE EXRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/17/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMIT
FUEL HYDROCARBONS	<0.10	1.00	0.914	91	0.898	90	2	(70-130)	20
HYDROCARBON RANGE		C6-C10							

HYDROCARBONS QUANTITATED USING GASOLINE

CHEMIST NOTES:
N/A

$$\frac{\text{(Spike Sample Result - Sample Result)}}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{\text{(Sample Result - Duplicate Result)}}{\text{Average Result}} \times 100$$

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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 311020
MSMSD #	: 311020-07	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 11/17/03
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<0.10	1.00	0.919	92	0.948	95	3	(70-130)	20
HYDROCARBON RANGE		C6-C10							
HYDROCARBONS QUANTITATED USING GASOLINE									

CHEMIST NOTES:
N/A

$$\frac{\text{(Spike Sample Result - Sample Result)}}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{\text{(Sample Result - Duplicate Result)}}{\text{Average Result}} \times 100$$

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 11-3-03 PAGE: 1 OF 2

PLI Accession #: 311020

SHADED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: Terry Griffin

COMPANY: Biotech Remediation Inc.
ADDRESS: 501 Airport Dr. Suite 109
Farmington, N.M. 87401
PHONE: 505-327-4965
FAX:
BILL TO:
COMPANY:
ADDRESS:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐/DBCP ☐	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics ☐PBMS	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method1311)	Metals:		NUMBER OF CONTAINERS
MW-18	11-3-3	1403	H2O					✓				-																		2
MW-~~06~~ 05		1427						✓																						2
MW-19		1456						✓																						2
MW-01		1521						✓																						2
MW-06		1540						✓																						2
MW-20	11-4-3	1003	-					✓																						2
MW-21		1032						✓																						2
MW-22		1055						✓																						2
MW-08		1143						✓																						2
MW-08A		1143						✓																						2

WEEKEND ANALYSES MAY RESULT IN AN ADDITIONAL SURCHARGE - PLEASE INQUIRE.

PROJECT INFORMATION

PROJ. NO.: 810
PROJ. NAME: T-Way Refinery
P.O. NO.:
SHIPPED VIA:

SAMPLE RECEIPT

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐24hr* ☐48hr* ☐72hr* ☐ 1 WEEK (NORMAL) ☐
*NOT AVAILABLE ON ALL ANALYSES

CERTIFICATION REQUIRED ☐ NM ☐ SDWA ☐ AZ ☐ OTHER

METHANOL PRESERVATION ☐ | METALS ☐ TOTAL ☐ DISSOLVED

COMMENTS:

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.
Signature: Time: 0830	Signature: Time:
Printed Name: Mike Beaumont Date: 11-5-3	Printed Name: Date:
Company: Biotech-I	Company:
See Reverse side (Force Majeure)	
RECEIVED BY: 1.	**RECEIVED BY: (LAB) 2.**
Signature: Time:	Signature: Time: 1740
Printed Name: Date:	Printed Name: Date: 11-5-03
Company:	

American Environmental Network (NM), Inc.

CHAIN OF CUSTODY

(Continuation Sheet)

PAGE 2 OF 2

CLIENT: BIOTECH

P.O. NUMBER: SITE - 810

AEN(NM) Accession #: 311020

CLIENT SAMPLE ID	LAB ID	DATE AND TIME	MATRIX	ANALYSIS NUMBERS: 8015	8081					BOTTLE TYPE & NO.	PRESERVATIVE
MW-09		11-4-3 1200	H_2O	✓	✓						
MW-10		1216		✓	✓						
MW-11		1231		✓	✓						
MW-15		1251		✓	✓						
MW-13 (12)		1353		✓	✓						
AIRSTRIPPER INFLUENT		1410		✓	✓						
EFLUENT		1416		✓	✓						

SAMPLES RELINQUISHED BY (SIGNATURE)	DATE AND TIME	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE AND TIME
	11-5-3 0830		
SAMPLES RECEIVED BY (SIGNATURE)	DATE AND TIME		

DISTRIBUTION: White - AEN (NM), Canary - Originato:

PINNACLE LABORATORIES

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Pinnacle Lab ID number **312103**
January 15, 2004

BIOTECH REMEDIATION
501 AIRPORT DRIVE SUITE 104
FARMINGTON, NM 87401

Project Name AIRSTRIPPER
Project Number 810

Attention: TERRY GRIFFIN

On 12/30/03 Pinnacle Laboratories Inc., (ADHS Lincense No. AZ0643), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure

PINNACLE LABORATORIES

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Albuquerque, New Mexico 87107
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Fax (505) 344-4413

CLIENT	: BIOTECH REMEDIATION	PINNACLE ID	: 312103
PROJECT #	: 810	DATE RECEIVED	: 12/30/03
PROJECT NAME	: AIRSTRIPPER	REPORT DATE	: 01/15/04

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
312103 - 01	INFLUENT	AQUEOUS	12/23/03
312103 - 02	EFFLUENT	AQUEOUS	12/23/03
312103 - 03	TRIP BLANK D	AQUEOUS	11/24/03

PINNACLE LABORATORIES

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Phone (505) 344-3777
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GAS CHROMATOGRAPHY RESULTS

ST : EPA 8021B MODIFIED / 8015B GRO
IENT : BIOTECH REMEDIATION — PINNACLE I.D. : 312103
ROJECT # : 810 — ANALYST : BP
ROJECT NAME : AIRSTRIPPER

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED		DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
1	INFLUENT	AQUEOUS	12/23/03		NA	01/02/04	10
2	EFFLUENT	AQUEOUS	12/23/03		NA	01/02/04	1
3	TRIP BLANK D	AQUEOUS	11/24/03	T1	NA	01/02/04	1

RAMETER	DET. LIMIT	UNITS	INFLUENT	EFFLUENT	TRIP BLANK D
UEL HYDROCARBONS	**0.10**	**MG/L**	**10**	**0.11**	< 0.10
YDROCARBON RANGE			**C6-C10**	**C6-C10**	C6-C10
YDROCARBONS QUANTITATED USING			**GASOLINE**	**GASOLINE**	GASOLINE
NZENE	**0.5**	**UG/L**	**610**	**0.9**	< 0.5
OLUENE	**0.5**	**UG/L**	**1200**	**5.3**	< 0.5
THYLBENZENE	**0.5**	**UG/L**	**450**	**1.5**	< 0.5
OTAL XYLENES	**1.0**	**UG/L**	**950**	**5.4**	< 1.0
ETHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**140**	**3.1**	< 2.5
URROGATE:					
ROMOFLUOROBENZENE (%)			94	102	100
RROGATE LIMITS	(80 - 120)				

EMIST NOTES:
A

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021B MODIFIED / 8015B GRO	PINNACLE I.D.	: 312103
ANK I.D.	: 010204	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/02/04
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: AIRSTRIPPER	ANALYST	: BP

RAMETER	UNITS	
EL HYDROCARBONS	MG/L	<0.10
YDROCARBON RANGE		C6-C10
YDROCARBONS QUANTITATED USING		GASOLINE
NZENE	UG/L	<0.5
LUENE	UG/L	<0.5
HYLBENZENE	UG/L	<0.5
TAL XYLENES	UG/L	<1.0
ETHYL-t-BUTYL ETHER	UG/L	<2.5
RROGATE:		
OMOFLUOROBENZENE (%)		103
URROGATE LIMITS (80 - 120)		

HEMIST NOTES:
/A

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

EST	: EPA 8015B GRO	PINNACLE I.D.	: 312103
ATCH #	: 010204	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/02/04
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: AIRSTRIPPER	UNITS	: MG/L

ARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMIT
UEL HYDROCARBONS	<0.10	1.00	1.01	101	1.02	102	1	(70-130)	20
YDROCARBON RANGE		C6-C10							

YDROCARBONS QUANTITATED USING GASOLINE

HEMIST NOTES:
/A

$$\frac{\text{(Spike Sample Result - Sample Result)}}{\text{Spike Concentration}} \times 100$$

$$\text{PD (Relative Percent Difference)} = \frac{\text{(Sample Result - Duplicate Result)}}{\text{Average Result}} \times 100$$

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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

EST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 312103
ATCH #	: 010204	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/02/04
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: AIRSTRIPPER	UNITS	: UG/L

RAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
ENZENE	<0.5	20.0	21.2	106	21.6	108	2	(80 - 120)	20
OLUENE	<0.5	20.0	20.3	102	20.5	103	1	(80 - 120)	20
HYLBENZENE	<0.5	20.0	20.5	103	20.8	104	1	(80 - 120)	20
OTAL XYLENES	<1.0	60.0	60.2	100	61.0	102	1	(80 - 120)	20
ETHYL-t-BUTYL ETHER	<2.5	20.0	13.2	66-**M4**	21.6	108	48-**M3**	(70 - 133)	20

EMIST NOTES:
3 = RPD is outside of PLI criteria.
4 = % REC is outside of PLI criteria.

$$\text{Recovery} = \frac{\text{(Spike Sample Result - Sample Result)}}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{\text{(Sample Result - Duplicate Result)}}{\text{Average Result}} \times 100$$

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GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 312103
MSMSD #	: 312103-02	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/04/04 **H2**
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: AIRSTRIPPER	UNITS	: MG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	0.11	1.00	1.08	97	1.13	102	5	(70-130)	20
HYDROCARBON RANGE		C6-C10							

HYDROCARBONS QUANTITATED USING GASOLINE

CHEMIST NOTES:
H2 = MS/MSD was run past the 12 hour shift clock.

$$\frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 312103
MSMSD #	: 312103-02	DATE EXTRACTED	: N/A
CLIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/04/04 **H2**
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: AIRSTRIPPER	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	0.9	20.0	21.6	104	21.0	101	3	(80 - 120)	20
TOLUENE	5.3	20.0	25.1	99	25.6	102	2	(80 - 120)	20
ETHYLBENZENE	1.5	20.0	21.6	101	20.7	96	4	(80 - 120)	20
TOTAL XYLENES	5.4	60.0	64.5	99	62.7	96	3	(80 - 120)	20
METHYL-t-BUTYL ETHER	3.1	20.0	23.2	101	23.0	100	1	(70 - 133)	20

CHEMIST NOTES:
H2 = MS/MSD was run past the 12 hour shift clock.

$$\%\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: ________ PAGE: ____ OF ____

PLI Accession #: 312/31/c/ R

PROJECT MANAGER: Terry Griffin

COMPANY: Biotech Remediation
ADDRESS: 501 Airport Dr
Farmington, NM 87401
PHONE:
FAX:
BILL TO:
COMPANY:
ADDRESS:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject		(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐		8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:		NUMBER OF CONTAINERS
Influent	12-23-3	1100	H2O						✓																								
Effluent	/	1107	/						✓																								
Trip Blank D	1124	1500	Aq						X																								

PROJECT INFORMATION

PROJ. NO.: 810
PROJ. NAME: Air Stripper
P.O. NO.:
SHIPPED VIA: Bus

SAMPLE RECEIPT
NO. CONTAINERS
CUSTODY SEALS
RECEIVED INTACT
BLUE ICE/ICE

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☐
CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER
METHANOL PRESERVATION ☐
COMMENTS: FIXED FEE ☐

on ice

RELINQUISHED BY: 1.		RELINQUISHED BY: 2.	
Signature: [signature]	Time: 0900	Signature:	Time:
Printed Name: Mike Benavides	Date: 12-30-3	Printed Name:	Date:
Company: Biotech		Company:	
See reverse side (Force Majeure)			
RECEIVED BY: 1.		**RECEIVED BY: (LAB) 2.**	
Signature:	Time:	Signature: [signature]	Time: 1615
Printed Name:	Date:	Printed Name: [illegible]	Date: 12/31/03
Company:		Pinnacle Laboratories Inc.	

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PINNACLE LABORATORIES

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Albuquerque, New Mexico 87107
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Fax (505) 344-4413

Pinnacle Lab ID number **401053**
February 09, 2004

BIOTECH REMEDIATION
501 AIRPORT DRIVE SUITE 104
FARMINGTON, NM 87401

Project Name T-WAY REFINERY
Project Number 810

Attention: TERRY GRIFFIN

On- 01/21/04 Pinnacle Laboratories Inc., (ADHS Lincense No. AZ0643), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

EPA method 8021 and pH analyses were performed by Pinnacle Laboratories, Inc. Albuquerque, NM.

EPA method 8270 SIMS analyses were performed by Environmental Services Laboratory, Inc. Portland, OR.

All remaining analyses were performed by Severn Trent Laboratories, Inc. Pensacola, FL.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: BIOTECH REMEDIATION	PINNACLE ID	: 401053
PROJECT #	: 810	DATE RECEIVED	: 01/21/04
PROJECT NAME	: T-WAY REFINERY	REPORT DATE	: 02/09/04

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
401053 - 01	MW-18	AQUEOUS	01/19/04
401053 - 02	MW-5	AQUEOUS	01/19/04
401053 - 03	MW-19	AQUEOUS	01/19/04
401053 - 04	MW-4	AQUEOUS	01/19/04
401053 - 05	MW-6	AQUEOUS	01/19/04
401053 - 06	MW-7	AQUEOUS	01/19/04
401053 - 07	MW-9	AQUEOUS	01/19/04
401053 - 08	MW-10	AQUEOUS	01/19/04
401053 - 09	MW-20	AQUEOUS	01/20/04
401053 - 10	MW-21	AQUEOUS	01/20/04
401053 - 11	MW-22	AQUEOUS	01/20/04
401053 - 12	MW-11	AQUEOUS	01/20/04
401053 - 13	MW-15	AQUEOUS	01/20/04
401053 - 14	MW-13	AQUEOUS	01/20/04
401053 - 15	MW-12	AQUEOUS	01/20/04
401053 - 16	INFLUENT	AQUEOUS	01/20/04
401053 - 17	EFFLUENT	AQUEOUS	01/20/04
401053 - 18	TRIP BLANK	AQUEOUS	12/30/03

PINNACLE LABORATORIES

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Albuquerque, New Mexico 87107
Phone (505) 344-3777
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GENERAL CHEMISTRY RESULTS

IENT	: BIOTECH REMEDIATION	PINNACLE I.D.	: 401053
ROJECT #	: 810	DATE RECEIVED	: 01/21/04
ROJECT NAME	: T-WAY REFINERY	ANALYST	: BP

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE ANALYZED
1	MW-18	AQUEOUS	01/19/04	01/21/04
2	MW-5	AQUEOUS	01/19/04	01/21/04
	MW-19	AQUEOUS	01/19/04	01/21/04

ARAMETER	UNITS	MW-18	MW-5	MW-19
H (150.1)	UNITS	7.5	7.8	7.1

EMIST NOTES:
/A

PINNACLE LABORATORIES

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GENERAL CHEMISTRY RESULTS

LIENT	: BIOTECH REMEDIATION	PINNACLE I.D.	: 401053
ROJECT #	: 810	DATE RECEIVED	: 01/21/04
ROJECT NAME	: T-WAY REFINERY	ANALYST	: BP

AMPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE ANALYZED
14	MW-4	AQUEOUS	01/19/04	01/21/04
5	MW-6	AQUEOUS	01/19/04	01/21/04
	MW-7	AQUEOUS	01/19/04	01/21/04

ARAMETER	UNITS	MW-4	MW-6	MW-7
H (150.1)	UNITS	7.2	7.5	7.0

HEMIST NOTES:
/A

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GENERAL CHEMISTRY RESULTS

LIENT	: BIOTECH REMEDIATION	PINNACLE I.D.	: 401053
ROJECT #	: 810	DATE RECEIVED	: 01/21/04
ROJECT NAME	: T-WAY REFINERY	ANALYST	: BP

AMPLE D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE ANALYZED
17	MW-9	AQUEOUS	01/19/04	01/21/04
18	MW-10	AQUEOUS	01/19/04	01/21/04
19	MW-20	AQUEOUS	01/20/04	01/21/04

ARAMETER	UNITS	MW-9	MW-10	MW-20
H (150.1)	UNITS	7.4	7.4	7.2

HEMIST NOTES:
/A

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GENERAL CHEMISTRY RESULTS

LIENT	: BIOTECH REMEDIATION	PINNACLE I.D.	: 401053
ROJECT #	: 810	DATE RECEIVED	: 01/21/04
ROJECT NAME	: T-WAY REFINERY	ANALYST	: BP

AMPLE D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE ANALYZED
0	MW-21	AQUEOUS	01/20/04	01/21/04
	MW-22	AQUEOUS	01/20/04	01/21/04
2	MW-11	AQUEOUS	01/20/04	01/21/04

ARAMETER	UNITS	MW-21	MW-22	MW-11
H (150.1)	UNITS	7.0	6.9	7.6

HEMIST NOTES:
/A

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GENERAL CHEMISTRY RESULTS

IENT	: BIOTECH REMEDIATION	PINNACLE I.D.	: 401053
ROJECT #	: 810	DATE RECEIVED	: 01/21/04
ROJECT NAME	: T-WAY REFINERY	ANALYST	: BP

AMPLE D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE ANALYZED
3	MW-15	AQUEOUS	01/20/04	01/21/04
	MW-13	AQUEOUS	01/20/04	01/21/04
5	MW-12	AQUEOUS	01/20/04	01/21/04

ARAMETER	UNITS	MW-15	MW-13	MW-12
H (150.1)	UNITS	7.4	7.2	7.2

HEMIST NOTES:
/A

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GENERAL CHEMISTRY RESULTS

IENT	: BIOTECH REMEDIATION	PINNACLE I.D.	: 401053
ROJECT #	: 810	DATE RECEIVED	: 01/21/04
ROJECT NAME	: T-WAY REFINERY	ANALYST	: BP

AMPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE ANALYZED
6	INFLUENT	AQUEOUS	01/20/04	01/21/04
7	EFFLUENT	AQUEOUS	01/20/04	01/21/04

RAMETER	UNITS	INFLUENT	EFFLUENT
H (150.1)	UNITS	6.9	2.3

HEMIST NOTES:
A

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GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT	: BIOTECH REMEDIATION	PINNACLE I.D.	: 401053
PROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: T-WAY REFINERY	DATE ANALYZED	: 01/21/04

PARAMETER	UNITS	PINNACLE I.D.	SAMPLE RESULT	DUP. RESULT	% RPD
PH	UNITS	401053-09	7.17	7.18	0

CHEMIST NOTES:
NA

$$\%\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY RESULTS

ST : EPA 8021B MODIFIED
IENT : BIOTECH REMEDIATION — PINNACLE I.D. : 401053
ROJECT # : 810 — ANALYST : BP
ROJECT NAME : T-WAY REFINERY

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
1	MW-18	AQUEOUS	01/19/04	NA	01/22/04	1
2	MW-5	AQUEOUS	01/19/04	NA	01/22/04	1
	MW-19	AQUEOUS	01/19/04	NA	01/26/04	1

RAMETER	DET. LIMIT	UNITS	MW-18	MW-5	MW-19
ENZENE	**0.5**	**UG/L**	**0.7**	**3.8**	**0.6**
OLUENE	**0.5**	**UG/L**	< 0.5	**0.9**	< 0.5
THYLBENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TAL XYLENES	**1.0**	**UG/L**	< 1.0	**1.4**	**1.7**
ETHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**18**	**44**	**310 - D5**
URROGATE:					
OMOFLUOROBENZENE (%)			102	104	114
URROGATE LIMITS	(80 - 120)				

EMIST NOTES:
5 = Reported from a 5X dilution run on 01-26-03.

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GAS CHROMATOGRAPHY RESULTS

EST : EPA 8021B MODIFIED
LIENT : BIOTECH REMEDIATION — PINNACLE I.D. : 401053
ROJECT # : 810 — ANALYST : BP
ROJECT NAME : T-WAY REFINERY

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
4	MW-4	AQUEOUS	01/19/04	NA	01/22/04	1
	MW-6	AQUEOUS	01/19/04	NA	01/22/04	1
	MW-7	AQUEOUS	01/19/04	NA	01/25/04	1

ARAMETER	DET. LIMIT	UNITS	MW-4	MW-6	MW-7
ENZENE	**0.5**	**UG/L**	**2.2**	< 0.5	< 0.5
OLUENE	**0.5**	**UG/L**	**0.6**	**0.7**	< 0.5
HYLBENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
OTAL XYLENES	**1.0**	**UG/L**	**1.3**	< 1.0	**1.6**
ETHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**27**	**9.2**	**210 - D10**
RROGATE:					
ROMOFLUOROBENZENE (%)			102	102	105
URROGATE LIMITS	(80 - 120)				

EMIST NOTES:
0 = Reported from a 10X dilution run on 01-25-03.

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY RESULTS

EST : EPA 8021B MODIFIED
LIENT : BIOTECH REMEDIATION — PINNACLE I.D. : 401053
ROJECT # : 810 — ANALYST : BP
ROJECT NAME : T-WAY REFINERY

AMPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
7	MW-9	AQUEOUS	01/19/04	NA	01/22/04	1
8	MW-10	AQUEOUS	01/19/04	NA	01/23/04	1
9	MW-20	AQUEOUS	01/20/04	NA	01/26/04	1

ARAMETER	DET. LIMIT	UNITS	MW-9	MW-10	MW-20
ENZENE	**0.5**	**UG/L**	< 0.5	< 0.5	**2.8**
OLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
HYLBENZENE	**0.5**	**UG/L**	< 0.5	< 0.5	**1.4**
TAL XYLENES	**1.0**	**UG/L**	< 1.0	< 1.0	**3.3**
ETHYL-t-BUTYL ETHER	**2.5**	**UG/L**	< 2.5	< 2.5	**680 - D5**
URROGATE:					
OMOFLUOROBENZENE (%)			103	101	112
URROGATE LIMITS	(80 - 120)				

EMIST NOTES:
5 = Reported from a 5X dilution run on 01-26-03.

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GAS CHROMATOGRAPHY RESULTS

EST : EPA 8021B MODIFIED
LIENT : BIOTECH REMEDIATION — PINNACLE I.D. : 401053
ROJECT # : 810 — ANALYST : BP
ROJECT NAME : T-WAY REFINERY

AMPLE D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
0	MW-21	AQUEOUS	01/20/04	NA	01/23/04	1
1	MW-22	AQUEOUS	01/20/04	NA	01/25/04	1
2	MW-11	AQUEOUS	01/20/04	NA	01/23/04	1

ARAMETER	DET. LIMIT	UNITS	MW-21	MW-22	MW-11
ENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
OLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
THYLBENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
OTAL XYLENES	1.0	UG/L	< 1.0	< 1.0	< 1.0
IETHYL-t-BUTYL ETHER	**2.5**	**UG/L**	< 2.5	**13**	< 2.5

URROGATE:
ROMOFLUOROBENZENE (%) — 102 — 102 — 99
URROGATE LIMITS (80 - 120)

HEMIST NOTES:
/A

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GAS CHROMATOGRAPHY RESULTS

ST : EPA 8021B MODIFIED
IENT : BIOTECH REMEDIATION — PINNACLE I.D. : 401053
ROJECT # : 810 — ANALYST : BP
ROJECT NAME : T-WAY REFINERY

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
3	MW-15	AQUEOUS	01/20/04	NA	01/23/04	1
4	MW-13	AQUEOUS	01/20/04	NA	01/23/04	1
5	MW-12	AQUEOUS	01/20/04	NA	01/26/04	5

ARAMETER	DET. LIMIT	UNITS	MW-15	MW-13	MW-12
ENZENE	**0.5**	**UG/L**	< 0.5	< 0.5	**17**
OLUENE	0.5	UG/L	< 0.5	< 0.5	< 2.5
HYLBENZENE	**0.5**	**UG/L**	< 0.5	< 0.5	**34**
TAL XYLENES	**1.0**	**UG/L**	< 1.0	< 1.0	**43**
ETHYL-t-BUTYL ETHER	**2.5**	**UG/L**	< 2.5	< 2.5	**100**
RROGATE:					
OMOFLUOROBENZENE (%)			102	101	104
URROGATE LIMITS	(80 - 120)				

EMIST NOTES:
/A

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GAS CHROMATOGRAPHY RESULTS

ST : EPA 8021B MODIFIED
IENT : BIOTECH REMEDIATION — PINNACLE I.D. : 401053
ROJECT # : 810 — ANALYST : BP
ROJECT NAME : T-WAY REFINERY

MPLE #	CLIENT I.D.	MATRIX	DATE SAMPLED		DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
	INFLUENT	AQUEOUS	01/20/04		NA	01/26/04	10
	EFFLUENT	AQUEOUS	01/20/04		NA	01/23/04	1
	TRIP BLANK	AQUEOUS	12/30/04	T1	NA	01/22/04	1

RAMETER	DET. LIMIT	UNITS	INFLUENT	EFFLUENT	TRIP BLANK
ENZENE	**0.5**	**UG/L**	**300**	**0.9**	< 0.5
OLUENE	**0.5**	**UG/L**	**510**	**3.3**	< 0.5
THYLBENZENE	**0.5**	**UG/L**	**340**	**1.4**	< 0.5
TAL XYLENES	**1.0**	**UG/L**	**790**	**4.8**	< 1.0
ETHYL-t-BUTYL ETHER	**2.5**	**UG/L**	**88**	**2.9**	< 2.5

URROGATE:
ROMOFLUOROBENZENE (%) — 104 — 102 — 100
URROGATE LIMITS (80 - 120)

EMIST NOTES:
= Trip Blank was received past the 14 day hold time.

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 401053
ANK I. D.	: 012204	DATE EXTRACTED	: N/A
LIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/22/04
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: T-WAY REFINERY	ANALYST	: BP

ARAMETER	UNITS	
ENZENE	UG/L	<0.5
OLUENE	UG/L	<0.5
HYLBENZENE	UG/L	<0.5
TAL XYLENES	UG/L	<1.0
ETHYL-t-BUTYL ETHER	UG/L	<2.5
RROGATE:		
ROMOFLUOROBENZENE (%)		101
URROGATE LIMITS:	(80 - 120)	
EMIST NOTES:		
A		

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 401053
ANK I. D.	: 012504	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/25/04
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
OJECT NAME	: T-WAY REFINERY	ANALYST	: BP

RAMETER	UNITS	
ENZENE	UG/L	<0.5
LUENE	UG/L	<0.5
HYLBENZENE	UG/L	<0.5
TAL XYLENES	UG/L	<1.0
THYL-t-BUTYL ETHER	UG/L	<2.5
RROGATE:		
OMOFLUOROBENZENE (%)		104
RROGATE LIMITS:	(80 - 120)	
EMIST NOTES:		

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

EST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 401053
TCH #	: 012204	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/22/04
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
OJECT NAME	: T-WAY REFINERY	UNITS	: UG/L

ARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMIT
NZENE	<0.5	20.0	21.2	106	21.3	107	0	(80 - 120)	20
LUENE	<0.5	20.0	20.3	102	20.4	102	0	(80 - 120)	20
THYLBENZENE	<0.5	20.0	20.6	103	20.6	103	0	(80 - 120)	20
OTAL XYLENES	<1.0	60.0	60.8	101	60.5	101	0	(80 - 120)	20
ETHYL-t-BUTYL ETHER	<2.5	20.0	20.7	104	21.2	106	2	(70 - 133)	20

HEMIST NOTES:
A

$$\text{Recovery} = \frac{\text{(Spike Sample Result - Sample Result)}}{\text{Spike Concentration}} \times 100$$

$$\text{D (Relative Percent Difference)} = \frac{\text{(Sample Result - Duplicate Result)}}{\text{Average Result}} \times 100$$

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

EST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 401053
ATCH #	: 012504	DATE EXTRACTED	: N/A
LIENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/25/04
ROJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: T-WAY REFINERY	UNITS	: UG/L

ARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMIT
ENZENE	<0.5	20.0	21.0	105	21.5	108	2	(80 - 120)	20
OLUENE	<0.5	20.0	20.1	101	20.5	103	2	(80 - 120)	20
THYLBENZENE	<0.5	20.0	20.4	102	20.9	105	2	(80 - 120)	20
OTAL XYLENES	<1.0	60.0	59.9	100	61.2	102	2	(80 - 120)	20
ETHYL-t-BUTYL ETHER	<2.5	20.0	20.7	104	21.1	106	2	(70 - 133)	20

HEMIST NOTES:
A

$$\%\text{ Recovery} = \frac{\text{(Spike Sample Result - Sample Result)}}{\text{Spike Concentration}} \times 100$$

$$\text{RD (Relative Percent Difference)} = \frac{\text{(Sample Result - Duplicate Result)}}{\text{Average Result}} \times 100$$

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GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

ST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 401053
MSD #	: 401052-01	DATE EXTRACTED	: N/A
IENT	: BIOTECH REMEDIATION	DATE ANALYZED	: 01/22/04
OJECT #	: 810	SAMPLE MATRIX	: AQUEOUS
OJECT NAME	: T-WAY REFINERY	UNITS	: UG/L

RAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
ZENE	<0.5	20.0	20.8	104	20.5	103	1	(80 - 120)	20
UENE	<0.5	20.0	20.1	101	19.8	99	2	(80 - 120)	20
HYLBENZENE	<0.5	20.0	20.3	102	19.9	100	2	(80 - 120)	20
AL XYLENES	<1.0	60.0	59.8	100	58.6	98	2	(80 - 120)	20
HYL-t-BUTYL ETHER	<2.5	20.0	20.3	102	20.7	104	2	(70 - 133)	20

EMIST NOTES:

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$(\text{Relative Percent Difference}) = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Environmental Services Laboratory, Inc.

E S I

17400 SW Upper Boones Ferry Road, Suite 270 • Portland, OR 97224 • (503) 670-8520

February 03, 2004

Jacinta A. Tenorio
Pinnacle Laboratories
2709-D Pan American Fwy NE
Albuquerque, NM 87107

TEL: 505 344-3777
FAX (505) 344-4413

RE: 401053/BIO

Order No.: 0401119

Dear Jacinta A. Tenorio:

Environmental Services Laboratory received 17 samples on 1/22/04 for the analyses presented in the following report.

There were no analytical problems encountered and all analytical data met requirements established under NELAC protocol or laboratory specifications except where noted in a Case Narrative. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety, without the written approval of the laboratory. The following checked data sections are included in this report.

✓Base Sample Report ✓Method Blank Report ✓Sample Duplicate Report __Matrix Spike/Matrix Spike Duplicate Report ✓Laboratory Control Spike/Spike Duplicate Report ✓Continuing Calibration Verification Report __Initial Calibration Verification Report

If you have any questions regarding these tests results, please feel free to call.

Project Manager

Keith Hunter
Technical Review

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-18/401053-01
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/19/04
Lab ID:	0401119-01A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: rlr
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	45.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	34.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	0	35-114	S, MI	%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-5/401053-02
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/19/04
Lab ID:	0401119-02A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: rlr
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	63.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	73.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	51.0	35-114		%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-19/401053-03
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/19/04
Lab ID:	0401119-03A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: rlr
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	54.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	70.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	47.0	35-114		%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-4/401053-04
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/19/04
Lab ID:	0401119-04A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: **rlr**
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	60.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	69.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	37.0	35-114		%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-6/401053-05
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/19/04
Lab ID:	0401119-05A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: **rlr**
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	62.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	73.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	57.0	35-114		%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-7/401053-06
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/19/04
Lab ID:	0401119-06A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: **rlr**
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	59.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	76.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	43.0	35-114		%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-9/401053-07
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/19/04
Lab ID:	0401119-07A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: **rlr**
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	59.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	77.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	50.0	35-114		%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-10/401053-08
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/19/04
Lab ID:	0401119-08A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: rlr
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	61.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	75.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	46.0	35-114		%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-20/401053-09
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/20/04
Lab ID:	0401119-09A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: rlr
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	56.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	66.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	30.0	35-114	S	%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	Client Sample ID:	MW-21/401053-10
Lab Order:	0401119	Tag Number:	
Project:	401053/BIO	Collection Date:	1/20/04
Lab ID:	0401119-10A	Matrix:	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: rlr
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	57.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	66.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	38.0	35-114		%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-22/401053-11
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/20/04
Lab ID:	0401119-11A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: **rlr**
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	57.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	68.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	43.0	35-114		%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-11/401053-12
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/20/04
Lab ID:	0401119-12A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: rlr
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	56.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	64.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	45.0	35-114		%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-15/401053-13
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/20/04
Lab ID:	0401119-13A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: **rlr**
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	55.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	70.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	42.0	35-114		%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-13/401053-14
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/20/04
Lab ID:	0401119-14A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: **rlr**
1-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	ND	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	ND	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	ND	0.40		µg/L	4	1/27/04
Phenanthrene	ND	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	59.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	69.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	46.0	35-114		%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	MW-12/401053-15
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/20/04
Lab ID:	0401119-15A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: rlr
1-Methylnaphthalene	140	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	170	0.40		µg/L	4	1/27/04
Acenaphthene	2.8	0.40		µg/L	4	1/27/04
Acenaphthylene	4.7	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	0.68	0.40		µg/L	4	1/27/04
Fluorene	14	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	77	0.40		µg/L	4	1/27/04
Phenanthrene	38	0.40		µg/L	4	1/27/04
Pyrene	1.0	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	61.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	52.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	0	35-114	S, MI	%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	Influent/401053-16
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/20/04
Lab ID:	0401119-16A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: rlr
1-Methylnaphthalene	280	4.0		µg/L	40	1/27/04
2-Methylnaphthalene	290	4.0		µg/L	40	1/27/04
Acenaphthene	ND	4.0		µg/L	40	1/27/04
Acenaphthylene	ND	4.0		µg/L	40	1/27/04
Anthracene	ND	4.0		µg/L	40	1/27/04
Benz(a)anthracene	ND	4.0		µg/L	40	1/27/04
Benzo(a)pyrene	ND	4.0		µg/L	40	1/27/04
Benzo(b)fluoranthene	ND	4.0		µg/L	40	1/27/04
Benzo(g,h,i)perylene	ND	4.0		µg/L	40	1/27/04
Benzo(k)fluoranthene	ND	4.0		µg/L	40	1/27/04
Chrysene	ND	4.0		µg/L	40	1/27/04
Dibenz(a,h)anthracene	ND	4.0		µg/L	40	1/27/04
Fluoranthene	ND	4.0		µg/L	40	1/27/04
Fluorene	ND	4.0		µg/L	40	1/27/04
Indeno(1,2,3-cd)pyrene	ND	4.0		µg/L	40	1/27/04
Naphthalene	540	4.0		µg/L	40	1/27/04
Phenanthrene	ND	4.0		µg/L	40	1/27/04
Pyrene	ND	4.0		µg/L	40	1/27/04
Surr: 2-Fluorobiphenyl	0	43-116	S, X	%REC	40	1/27/04
Surr: 4-Terphenyl-d14	0	33-141	S, X	%REC	40	1/27/04
Surr: Nitrobenzene-d5	0	35-114	S, X	%REC	40	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Environmental Services Laboratory

Date: *03-Feb-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	Effluent/401053-17
Lab Order:	0401119	**Tag Number:**	
Project:	401053/BIO	**Collection Date:**	1/20/04
Lab ID:	0401119-17A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: **rlr**
1-Methylnaphthalene	3.2	0.40		µg/L	4	1/27/04
2-Methylnaphthalene	3.0	0.40		µg/L	4	1/27/04
Acenaphthene	ND	0.40		µg/L	4	1/27/04
Acenaphthylene	ND	0.40		µg/L	4	1/27/04
Anthracene	ND	0.40		µg/L	4	1/27/04
Benz(a)anthracene	ND	0.40		µg/L	4	1/27/04
Benzo(a)pyrene	ND	0.40		µg/L	4	1/27/04
Benzo(b)fluoranthene	ND	0.40		µg/L	4	1/27/04
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	1/27/04
Benzo(k)fluoranthene	ND	0.40		µg/L	4	1/27/04
Chrysene	ND	0.40		µg/L	4	1/27/04
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	1/27/04
Fluoranthene	ND	0.40		µg/L	4	1/27/04
Fluorene	1.5	0.40		µg/L	4	1/27/04
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	1/27/04
Naphthalene	4.7	0.40		µg/L	4	1/27/04
Phenanthrene	2.1	0.40		µg/L	4	1/27/04
Pyrene	ND	0.40		µg/L	4	1/27/04
Surr: 2-Fluorobiphenyl	64.0	43-116		%REC	4	1/27/04
Surr: 4-Terphenyl-d14	70.0	33-141		%REC	4	1/27/04
Surr: Nitrobenzene-d5	42.0	35-114		%REC	4	1/27/04

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

CLIENT: Pinnacle Laboratories
Work Order: 0401119
Project: 401053/BIO

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: **MB-6680**	SampType: **MBLK**	TestCode: **06 PAH A**	Units: **µg/L**	Prep Date: **1/26/04**	Run ID: **HEISENBURG_040127B**
Client ID: **ZZZZZ**	Batch ID: **6680**	TestNo: **8270-SIM**	**(3510C)**	Analysis Date: **1/27/04**	SeqNo: **194268**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	0.10									
2-Methylnaphthalene	ND	0.10									
Acenaphthene	ND	0.10									
Acenaphthylene	ND	0.10									
Anthracene	ND	0.10									
Benz(a)anthracene	ND	0.10									
Benzo(a)pyrene	ND	0.10									
Benzo(b)fluoranthene	ND	0.10									
Benzo(g,h,i)perylene	ND	0.10									
Benzo(k)fluoranthene	ND	0.10									
Chrysene	ND	0.10									
Dibenz(a,h)anthracene	ND	0.10									
Fluoranthene	ND	0.10									
Fluorene	ND	0.10									
Indeno(1,2,3-cd)pyrene	ND	0.10									
Naphthalene	ND	0.10									
Phenanthrene	ND	0.10									
Pyrene	ND	0.10									
Surr: 2-Fluorobiphenyl	0.53	0	1	0	53	43	116	0	0		
Surr: 4-Terphenyl-d14	0.82	0	1	0	82	33	141	0	0		
Surr: Nitrobenzene-d5	0.43	0	1	0	43	35	114	0	0		

Sample ID: **LCS-6680**	SampType: **LCS**	TestCode: **06 PAH A**	Units: **µg/L**	Prep Date: **1/26/04**	Run ID: **HEISENBURG_040127B**
Client ID: **ZZZZZ**	Batch ID: **6680**	TestNo: **8270-SIM**	**(3510C)**	Analysis Date: **1/27/04**	SeqNo: **194269**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	0.68	0.10	1	0	68	21	133	0	0		
2-Methylnaphthalene	0.54	0.10	1	0	54	21	133	0	0		
Acenaphthene	0.71	0.10	1	0	71	47	145	0	0		
Acenaphthylene	0.72	0.10	1	0	72	33	145	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
Work Order: 0401119
Project: 401053/BIO

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: LCS-6680	SampType: LCS	TestCode: 06 PAH A	Units: µg/L	Prep Date: 1/26/04	Run ID: HEISENBURG_040127B
Client ID: ZZZZZ	Batch ID: 6680	TestNo: 8270-SIM	(3510C)	Analysis Date: 1/27/04	SeqNo: 194269

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Anthracene	0.66	0.10	1	0	66	27	133	0	0		
Benz(a)anthracene	0.49	0.10	1	0	49	33	143	0	0		
Benzo(a)pyrene	0.58	0.10	1	0	58	17	163	0	0		
Benzo(b)fluoranthene	0.41	0.10	1	0	41	24	159	0	0		
Benzo(g,h,i)perylene	0.67	0.10	1	0	67	1	219	0	0		
Benzo(k)fluoranthene	0.76	0.10	1	0	76	11	162	0	0		
Chrysene	0.82	0.10	1	0	82	17	168	0	0		
Dibenz(a,h)anthracene	0.65	0.10	1	0	65	1	227	0	0		
Fluoranthene	0.66	0.10	1	0	66	26	137	0	0		
Fluorene	0.67	0.10	1	0	67	59	121	0	0		
Indeno(1,2,3-cd)pyrene	0.68	0.10	1	0	68	1	171	0	0		
Naphthalene	0.64	0.10	1	0	64	21	133	0	0		
Phenanthrene	0.66	0.10	1	0	66	54	120	0	0		
Pyrene	0.79	0.10	1	0	79	52	115	0	0		
Surr: 2-Fluorobiphenyl	0.62	0	1	0	62	43	116	0	0		
Surr: 4-Terphenyl-d14	0.84	0	1	0	84	33	141	0	0		
Surr: Nitrobenzene-d5	0.48	0	1	0	48	35	114	0	0		

Sample ID: LCSD-6680	SampType: LCSD	TestCode: 06 PAH A	Units: µg/L	Prep Date: 1/26/04	Run ID: HEISENBURG_040127B
Client ID: ZZZZZ	Batch ID: 6680	TestNo: 8270-SIM	(3510C)	Analysis Date: 1/27/04	SeqNo: 194270

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	0.72	0.10	1	0	72	21	133	0.68	5.71	30	
2-Methylnaphthalene	0.57	0.10	1	0	57	21	133	0.54	5.41	30	
Acenaphthene	0.77	0.10	1	0	77	47	145	0.71	8.11	30	
Acenaphthylene	0.78	0.10	1	0	78	33	145	0.72	8.00	30	
Anthracene	0.71	0.10	1	0	71	27	133	0.66	7.30	30	
Benz(a)anthracene	0.53	0.10	1	0	53	33	143	0.49	7.84	30	
Benzo(a)pyrene	0.6	0.10	1	0	60	17	163	0.58	3.39	30	
Benzo(b)fluoranthene	0.43	0.10	1	0	43	24	159	0.41	4.76	30	
Benzo(g,h,i)perylene	0.77	0.10	1	0	77	1	219	0.67	13.9	30	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
Work Order: 0401119
Project: 401053/BIO

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: LCSD-6680	SampType: LCSD	TestCode: 06 PAH A	Units: µg/L	Prep Date: 1/26/04	Run ID: HEISENBURG_040127B
Client ID: ZZZZZ	Batch ID: 6680	TestNo: 8270-SIM	(3510C)	Analysis Date: 1/27/04	SeqNo: 194270

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	0.81	0.10	1	0	81	11	162	0.76	6.37	30	
Chrysene	0.88	0.10	1	0	88	17	168	0.82	7.06	30	
Dibenz(a,h)anthracene	0.72	0.10	1	0	72	1	227	0.65	10.2	30	
Fluoranthene	0.73	0.10	1	0	73	26	137	0.66	10.1	30	
Fluorene	0.69	0.10	1	0	69	59	121	0.67	2.94	30	
Indeno(1,2,3-cd)pyrene	0.78	0.10	1	0	78	1	171	0.68	13.7	30	
Naphthalene	0.69	0.10	1	0	69	21	133	0.64	7.52	30	
Phenanthrene	0.71	0.10	1	0	71	54	120	0.66	7.30	30	
Pyrene	0.81	0.10	1	0	81	52	115	0.79	2.50	30	
Surr: 2-Fluorobiphenyl	0.64	0	1	0	64	43	116	0	0	30	
Surr: 4-Terphenyl-d14	0.84	0	1	0	84	33	141	0	0	30	
Surr: Nitrobenzene-d5	0.51	0	1	0	51	35	114	0	0	30	

Sample ID: 0401119-01A DUP	SampType: DUP	TestCode: 06 PAH A	Units: µg/L	Prep Date: 1/26/04	Run ID: HEISENBURG_040127B
Client ID: MW-18/401053-01	Batch ID: 6680	TestNo: 8270-SIM	(3510C)	Analysis Date: 1/27/04	SeqNo: 194272

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	0.40	0	0	0	0	0	0	0	20	
2-Methylnaphthalene	ND	0.40	0	0	0	0	0	0	0	20	
Acenaphthene	ND	0.40	0	0	0	0	0	0	0	20	
Acenaphthylene	ND	0.40	0	0	0	0	0	0	0	20	
Anthracene	ND	0.40	0	0	0	0	0	0	0	20	
Benz(a)anthracene	ND	0.40	0	0	0	0	0	0	0	20	
Benzo(a)pyrene	ND	0.40	0	0	0	0	0	0	0	20	
Benzo(b)fluoranthene	ND	0.40	0	0	0	0	0	0	0	20	
Benzo(g,h,i)perylene	ND	0.40	0	0	0	0	0	0	0	20	
Benzo(k)fluoranthene	ND	0.40	0	0	0	0	0	0	0	20	
Chrysene	ND	0.40	0	0	0	0	0	0	0	20	
Dibenz(a,h)anthracene	ND	0.40	0	0	0	0	0	0	0	20	
Fluoranthene	ND	0.40	0	0	0	0	0	0	0	20	
Fluorene	ND	0.40	0	0	0	0	0	0	0	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
Work Order: 0401119
Project: 401053/BIO

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: 0401119-01A DUP	SampType: DUP	TestCode: 06 PAH A	Units: µg/L	Prep Date: 1/26/04	Run ID: HEISENBURG_040127B
Client ID: MW-18/401053-01	Batch ID: 6680	TestNo: 8270-SIM	(3510C)	Analysis Date: 1/27/04	SeqNo: 194272

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	ND	0.40	0	0	0	0	0	0	0	20	
Naphthalene	ND	0.40	0	0	0	0	0	0	0	20	
Phenanthrene	ND	0.40	0	0	0	0	0	0	0	20	
Pyrene	ND	0.40	0	0	0	0	0	0	0	20	
Surr: 2-Fluorobiphenyl	2.64	0	4	0	66	43	116	0	0	0	
Surr: 4-Terphenyl-d14	3.4	0	4	0	85	33	141	0	0	0	
Surr: Nitrobenzene-d5	ND	0	4	0	0	35	114	0	0	0	S, MI

Sample ID: 0401119-11A DUP	SampType: DUP	TestCode: 06 PAH A	Units: µg/L	Prep Date: 1/26/04	Run ID: HEISENBURG_040127B
Client ID: MW-22/401053-11	Batch ID: 6680	TestNo: 8270-SIM	(3510C)	Analysis Date: 1/27/04	SeqNo: 194283

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	0.40	0	0	0	0	0	0	0	20	
2-Methylnaphthalene	ND	0.40	0	0	0	0	0	0	0	20	
Acenaphthene	ND	0.40	0	0	0	0	0	0	0	20	
Acenaphthylene	ND	0.40	0	0	0	0	0	0	0	20	
Anthracene	ND	0.40	0	0	0	0	0	0	0	20	
Benz(a)anthracene	ND	0.40	0	0	0	0	0	0	0	20	
Benzo(a)pyrene	ND	0.40	0	0	0	0	0	0	0	20	
Benzo(b)fluoranthene	ND	0.40	0	0	0	0	0	0	0	20	
Benzo(g,h,i)perylene	ND	0.40	0	0	0	0	0	0	0	20	
Benzo(k)fluoranthene	ND	0.40	0	0	0	0	0	0	0	20	
Chrysene	ND	0.40	0	0	0	0	0	0	0	20	
Dibenz(a,h)anthracene	ND	0.40	0	0	0	0	0	0	0	20	
Fluoranthene	ND	0.40	0	0	0	0	0	0	0	20	
Fluorene	ND	0.40	0	0	0	0	0	0	0	20	
Indeno(1,2,3-cd)pyrene	ND	0.40	0	0	0	0	0	0	0	20	
Naphthalene	ND	0.40	0	0	0	0	0	0	0	20	
Phenanthrene	ND	0.40	0	0	0	0	0	0	0	20	
Pyrene	ND	0.40	0	0	0	0	0	0	0	20	
Surr: 2-Fluorobiphenyl	2.4	0	4	0	60	43	116	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
Work Order: 0401119
Project: 401053/BIO

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: 0401119-11A DUP	SampType: DUP	TestCode: 06 PAH A	Units: µg/L	Prep Date: 1/26/04	Run ID: HEISENBURG_040127B
Client ID: MW-22/401053-11	Batch ID: 6680	TestNo: 8270-SIM	(3510C)	Analysis Date: 1/27/04	SeqNo: 194283

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	2.96	0	4	0	74	33	141	0	0	0	
Surr: Nitrobenzene-d5	1.76	0	4	0	44	35	114	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 06 PAH A	Units: µg/L	Prep Date:	Run ID: HEISENBURG_040127B
Client ID: ZZZZZ	Batch ID: R16007	TestNo: 8270-SIM		Analysis Date: 1/27/04	SeqNo: 194267

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	2.14	0.10	2.5	0	85.6	80	120	0	0		
2-Methylnaphthalene	2.04	0.10	2.5	0	81.6	80	120	0	0		
Acenaphthene	2.7	0.10	2.5	0	108	80	120	0	0		
Acenaphthylene	2.75	0.10	2.5	0	110	80	120	0	0		
Anthracene	2.55	0.10	2.5	0	102	80	120	0	0		
Benz(a)anthracene	2.26	0.10	2.5	0	90.4	80	120	0	0		
Benzo(a)pyrene	2.81	0.10	2.5	0	112	80	120	0	0		
Benzo(b)fluoranthene	2.26	0.10	2.5	0	90.4	80	120	0	0		
Benzo(g,h,i)perylene	2.69	0.10	2.5	0	108	80	120	0	0		
Benzo(k)fluoranthene	2.76	0.10	2.5	0	110	80	120	0	0		
Chrysene	2.81	0.10	2.5	0	112	80	120	0	0		
Dibenz(a,h)anthracene	2.66	0.10	2.5	0	106	80	120	0	0		
Fluoranthene	2.29	0.10	2.5	0	91.6	80	120	0	0		
Fluorene	2.18	0.10	2.5	0	87.2	80	120	0	0		
Indeno(1,2,3-cd)pyrene	2.6	0.10	2.5	0	104	80	120	0	0		
Naphthalene	2.56	0.10	2.5	0	102	80	120	0	0		
Phenanthrene	2.61	0.10	2.5	0	104	80	120	0	0		
Pyrene	2.65	0.10	2.5	0	106	80	120	0	0		
Surr: 2-Fluorobiphenyl	2.46	0	2.5	0	98.4	43	116	0	0		
Surr: 4-Terphenyl-d14	2.74	0	2.5	0	110	33	141	0	0		
Surr: Nitrobenzene-d5	2.31	0	2.5	0	92.4	35	114	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

ENVIRONMENTAL SERVICES LABORATORY – GLOSSARY OF FLAGS

QUALIFIER	DESCRIPTION
AA	This sample was analyzed after the holding time had expired.
AB	The hydrocarbon pattern in this sample is not typical of gasoline.
AC	The hydrocarbon pattern in this sample is not typical of diesel.
AD	The hydrocarbon pattern in this sample is not typical of oil.
AE	The hydrocarbon pattern in this sample extends into the gasoline range.
AF	The hydrocarbon pattern in this sample extends into the diesel range.
AG	The hydrocarbon pattern in this sample extends into the oil range.
A	This analysis was performed on a VOA sample containing headspace.
B	Analyte detected in the Method Blank above the reporting level.
C	The Relative Percent Difference (RPD) for the primary result and confirmation result was greater than 40%. The higher result was reported.
D	The sample was supplied in an inappropriate container according to method criteria.
E	This value is above the quantitation limit. It is considered an estimate.
H	The Matrix Spike/Matrix Spike Duplicate (MS/MSD) result was outside control limits. The Laboratory Control Standard/Duplicate (LCS/LCSD) result was in control validating the batch.
J	The result is above the Method Detection Limit (MDL) and below the Reporting level (RL). It is considered an estimate.
M	The MS/MSD recoveries are not calculable due to a high amount of analyte in sample.
MI	This indicates a high level of matrix interference affecting the spike or surrogate recovery.
N	See case narrative.
O	Detection Limits are elevated due to sample dilution. See case narrative.
Q	Further inspection of the sample confirms a non-homogenous sample matrix affecting RPD result.
R	The RPD result is outside method control limits. See other qualifiers or case narrative.
S	The spike recovery is outside method control limits. See other qualifiers or case narrative.
T	The RPD between the sample result and duplicate result was greater than 20%. The original result was less than three times the reporting level, therefore the RPD is not applicable.
X	Unable to quantitate surrogate recovery due to sample dilution.

Pinnacle Laboratories, Inc. 04/01/19

Interlab Chain of Custody

Date: 1/21/04 Page: 1 of 2

Network Project Manager: Jacinta Tenorio

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, NM 87107
(505) 344-3777 Fax (505) 344-4413

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	TCLP RCRA (8) Metals	Metals-13 PP List	Metals-TAL (23 Metals)	Dissolved Fe, Mn, Pb (6010)		TOC	Gen Chemistry:			Volatile Organics GC/MS (8260)	BOD	COD	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	PNA (8310/8270 SIMS)	8260 (TCLP 1311) ZHE		Base/Neutral Acid Compounds GC/MS (625/8270)	Uranium (ICP-MS)	Radium 226+228	Gross Alpha/Beta	TO-14	NUMBER OF CONTAINERS
MW-18/401053-01	1/19/04	1025	AQ	01																X								
MW-5/401053-02		1116		02																X								
MW-19/401053-03		1144		03																X								
MW-4/401053-04		1349		04																X								
MW-6/401053-05		1415		05																X								
MW-7/401053-06		1446		06																X								
MW-9/401053-07		1513		07																X								
MW-10/401053-08	↓	1537		08																X								
MW-20/401053-09	1/20/04	0942		09																X								
MW-21/401053 10	↓	1020	↓	10																X								

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJECT #:	401053	Total Number of Containers	
PROJ. NAME:	BIO	Chain of Custody Seals	
QC LEVEL:	(STD) IV	Received Intact?	
QC REQUIRED:	MS MSD BLANK	Received Good Cond./Cold	
TAT:	(STANDARD) RUSH!!	LAB NUMBER:	
DUE DATE:	2/4	COMMENTS:	
RUSH SURCHARGE:	—		
CLIENT DISCOUNT:			
SPECIAL CERTIFICATION REQUIRED:	YES (NO)		

SAMPLES SENT TO:	
PENSACOLA - STL-FL	
ESL - OR	X
ATEL - AZ	
ATEL - MARION	
ATEL - MELMORE	
EHL	
GEL	
U OF MIAMI	
WCAS	
WOHL	

RELINQUISED BY: 1.	RELINQUISED BY: 2.
Signature: Francine Tonnio Time: 1700	Signature: Time:
Printed Name: Francine Tonnio Date: 1/21/04	Printed Name: Date:
Pinnacle Laboratories, Inc.	Company
RECEIVED BY: 1.	**RECEIVED BY: 2.**
Signature: D. Thomas Time: 1000	Signature: Time:
Printed Name: Date: 1/22/04	Printed Name: Date:
Company ESL	Company

Pinnacle Laboratories, Inc. **Interlab Chain of Custody** Date: 1/21/04 Page: 2 of 2

PINNACLE LABORATORIES

Network Project Manager: Jacinta Tenorio

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, NM 87107
(505) 344-3777 Fax (505) 344-4413

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	TCLP RCRA (8) Metals	Metals-13 PP List	Metals-TAL (23 Metals)	Dissolved Fe, Mn, Pb (6010)		TOC	Gen Chemistry:			Volatile Organics GC/MS (8260)	BOD	COD	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	PNA (8310)/8270 SIMS	8260 (TCLP 1311) ZHE		Base/Neutral Acid Compounds GC/MS (625/8270)	Uranium (ICP-MS)	Radium 226+228	Gross Alpha/Beta	TO-14	NUMBER OF CONTAINERS
MW-22 / 401053-11	1/20/04	1056	AQ	01																X								
MW-11 / 401053-12		1136		02																X								
MW-15 / 401053-13		1209		03																X								
MW-13 / 401053-14		1244		04																X								
MW-12 / 401053-15		1420		05																X								
Influent / 401053-16		1452		06																X								
Effluent / 401053-17	↓	1512	↓	07																X								

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJECT #:	401053	Total Number of Containers	
PROJ. NAME:	BIO	Chain of Custody Seals	
QC LEVEL:	(STD) IV	Received Intact?	
QC REQUIRED:	(MS) MSD BLANK	Received Good Cond./Cold	
TAT:	(STANDARD) RUSH!!	LAB NUMBER:	
DUE DATE:	2/4	COMMENTS:	
RUSH SURCHARGE:	—		
CLIENT DISCOUNT:	—		
SPECIAL CERTIFICATION REQUIRED:	YES (NO)		

SAMPLES SENT TO:	
PENSACOLA - STL-FL	
ESL - OR	
ATEL - AZ	
ATEL - MARION	
ATEL - MELMORE	
EHL	
GEL	
U OF MIAMI	
WCAS	
WOHL	

RELINQUISED BY: 1.	RELINQUISED BY: 2.
Signature: X Francine Time: 1700	Signature: Time:
Printed Name: Francine Date: 1/21/04	Printed Name: Date:
Pinnacle Laboratories, Inc.	Company
RECEIVED BY: 1.	**RECEIVED BY: 2.**
Signature: Time:	Signature: Time:
Printed Name: Date:	Printed Name: Date:
Company	Company

SEVERN TRENT STL

STL Pensacola 3355 McLemore Drive - Pensacola FL 32514 Telephone:(850) 474-1001 Fax:(850) 478-2671

Analytical Report

For: Ms. Jacinta Tenorio
Pinnacle Laboratories
2709-D Pan American Freeway Northeast
Albuquerque, NM 87107
CC:

Order Number: C401481
SDG Number:
Client Project ID:
Project: 401053-BIO/T-WAY REFINERY
Report Date: 02/04/2004
Sampled By: Client
Sample Received Date: 01/22/2004
Requisition Number:
Purchase Order:

Lance Larson, Project Manager
llarson@stl-inc.com

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

SEVERN TRENT STL

STL Pensacola 3355 McLemore Drive - Pensacola FL 32514 Telephone:(850) 474-1001 Fax:(850) 478-2671

Sample Summary

Order: C401481
Date Received: 01/22/2004

Client: Pinnacle Laboratories
Project: 401053-BIO/T-WAY REFINERY

Client Sample ID	Lab Sample ID	Matrix	Date Sampled
MW-18/401053-01	C401481*1	Liquid	01/19/2004 10:25
MW-5/401053-02	C401481*2	Liquid	01/19/2004 11:16
MW-19/401053-03	C401481*3	Liquid	01/19/2004 11:44
MW-4/401053-04	C401481*4	Liquid	01/19/2004 13:49
MW-6/401053-05	C401481*5	Liquid	01/19/2004 14:15
MW-7/401053-06	C401481*6	Liquid	01/19/2004 14:46
MW-9/401053-07	C401481*7	Liquid	01/19/2004 15:13
MW-10/401053-08	C401481*8	Liquid	01/19/2004 15:37
MW-20/401063-09	C401481*9	Liquid	01/20/2004 09:42
MW-21/401053-10	C401481*10	Liquid	01/20/2004 10:20
MW-22/401053-11	C401481*11	Liquid	01/20/2004 10:56
MW-11/401053-12	C401481*12	Liquid	01/20/2004 11:36
MW-15/401053-13	C401481*13	Liquid	01/20/2004 12:09
MW-13/401053-14	C401481*14	Liquid	01/20/2004 12:44
MW-12/401053-15	C401481*15	Liquid	01/20/2004 14:20
INFLUENT/401053-16	C401481*16	Liquid	01/20/2004 14:52
EFFLUENT/401053-17	C401481*17	Liquid	01/20/2004 15:12

SEVERN TRENT STL

STL Pensacola 3355 McLemore Drive - Pensacola FL 32514 Telephone:(850) 474-1001 Fax:(850) 478-2671

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-1	MW-18/401053-01	Liquid	01/22/04	01/19/04 10:25	
01481-2	MW-5/401053-02	Liquid	01/22/04	01/19/04 11:16	
01481-3	MW-19/401053-03	Liquid	01/22/04	01/19/04 11:44	
01481-4	MW-4/401053-04	Liquid	01/22/04	01/19/04 13:49	
01481-5	MW-6/401053-05	Liquid	01/22/04	01/19/04 14:15	

Parameter	Units	Lab Sample IDs 01481-1 MW-18	01481-2 MW-5	01481-3 MW-19	01481-4 MW-4	01481-5 MW-6
Specific Conductance (120.1)						
Specific Conductance	umhos/cm	4700	4900	5600	3400	4200
Dilution Factor		1	1	1	1	1
Analysis Date		01/28/04	01/28/04	01/28/04	01/28/04	01/28/04
Batch ID		CDW005	CDW005	CDW005	CDW005	CDW005
Analyst		ST	ST	ST	ST	ST
Total Dissolved Solids (160.1)						
Total Dissolved Solids	mg/l	4000	3400	4500	2500	3000
Dilution Factor		1	1	1	1	1
Analysis Date		01/26/04	01/26/04	01/26/04	01/26/04	01/26/04
Batch ID		TDW008	TDW008	TDW008	TDW008	TDW008
Analyst		ST	ST	ST	ST	ST
Chloride (4500E)						
Chloride	mg/l	170	160	160	93	71
Dilution Factor		5	5	5	1	1
Analysis Date		01/28/04	01/28/04	01/28/04	01/28/04	01/28/04
Batch ID		CKW009	CKW009	CKW009	CKW009	CKW009
Analyst		CR	CR	CR	CR	CR

SEVERN TRENT STL

STL Pensacola 3355 McLemore Drive - Pensacola FL 32514 Telephone:(850) 474-1001 Fax:(850) 478-2671

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-1	MW-18/401053-01	Liquid	01/22/04	01/19/04 10:25	
01481-2	MW-5/401053-02	Liquid	01/22/04	01/19/04 11:16	
01481-3	MW-19/401053-03	Liquid	01/22/04	01/19/04 11:44	
01481-4	MW-4/401053-04	Liquid	01/22/04	01/19/04 13:49	
01481-5	MW-6/401053-05	Liquid	01/22/04	01/19/04 14:15	

Parameter	Units	Lab Sample IDs 01481-1 (MW-18)	01481-2 (MW-5)	01481-3 (MW-19)	01481-4 (MW-4)	01481-5 (MW-6)
Sulfate as SO4 (375.4)						
Sulfate as SO4	mg/l	1400	1900	2700	1300	1600
Dilution Factor		50	50	75	50	50
Analysis Date		01/28/04	01/28/04	01/28/04	01/28/04	01/28/04
Batch ID		SEW006	SEW006	SEW006	SEW006	SEW006
Analyst		CR	CR	CR	CR	CR
CO2 and Forms of Alkalinity (4500D)						
Bicarbonate (2320/4500)	mg/l as CaCO3	1100	700	830	540	760
Carbon Dioxide, Free	mg/l as CaCO3	46	18	76	47	30
Carbonate (2320/4500)	mg/l as CaCO3	5.0	5.0	2.0	1.0	4.0
Hydroxide	mg/l as CaCO3	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Dioxide, Total	mg/l as CaCO3	1000	630	810	520	700
Analysis Date		01/30/04	01/30/04	01/30/04	01/30/04	01/30/04
Batch ID		AEW004	AEW004	AEW004	AEW004	AEW004
Analyst		ST	ST	ST	ST	ST
Alkalinity (to pH 4.5) as CaCO3 (2320B)						
Alkalinity (to pH 4.5) as CaCO3	mg/l	1100	700	830	540	760
Dilution Factor		1	1	1	1	1
Analysis Date		01/30/04	01/30/04	01/30/04	01/30/04	01/30/04
Batch ID		AEW004	AEW004	AEW004	AEW004	AEW004
Analyst		ST	ST	ST	ST	ST

SEVERN TRENT STL

STL Pensacola 3355 McLemore Drive - Pensacola FL 32514 Telephone:(850) 474-1001 Fax:(850) 478-2671

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-1	MW-18/401053-01	Liquid	01/22/04	01/19/04 10:25	
01481-2	MW-5/401053-02	Liquid	01/22/04	01/19/04 11:16	
01481-3	MW-19/401053-03	Liquid	01/22/04	01/19/04 11:44	
01481-4	MW-4/401053-04	Liquid	01/22/04	01/19/04 13:49	
01481-5	MW-6/401053-05	Liquid	01/22/04	01/19/04 14:15	

Parameter	Units	Lab Sample IDs 01481-1	01481-2	01481-3	01481-4	01481-5
Fluoride (340.2)						
Fluoride	mg/l	0.45	0.59	0.48	0.41	0.50
Dilution Factor		1	1	1	1	1
Analysis Date		02/03/04	02/03/04	02/03/04	02/03/04	02/03/04
Batch ID		FLW005	FLW005	FLW005	FLW005	FLW005
Analyst		ST	ST	ST	ST	ST
Bromide (300.0)						
Bromide	mg/l	0.26	<0.20	0.34	<0.20	<0.20
Dilution Factor		1.0	1.0	1.0	1.0	1.0
Prep Date		01/26/04	01/26/04	01/26/04	01/26/04	01/26/04
Analysis Date		01/26/04	01/26/04	01/26/04	01/26/04	01/26/04
Batch ID		ICW047	ICW047	ICW047	ICW047	ICW047
Prep Method		300.0	300.0	300.0	300.0	300.0
Analyst		SGB	SGB	SGB	SGB	SGB
RCRA Metals (6010B)						
Arsenic	mg/l	1.0	<0.0050	0.0070	0.015	<0.0050
Barium	mg/l	1.2	0.038	0.058	0.17	0.018
Cadmium	mg/l	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chromium	mg/l	0.11	<0.0050	<0.0050	<0.0050	<0.0050
Lead	mg/l	0.13	<0.0050	<0.0050	<0.0050	<0.0050
Selenium	mg/l	<0.010	<0.010	<0.010	<0.010	<0.010
Silver	mg/l	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dilution Factor		1	1	1	1	1
Prep Date		01/23/04	01/23/04	01/23/04	01/23/04	01/23/04
Analysis Date		01/27/04	01/27/04	01/27/04	01/27/04	01/27/04
Batch ID		PW041	PW041	PW041	PW041	PW041
Prep Method		3010A	3010A	3010A	3010A	3010A
Analyst		GSP	GSP	GSP	GSP	GSP

SEVERN TRENT STL

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-1	MW-18/401053-01	Liquid	01/22/04	01/19/04 10:25	
01481-2	MW-5/401053-02	Liquid	01/22/04	01/19/04 11:16	
01481-3	MW-19/401053-03	Liquid	01/22/04	01/19/04 11:44	
01481-4	MW-4/401053-04	Liquid	01/22/04	01/19/04 13:49	
01481-5	MW-6/401053-05	Liquid	01/22/04	01/19/04 14:15	

Parameter	Units	Lab Sample IDs 01481-1	01481-2	01481-3	01481-4	01481-5
Mercury (7470A)						
Mercury	mg/l	0.00028	<0.00020	<0.00020	<0.00020	<0.00020
Dilution Factor		1	1	1	1	1
Prep Date		01/27/04	01/27/04	01/27/04	01/27/04	01/27/04
Analysis Date		01/27/04	01/27/04	01/27/04	01/27/04	01/27/04
Batch ID		HGW007	HGW007	HGW007	HGW007	HGW007
Prep Method		7470A	7470A	7470A	7470A	7470A
Analyst		JDE	JDE	JDE	JDE	JDE
Metals, Dissolved (6010B)						
Calcium, Dissolved	mg/l	160	65	370	270	190
Magnesium, Dissolved	mg/l	36	17	63	32	32
Potassium, Dissolved	mg/l	10	7.7	11	6.7	6.9
Sodium, Dissolved	mg/l	1100	1300	1300	800	960
Dilution Factor		1	1	1	5	5
Analysis Date		01/23/04	01/23/04	01/23/04	01/26/04	01/26/04
Batch ID		PD012	PD012	PD012	PD012	PD012
Analyst		GSP	GSP	GSP	GSP	GSP
Hardness by calculation (6010B)						
Hardness as CaCO3	mg/l	750	260	1100	750	540
Dilution Factor		1	1	1	1	1
Prep Date		01/23/04	01/23/04	01/23/04	01/23/04	01/23/04
Analysis Date		01/27/04	01/27/04	01/27/04	01/27/04	01/27/04
Batch ID		PW041	PW041	PW041	PW041	PW041
Prep Method		3010A	3010A	3010A	3010A	3010A
Analyst		GSP	GSP	GSP	GSP	GSP

SEVERN TRENT STL

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-6	MW-7/401053-06	Liquid	01/22/04	01/19/04 14:46	
01481-7	MW-9/401053-07	Liquid	01/22/04	01/19/04 15:13	
01481-8	MW-10/401053-08	Liquid	01/22/04	01/19/04 15:37	
01481-9	MW-20/401063-09	Liquid	01/22/04	01/20/04 09:42	
01481-10	MW-21/401053-10	Liquid	01/22/04	01/20/04 10:20	

Parameter	Units	Lab Sample IDs 01481-6 MW-7	01481-7 MW-9	01481-8 MW-10	01481-9 MW-20	01481-10 MW-21
Specific Conductance (120.1)						
Specific Conductance	umhos/cm	5500	7000	6300	5200	11000
Dilution Factor		1	1	1	1	1
Analysis Date		01/28/04	01/28/04	01/28/04	01/28/04	01/28/04
Batch ID		CDW005	CDW005	CDW005	CDW005	CDW005
Analyst		ST	ST	ST	ST	ST
Total Dissolved Solids (160.1)						
Total Dissolved Solids	mg/l	4000	5700	5200	3900	8000
Dilution Factor		1	1	1	1	1
Analysis Date		01/26/04	01/26/04	01/26/04	01/26/04	01/26/04
Batch ID		TDW008	TDW008	TDW008	TDW008	TDW008
Analyst		ST	ST	ST	ST	ST
Chloride (4500E)						
Chloride	mg/l	330	86	150	160	300
Dilution Factor		10	1	5	5	10
Analysis Date		01/28/04	01/28/04	01/28/04	01/28/04	01/28/04
Batch ID		CKW009	CKW009	CKW009	CKW009	CKW009
Analyst		CR	CR	CR	CR	CR

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-6	MW-7/401053-06	Liquid	01/22/04	01/19/04 14:46	
01481-7	MW-9/401053-07	Liquid	01/22/04	01/19/04 15:13	
01481-8	MW-10/401053-08	Liquid	01/22/04	01/19/04 15:37	
01481-9	MW-20/401063-09	Liquid	01/22/04	01/20/04 09:42	
01481-10	MW-21/401053-10	Liquid	01/22/04	01/20/04 10:20	

Parameter	Units	Lab Sample IDs 01481-6	01481-7	01481-8	01481-9	01481-10
		7	9	3	22	5
Sulfate as SO4 (375.4)						
Sulfate as SO4	mg/l	2400	4000	3500	2400	6000
Dilution Factor		75	100	100	75	1000
Analysis Date		01/28/04	01/28/04	01/28/04	01/28/04	01/28/04
Batch ID		SEW006	SEW006	SEW006	SEW006	SEW006
Analyst		CR	CR	CR	CR	CR
CO2 and Forms of Alkalinity (4500D)						
Bicarbonate (2320/4500)	mg/l as CaCO3	610	300	250	900	630
Carbon Dioxide, Free	mg/l as CaCO3	68	13	14	94	60
Carbonate (2320/4500)	mg/l as CaCO3	1.0	1.0	1.0	2.0	1.0
Hydroxide	mg/l as CaCO3	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Dioxide, Total	mg/l as CaCO3	610	280	230	890	610
Analysis Date		01/30/04	01/30/04	01/30/04	01/30/04	01/30/04
Batch ID		AEW004	AEW004	AEW004	AEW004	AEW004
Analyst		ST	ST	ST	ST	ST
Alkalinity (to pH 4.5) as CaCO3 (2320B)						
Alkalinity (to pH 4.5) as CaCO3	mg/l	610	300	250	900	630
Dilution Factor		1	1	1	1	1
Analysis Date		01/30/04	01/30/04	01/30/04	01/30/04	01/30/04
Batch ID		AEW004	AEW004	AEW004	AEW004	AEW004
Analyst		ST	ST	ST	ST	ST

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-6	MW-7/401053-06	Liquid	01/22/04	01/19/04 14:46	
01481-7	MW-9/401053-07	Liquid	01/22/04	01/19/04 15:13	
01481-8	MW-10/401053-08	Liquid	01/22/04	01/19/04 15:37	
01481-9	MW-20/401063-09	Liquid	01/22/04	01/20/04 09:42	
01481-10	MW-21/401053-10	Liquid	01/22/04	01/20/04 10:20	

Parameter	Units	Lab Sample IDs 01481-6	01481-7	01481-8	01481-9	01481-10
		7	9	10	20	21
Fluoride (340.2)						
Fluoride	mg/l	0.48	0.73	0.68	0.56	0.46
Dilution Factor		1	1	1	1	1
Analysis Date		02/03/04	02/03/04	02/03/04	02/03/04	02/03/04
Batch ID		FLW005	FLW005	FLW005	FLW005	FLW005
Analyst		ST	ST	ST	ST	ST
Bromide (300.0)						
Bromide	mg/l	<0.20	0.31	0.47	0.32	0.40
Dilution Factor		1.0	1.0	1.0	1.0	1.0
Prep Date		01/26/04	01/26/04	01/26/04	01/26/04	01/26/04
Analysis Date		01/26/04	01/26/04	01/26/04	01/26/04	01/26/04
Batch ID		ICW047	ICW047	ICW047	ICW047	ICW047
Prep Method		300.0	300.0	300.0	300.0	300.0
Analyst		SGB	SGB	SGB	SGB	SGB
RCRA Metals (6010B)						
Arsenic	mg/l	0.14	0.0080	<0.0050	0.080	0.038
Barium	mg/l	2.0	0.23	0.038	0.51	0.091
Cadmium	mg/l	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chromium	mg/l	0.012	0.016	<0.0050	0.066	0.013
Lead	mg/l	0.015	0.010	<0.0050	0.075	0.010
Selenium	mg/l	<0.010	<0.010	<0.010	<0.010	<0.010
Silver	mg/l	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dilution Factor		1	1	1	1	1
Prep Date		01/23/04	01/23/04	01/23/04	01/23/04	01/23/04
Analysis Date		01/27/04	01/27/04	01/27/04	01/27/04	01/27/04
Batch ID		PW041	PW041	PW041	PW041	PW041
Prep Method		3010A	3010A	3010A	3010A	3010A
Analyst		GSP	GSP	GSP	GSP	GSP

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-6	MW-7/401053-06	Liquid	01/22/04	01/19/04 14:46	
01481-7	MW-9/401053-07	Liquid	01/22/04	01/19/04 15:13	
01481-8	MW-10/401053-08	Liquid	01/22/04	01/19/04 15:37	
01481-9	MW-20/401063-09	Liquid	01/22/04	01/20/04 09:42	
01481-10	MW-21/401053-10	Liquid	01/22/04	01/20/04 10:20	

Parameter	Units	Lab Sample IDs 01481-6	01481-7	01481-8	01481-9	01481-10
		7	9	10	20	21
Mercury (7470A)						
Mercury	mg/l	<0.00020	<0.00020	<0.00020	0.00026	<0.00020
Dilution Factor		1	1	1	1	1
Prep Date		01/27/04	01/27/04	01/27/04	01/27/04	01/27/04
Analysis Date		01/27/04	01/27/04	01/27/04	01/27/04	01/27/04
Batch ID		HGW007	HGW007	HGW007	HGW007	HGW007
Prep Method		7470A	7470A	7470A	7470A	7470A
Analyst		JDE	JDE	JDE	JDE	JDE
Metals, Dissolved (6010B)						
Calcium, Dissolved	mg/l	340	410	380	480	390
Magnesium, Dissolved	mg/l	44	61	50	68	96
Potassium, Dissolved	mg/l	8.3	5.7	6.0	5.6	10
Sodium, Dissolved	mg/l	1100	1500	1400	1000	2900
Dilution Factor		5	5	5	5	5
Analysis Date		01/26/04	01/26/04	01/26/04	01/26/04	01/26/04
Batch ID		PD012	PD012	PD012	PD012	PD012
Analyst		GSP	GSP	GSP	GSP	GSP
Hardness by calculation (6010B)						
Hardness as CaCO3	mg/l	990	1200	1000	1400	1300
Dilution Factor		1	1	1	1	1
Prep Date		01/23/04	01/23/04	01/23/04	01/23/04	01/23/04
Analysis Date		01/27/04	01/27/04	01/27/04	01/27/04	01/27/04
Batch ID		PW041	PW041	PW041	PW041	PW041
Prep Method		3010A	3010A	3010A	3010A	3010A
Analyst		GSP	GSP	GSP	GSP	GSP

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-11	MW-22/401053-11	Liquid	01/22/04	01/20/04 10:56	
01481-12	MW-11/401053-12	Liquid	01/22/04	01/20/04 11:36	
01481-13	MW-15/401053-13	Liquid	01/22/04	01/20/04 12:09	
01481-14	MW-13/401053-14	Liquid	01/22/04	01/20/04 12:44	
01481-15	MW-12/401053-15	Liquid	01/22/04	01/20/04 14:20	

Parameter	Units	Lab Sample IDs 01481-11	01481-12	01481-13	01481-14	01481-15
		23	11	15	13	
Specific Conductance (120.1)						
Specific Conductance	umhos/cm	10000	5200	4800	6400	7100
Dilution Factor		1	1	1	1	1
Analysis Date		01/28/04	01/28/04	01/28/04	01/28/04	01/28/04
Batch ID		CDW005	CDW005	CDW005	CDW005	CDW005
Analyst		ST	ST	ST	ST	ST
Total Dissolved Solids (160.1)						
Total Dissolved Solids	mg/l	8000	3900	3800	5000	5600
Dilution Factor		1	1	1	1	1
Analysis Date		01/26/04	01/26/04	01/26/04	01/26/04	01/26/04
Batch ID		TDW008	TDW008	TDW008	TDW008	TDW008
Analyst		ST	ST	ST	ST	ST
Chloride (4500E)						
Chloride	mg/l	380	90	210	71	92
Dilution Factor		10	1	10	1	1
Analysis Date		01/28/04	01/28/04	01/28/04	01/28/04	01/28/04
Batch ID		CKW009	CKW009	CKW009	CKW009	CKW009
Analyst		CR	CR	CR	CR	CR

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-11	MW-22/401053-11	Liquid	01/22/04	01/20/04 10:56	
01481-12	MW-11/401053-12	Liquid	01/22/04	01/20/04 11:36	
01481-13	MW-15/401053-13	Liquid	01/22/04	01/20/04 12:09	
01481-14	MW-13/401053-14	Liquid	01/22/04	01/20/04 12:44	
01481-15	MW-12/401053-15	Liquid	01/22/04	01/20/04 14:20	

Parameter	Units	Lab Sample IDs 01481-11	01481-12	01481-13	01481-14	01481-15
		22	1	15	3	2
Sulfate as SO4 (375.4)						
Sulfate as SO4	mg/l	5100	2800	2600	3800	3700
Dilution Factor		1000	75	75	100	100
Analysis Date		01/28/04	01/28/04	01/28/04	01/28/04	01/28/04
Batch ID		SEW006	SEW006	SEW006	SEW006	SEW006
Analyst		CR	CR	CR	CR	CR
CO2 and Forms of Alkalinity (4500D)						
Bicarbonate (2320/4500)	mg/l as CaCO3	440	560	190	250	660
Carbon Dioxide, Free	mg/l as CaCO3	67	23	12	9.0	26
Carbonate (2320/4500)	mg/l as CaCO3	1.0	3.0	1.0	1.0	3.0
Hydroxide	mg/l as CaCO3	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Dioxide, Total	mg/l as CaCO3	450	520	180	230	610
Analysis Date		01/30/04	01/30/04	01/30/04	01/30/04	01/30/04
Batch ID		AEW004	AEW004	AEW004	AEW004	AEW004
Analyst		ST	ST	ST	ST	ST
Alkalinity (to pH 4.5) as CaCO3 (2320B)						
Alkalinity (to pH 4.5) as CaCO3	mg/l	440	560	190	250	660
Dilution Factor		1	1	1	1	1
Analysis Date		01/30/04	01/30/04	01/30/04	01/30/04	01/30/04
Batch ID		AEW004	AEW004	AEW004	AEW004	AEW004
Analyst		ST	ST	ST	ST	ST

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-11	MW-22/401053-11	Liquid	01/22/04	01/20/04 10:56	
01481-12	MW-11/401053-12	Liquid	01/22/04	01/20/04 11:36	
01481-13	MW-15/401053-13	Liquid	01/22/04	01/20/04 12:09	
01481-14	MW-13/401053-14	Liquid	01/22/04	01/20/04 12:44	
01481-15	MW-12/401053-15	Liquid	01/22/04	01/20/04 14:20	

Parameter	Units	Lab Sample IDs 01481-11	01481-12	01481-13	01481-14	01481-15
		22	11	15	13	12
Fluoride (340.2)						
Fluoride	mg/l	0.35	0.54	0.70	0.94	1.4
Dilution Factor		1	1	1	1	1
Analysis Date		02/03/04	02/03/04	02/03/04	02/03/04	02/03/04
Batch ID		FLW005	FLW005	FLW005	FLW005	FLW005
Analyst		ST	ST	ST	ST	ST
Bromide (300.0)						
Bromide	mg/l	1.2	0.41	0.65	<0.20	0.24
Dilution Factor		1.0	1.0	1.0	1.0	1.0
Prep Date		01/26/04	01/26/04	01/26/04	01/26/04	01/26/04
Analysis Date		01/26/04	01/26/04	01/26/04	01/26/04	01/26/04
Batch ID		ICW047	ICW047	ICW047	ICW047	ICW047
Prep Method		300.0	300.0	300.0	300.0	300.0
Analyst		SGB	SGB	SGB	SGB	SGB
RCRA Metals (6010B)						
Arsenic	mg/l	0.016	0.14	0.0050	<0.0050	0.017
Barium	mg/l	0.036	2.4	0.32	<0.010	0.18
Cadmium	mg/l	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chromium	mg/l	0.054	0.12	0.020	<0.0050	0.030
Lead	mg/l	0.65	0.094	0.010	<0.0050	0.013
Selenium	mg/l	<0.010	<0.010	<0.010	<0.010	<0.010
Silver	mg/l	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dilution Factor		1	1	1	1	1
Prep Date		01/23/04	01/23/04	01/23/04	01/23/04	01/23/04
Analysis Date		01/27/04	01/27/04	01/27/04	01/27/04	01/27/04
Batch ID		PW041	PW041	PW041	PW041	PW041
Prep Method		3010A	3010A	3010A	3010A	3010A
Analyst		GSP	GSP	GSP	GSP	GSP

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-11	MW-22/401053-11	Liquid	01/22/04	01/20/04 10:56	
01481-12	MW-11/401053-12	Liquid	01/22/04	01/20/04 11:36	
01481-13	MW-15/401053-13	Liquid	01/22/04	01/20/04 12:09	
01481-14	MW-13/401053-14	Liquid	01/22/04	01/20/04 12:44	
01481-15	MW-12/401053-15	Liquid	01/22/04	01/20/04 14:20	

Parameter	Units	Lab Sample IDs 01481-11	01481-12	01481-13	01481-14	01481-15
		29		15		
Mercury (7470A)						
Mercury	mg/l	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dilution Factor		1	1	1	1	1
Prep Date		01/27/04	01/27/04	01/27/04	01/27/04	01/27/04
Analysis Date		01/27/04	01/27/04	01/27/04	01/27/04	01/27/04
Batch ID		HGW007	HGW007	HGW007	HGW007	HGW007
Prep Method		7470A	7470A	7470A	7470A	7470A
Analyst		JDE	JDE	JDE	JDE	JDE
Metals, Dissolved (6010B)						
Calcium, Dissolved	mg/l	400	150	130	390	420
Magnesium, Dissolved	mg/l	73	15	15	57	78
Potassium, Dissolved	mg/l	11	<5.0	<5.0	7.0	6.5
Sodium, Dissolved	mg/l	2600	480	180	1000	1500
Dilution Factor		5	5	5	5	5
Analysis Date		01/26/04	01/26/04	01/26/04	01/26/04	01/26/04
Batch ID		PD012	PD012	PD012	PD012	PD012
Analyst		GSP	GSP	GSP	GSP	GSP
Hardness by calculation (6010B)						
Hardness as CaCO3	mg/l	1200	1200	1300	1200	1300
Dilution Factor		1	1	1	1	1
Prep Date		01/23/04	01/23/04	01/23/04	01/23/04	01/23/04
Analysis Date		01/27/04	01/27/04	01/27/04	01/27/04	01/27/04
Batch ID		PW041	PW041	PW041	PW041	PW041
Prep Method		3010A	3010A	3010A	3010A	3010A
Analyst		GSP	GSP	GSP	GSP	GSP

SEVERN TRENT STL

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-16	INFLUENT/401053-16	Liquid	01/22/04	01/20/04 14:52	
01481-17	EFFLUENT/401053-17	Liquid	01/22/04	01/20/04 15:12	

Parameter	Units	Lab Sample IDs 01481-16	01481-17
Specific Conductance (120.1)			
Specific Conductance	umhos/cm	5700	8000
Dilution Factor		1	1
Analysis Date		01/28/04	01/28/04
Batch ID		CDW005	CDW005
Analyst		ST	ST
Total Dissolved Solids (160.1)			
Total Dissolved Solids	mg/l	3900	5800
Dilution Factor		1	1
Analysis Date		01/26/04	01/26/04
Batch ID		TDW008	TDW008
Analyst		ST	ST
Chloride (4500E)			
Chloride	mg/l	810	1500
Dilution Factor		10	20
Analysis Date		01/28/04	01/28/04
Batch ID		CKW009	CKW009
Analyst		CR	CR
Sulfate as SO4 (375.4)			
Sulfate as SO4	mg/l	1600	1600
Dilution Factor		50	50
Analysis Date		01/28/04	01/28/04
Batch ID		SEW006	SEW006
Analyst		CR	CR

SEVERN TRENT STL

STL Pensacola 3355 McLemore Drive - Pensacola FL 32514 Telephone:(850) 474-1001 Fax:(850) 478-2671

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-16	INFLUENT/401053-16	Liquid	01/22/04	01/20/04 14:52	
01481-17	EFFLUENT/401053-17	Liquid	01/22/04	01/20/04 15:12	

Parameter	Units	Lab Sample IDs 01481-16	01481-17
CO2 and Forms of Alkalinity (4500D)			
Bicarbonate (2320/4500)	mg/l as CaCO3	570	<1.0
Carbon Dioxide, Free	mg/l as CaCO3	70	<1.0
Carbonate (2320/4500)	mg/l as CaCO3	1.0	<1.0
Hydroxide	mg/l as CaCO3	<1.0	<1.0
Carbon Dioxide, Total	mg/l as CaCO3	570	<1.0
Analysis Date		01/30/04	01/30/04
Batch ID		AEW004	AEW004
Analyst		ST	ST
Alkalinity (to pH 4.5) as CaCO3 (2320B)			
Alkalinity (to pH 4.5) as CaCO3	mg/l	570	<1.0
Dilution Factor		1	1
Analysis Date		01/30/04	01/30/04
Batch ID		AEW004	AEW004
Analyst		ST	ST
Fluoride (340.2)			
Fluoride	mg/l	0.53	0.47
Dilution Factor		1	1
Analysis Date		02/03/04	02/03/04
Batch ID		FLW005	FLW005
Analyst		ST	ST

SEVERN TRENT STL

STL Pensacola 3355 McLemore Drive - Pensacola FL 32514 Telephone:(850) 474-1001 Fax:(850) 478-2671

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-16	INFLUENT/401053-16	Liquid	01/22/04	01/20/04 14:52	
01481-17	EFFLUENT/401053-17	Liquid	01/22/04	01/20/04 15:12	

Parameter	Units	Lab Sample IDs 01481-16	01481-17
Bromide (300.0)			
Bromide	mg/l	0.50	<0.20
Dilution Factor		1.0	1.0
Prep Date		01/26/04	01/26/04
Analysis Date		01/26/04	01/26/04
Batch ID		ICW047	ICW047
Prep Method		300.0	300.0
Analyst		SGB	SGB
RCRA Metals (6010B)			
Arsenic	mg/l	<0.0050	<0.0050
Barium	mg/l	0.059	0.059
Cadmium	mg/l	<0.0050	<0.0050
Chromium	mg/l	0.0050	0.018
Lead	mg/l	<0.0050	0.23
Selenium	mg/l	<0.010	<0.010
Silver	mg/l	<0.0050	<0.0050
Dilution Factor		1	1
Prep Date		01/23/04	01/23/04
Analysis Date		01/27/04	01/27/04
Batch ID		PW041	PW041
Prep Method		3010A	3010A
Analyst		GSP	GSP

SEVERN TRENT STL

STL Pensacola 3355 McLemore Drive - Pensacola FL 32514 Telephone:(850) 474-1001 Fax:(850) 478-2671

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-16	INFLUENT/401053-16	Liquid	01/22/04	01/20/04 14:52	
01481-17	EFFLUENT/401053-17	Liquid	01/22/04	01/20/04 15:12	

Parameter	Units	Lab Sample IDs 01481-16	01481-17
Mercury (7470A)			
Mercury	mg/l	<0.00020	<0.00020
Dilution Factor		1	1
Prep Date		01/27/04	01/27/04
Analysis Date		01/27/04	01/27/04
Batch ID		HGW007	HGW007
Prep Method		7470A	7470A
Analyst		JDE	JDE
Metals, Dissolved (6010B)			
Calcium, Dissolved	mg/l	400	400
Magnesium, Dissolved	mg/l	60	60
Potassium, Dissolved	mg/l	7.3	7.2
Sodium, Dissolved	mg/l	970	990
Dilution Factor		5	5
Analysis Date		01/26/04	01/26/04
Batch ID		PD012	PD012
Analyst		GSP	GSP
Hardness by calculation (6010B)			
Hardness as CaCO3	mg/l	1100	1100
Dilution Factor		1	1
Prep Date		01/23/04	01/23/04
Analysis Date		01/27/04	01/27/04
Batch ID		PW041	PW041
Prep Method		3010A	3010A
Analyst		GSP	GSP

SEVERN TRENT STL

STL Pensacola 3355 McLemore Drive - Pensacola FL 32514 Telephone:(850) 474-1001 Fax:(850) 478-2671

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-18	Method Blank	Liquid	01/22/04		
01481-19	Lab Control Standard % Recovery	Liquid	01/22/04		
01481-20	Matrix Spike % Recovery	Liquid	01/22/04		
01481-21	Matrix Spike Duplicate % Recovery	Liquid	01/22/04		

Parameter	Units	Lab Sample IDs 01481-18	01481-19	01481-20	01481-21
Specific Conductance (120.1)					
Specific Conductance	umhos/cm	<1.0	100 %	N/A	N/A
Dilution Factor		1			
Analysis Date		01/28/04			
Batch ID		CDW005	CDW005		
Analyst		ST			
Total Dissolved Solids (160.1)					
Total Dissolved Solids	mg/l	<5.0	94 %	N/A	N/A
Dilution Factor		1			
Analysis Date		01/26/04			
Batch ID		TDW008	TDW008		
Analyst		ST			
Chloride (4500E)					
Chloride	mg/l	<2.0	101 %	76 %N	76 %N
Dilution Factor		1			
Analysis Date		01/28/04			
Batch ID		CKW009	CKW009	CKW009	CKW009
Analyst		CR			

SEVERN TRENT STL

STL Pensacola 3355 McLemore Drive - Pensacola FL 32514 Telephone:(850) 474-1001 Fax:(850) 478-2671

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-18	Method Blank	Liquid	01/22/04		
01481-19	Lab Control Standard % Recovery	Liquid	01/22/04		
01481-20	Matrix Spike % Recovery	Liquid	01/22/04		
01481-21	Matrix Spike Duplicate % Recovery	Liquid	01/22/04		

Parameter	Units	Lab Sample IDs 01481-18	01481-19	01481-20	01481-21
Sulfate as SO4 (375.4)					
Sulfate as SO4	mg/l	<5.0	102 %	0 %N/C	0 %N/C
Dilution Factor		1			
Analysis Date		01/28/04			
Batch ID		SEW006	SEW006	SEW006	SEW006
Analyst		CR			
CO2 and Forms of Alkalinity (4500D)					
Bicarbonate (2320/4500)	mg/l as CaCO3	N/A	N/A	N/A	N/A
Alkalinity (to pH 4.5) as CaCO3 (2320B)					
Alkalinity (to pH 4.5) as CaCO3	mg/l	<1.0	97 %	92 %	82 %
Dilution Factor		1			
Analysis Date		01/30/04			
Batch ID		AEW004	AEW004	AEW004	AEW004
Analyst		ST			
Fluoride (340.2)					
Fluoride	mg/l	<0.20	96 %	91 %	93 %
Dilution Factor		1			
Analysis Date		02/03/04			
Batch ID		FLW005			
Analyst		ST			

SEVERN TRENT STL

STL Pensacola 3355 McLemore Drive - Pensacola FL 32514 Telephone:(850) 474-1001 Fax:(850) 478-2671

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-18	Method Blank	Liquid	01/22/04		
01481-19	Lab Control Standard % Recovery	Liquid	01/22/04		
01481-20	Matrix Spike % Recovery	Liquid	01/22/04		
01481-21	Matrix Spike Duplicate % Recovery	Liquid	01/22/04		

		Lab Sample IDs			
Parameter	Units	01481-18	01481-19	01481-20	01481-21
Bromide (300.0)					
Bromide	mg/l	<0.20	94 %	94 %	93 %
Dilution Factor		1.0			
Prep Date		01/26/04			
Analysis Date		01/26/04			
Batch ID		ICW047	ICW047	ICW047	ICW047
Prep Method		300.0			
Analyst		SGB			
RCRA Metals (6010B)					
Arsenic	mg/l	<0.0050	102 %	107 %	109 %
Barium	mg/l	<0.010	106 %	100 %	102 %
Cadmium	mg/l	<0.0050	101 %	102 %	104 %
Chromium	mg/l	<0.0050	103 %	102 %	104 %
Lead	mg/l	<0.0050	104 %	105 %	107 %
Selenium	mg/l	<0.010	96 %	89 %	90 %
Silver	mg/l	<0.0050	106 %	111 %	110 %
Dilution Factor		1			
Prep Date		01/23/04			
Analysis Date		01/27/04			
Batch ID		PW041	PW041	PW041	PW041
Prep Method		3010A			
Analyst		GSP			

SEVERN TRENT STL

STL Pensacola 3355 McLemore Drive - Pensacola FL 32514 Telephone:(850) 474-1001 Fax:(850) 478-2671

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
01481-18	Method Blank	Liquid	01/22/04		
01481-19	Lab Control Standard % Recovery	Liquid	01/22/04		
01481-20	Matrix Spike % Recovery	Liquid	01/22/04		
01481-21	Matrix Spike Duplicate % Recovery	Liquid	01/22/04		

Parameter	Units	Lab Sample IDs 01481-18	01481-19	01481-20	01481-21
Mercury (7470A)					
Mercury	mg/l	<0.00020	101 %	95 %	95 %
Dilution Factor		1			
Prep Date		01/27/04			
Analysis Date		01/27/04			
Batch ID		HGW007	HGW007	HGW007	HGW007
Prep Method		7470A			
Analyst		JDE			
Metals, Dissolved (6010B)					
Calcium, Dissolved	mg/l	<0.50	100 %	93 %	99 %
Magnesium, Dissolved	mg/l	<0.50	99 %	98 %	101 %
Potassium, Dissolved	mg/l	<1.0	99 %	118 %	119 %
Sodium, Dissolved	mg/l	<1.0	98 %	111 %	115 %
Dilution Factor		1			
Analysis Date		01/23/04			
Batch ID		PD012	PD012	PD012	PD012
Analyst		GSP			
Hardness by calculation (6010B)					
Hardness as CaCO3	mg/l	<3.3			
Dilution Factor		1			
Prep Date		01/23/04			
Analysis Date		01/27/04			
Batch ID		PW041	PW041	PW041	PW041
Prep Method		3010A			
Analyst		GSP			

STL Pensacola

TRENT STL

PROJECT SAMPLE INSPECTION FORM

Lab Order #: C401481 Date Received: 01/22/

1.	Was there a Chain of Custody?	(Yes)	No*		8.	Were samples checked for preservative? *(Check pH of all H_2O requiring preservative (STL-PN SOP 917) except VOA vials that require zero headspace)*+	Yes	(No*)	N/A
2.	Was Chain of Custody properly filled out and relinquished?	(Yes)	No*		9.	Is there sufficient volume for analysis requested?	(Yes)	No*	N/A *(Can)*
3.	Were all samples properly labeled and identified?	Yes	(No*)		10.	Were samples received within Holding Time? (REFER TO STL-SOP 1040)	(Yes)	No*	
4.	Were samples received cold? (Criteria: 2° - 6°C: STL-SOP 1055)	(Yes)	No*	N/A	11.	Is Headspace visible > ¼" in diameter in VOA vials?*	Yes*	No	(N/A)
5.	Did samples require splitting or compositing♦?	Yes*	(No)		12.	**Were Trip Blanks Received?**	Yes	No	(N/A)
6.	Were samples received in proper containers for analysis requested?	(Yes)	No*		13.	If sent, were matrix spike bottles returned?	Yes	No*	(N/A)
7.	Were all sample containers received intact?	(Yes)	No*		14.	If sent, were T-Handles returned?	Yes	No*	(N/A)
					15.	If any issues, how was PM notified?	PSIF ☒	Verbal ☐	

Airbill Number(s): 12 878 168 01 4359 3008
12 878 168 01 4374 0219
12 878 168 01 4314 2591

Shipped By: (UPS) FedX HD BUS ABX
(HD – Hand Delivery)

Cooler Numbers & Temp(s) (°C): Client 3.0°C, 3.0°C, 3.5°C IR#1, CCC3
(IE. 340L-4°C-CCK8 -- LIST THERMOMETER NUMBER FOR VERIFICATION)

Out of Control Events and Inspection Comments (list sample IDs/Tests where appropriate):

1-3. COC/Sample ID/COC discrepancy: (2) 32oz plastic bottles for wet chem were labeled to have HCl but are not preserved (samples 2+3) (3) 16oz plastics for samples 1, 2, + 3 are labeled for

4. Insufficient Ice ☐ Delay in delivery ☐ Other ☐

5. Samples were Split ☐ Composited ☐ Requested by: Client ☐ PM ☐ Other:

6. Improper Containers (ID/Size/desc):

7. Broken bottles/Test:

8. Incorrect pH:

9. Test/Matrix/Volume:

10. Out of Holding Time/Test:

11. VOA headspace >1/4"
(list ~ size)

List additional comments by above number: HCl
both HCl and HNO3. (2) 4oz plastic bottles received for sample 2, 3 were labeled for HCl and HNO3.

(USE BACK OF PSIF FOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: RH Date: 01/22/04 Logged By: LK Date: 22-JAN-04

♣ *Note all Out-of-Control and/or questionable events on Comment Section of this form. For holding times, the analytical department will flag immediate hold time samples(pH, Dissolved O2, Residual Cl) as out of hold time, therefore, these samples will not be documented on this PSIF.*

♦ *All volatile samples requested to be split or composited must be done in the Volatile Lab. Document: "Volatile sample values may be compromised due to sample splitting (compositing)"*

\+ *All pH results for North Carolina, New York, and other requested samples are to be recorded on the pH log provided (STL-SOP 938).*

• *According to EPA, ¼" of headspace is acceptable in 40 ml vials requiring volatile analysis.*

SEVERN TRENT STL

Organic Data Qualifiers for Final Report

B	The analyte was detected in the method blank and in the client's sample.
D	The result was obtained from a dilution.
E	The result exceeds the calibration range.
J	Estimated value because the analyte concentration is less than the reporting limit.
M	A matrix effect was present.
N	Presumptive evidence of a compound. The compound was identified qualitatively or as a Tentatively Identified Compound.
N/C	Not Calculable. Either the sample spiked was > 4X spike concentration, or the compound was diluted out, or the results of sample duplicate analysis were <RL.
P	Second-column or detector confirmation exceeded method criteria. Appropriate value is reported and data is flagged/qualified as instructed by method/regulation.
U or < or ND	The analyte was not detected.
*	The result is not within control limit(s).

Inorganic Data Qualifiers for Final Report

B	The analyte was detected in the method blank and in the client's sample.
E	The reported value is estimated because of the presence of interference.
J	Estimated value because the analyte concentration is less than the reporting limit.
N	The spiked sample recovery is not within control limits.
N/C	Not Calculable. Either the sample spiked was > 4X spike concentration, or the compound was diluted out, or the results of sample duplicate analysis were <RL.
U or < or ND	The analyte was not detected.
*	Duplicate analysis not within control limits
M	The duplicate injection precision was not met.
S	The reported value was determined by the Method of Standard Addition (MSA).
W	Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance and post spike recovery is greater than or equal to 40%, the sample is flagged with a "W" and no further action is required.
+	The Standard Additions Correlation Coefficient is <0.995.

It is permissible to submit an Out-of-Control Events/Corrective Action form and/or Case Narrative in lieu of using above qualifiers.

When the laboratory receives a sample that does not meet EPA requirements for sample collection, preservation or holding time, the laboratory is required to reject the samples. The client must be notified and asked whether the lab should proceed with analysis. Data from any samples that do not meet sample acceptance criteria (collection, preservation and holding time), must be flagged, or noted on a corrective action form or case narrative, or addressed on the Project Sample Inspection Form (PSIF) in an unambiguous manner clearly defining the nature and substance of the variation. NPDES samples from North Carolina that do not meet EPA requirements for sample collection, preservation or holding time are non-reportable for NPDES compliance monitoring.

Abbreviations

ND	Not Detected at or above the STL Pensacola reporting limit (RL)
NS	Not Submitted
NA	Not Applicable
MDL	STL Pensacola Method Detection Limit
RL	STL Pensacola Reporting Limit
NoMS	Not enough sample provided to prepare and/or analyze a method-required matrix spike (MS) and/or duplicate (MSD)

Florida Projects Inorganic/Organic

Refer to FL DEP 62-160; Table 4 Data Qualifier Codes. FL DEP Rule 62-160, Table 1 lists the Florida sites which require data qualifiers.

Arizona DEQ Projects

Any qualified data submitted to Arizona DEQ (ADEQ) after January 1, 2001 must be designated using the Arizona Data Qualifiers as developed by the Arizona ELAC technical subcommittee. Refer to the ADEQ qualifier list.

Severn Trent Laboratories Inc.
STL Pensacola • 3355 McLemore Dr • Pensacola, FL 32514
Tel 850 474 1001 Fax 850 484 5315 • *www.stl-inc.com*

Revised/Effective: 10-24-03.

SEVERN TRENT STL

STL PENSACOLA
Certifications, Memberships & Affiliations

Alabama Department of Environmental Management, Laboratory ID No. 40150 (Drinking Water by Reciprocity with FL)

Arizona Department of Health Services, Lab ID No. AZ0589 (Hazardous Waste & Wastewater)

Arkansas Department of Pollution Control and Ecology, (88-0689) (Environmental)

California Department of Health Services, **ELAP** Laboratory ID No. I-2510 (Hazardous Waste and Wastewater)

Connecticut Department of Health Services, Connecticut Lab Approval No. PH-0697 (D W, H W and Wastewater)

Florida DOH, **NELAP** Laboratory ID No. E81010 (Drinking Water, Hazardous Waste and Wastewater)

Florida DEP/DOH CompQAP # 980156

Iowa Department of Natural Resources, Laboratory ID No. 367 (WW & UST)

Kansas Department of Health & Environment, **NELAP** Laboratory ID No. E10253 (Wastewater and Hazardous Waste)

Kentucky NR&EPC, Laboratory ID No. 90043 (Drinking Water)

Louisiana DEQ, LELAP, **NELAP** Laboratory ID No. 02075, Agency Interest ID 30748 (Environmental)

Maryland DH&MH Laboratory ID No. 233 (Drinking Water by Reciprocity with Florida)

Massachusetts DEP, Laboratory ID No. M-FL094 (Wastewater)

Michigan Bureau of E&OccH, Laboratory ID No.9912 (Drinking Water by Reciprocity with Florida)

New Hampshire DES ELAP, **NELAP** Laboratory ID No. 250502 (Drinking Water & Wastewater)

New Jersey DEP&E, **NELAP** Laboratory ID No. FL006 (Wastewater and Hazardous Waster)

North Carolina DENR, Laboratory ID No. 314 (Hazardous Waste and Wastewater)

North Dakota DH&Consol Labs, Laboratory ID No. R-108 Wastewater and Hazardous Waste by Reciprocity with Florida)

Oklahoma Department of Environmental Quality, Laboratory ID No. 9810 (Hazardous Waste and Wastewater)

Pennsylvania Department of Environmental Resources, **NELAP** Laboratory ID No. 68-467 (Drinking Water & Wastewater)

South Carolina DH&EC, Laboratory ID No. 96026 (Wastewater & Solids/Hazardous Waste by Reciprocity with FL)

Tennessee Department of Health & Environment, Laboratory ID No. 02907 (Drinking Water)

Virginia Department of General Services, Laboratory ID No. 00008 (Drinking Water by Reciprocity with FL)

West Virginia DOE, Office of Water Resources, Laboratory ID No. 136 (Haz Waste and Wastewater)

AIHA (American Industrial Hygiene Association) Accredited Laboratory, Laboratory ID No. 100704. Participant in AIHA sponsored Laboratory PAT Rounds

EPA ICR (Information Collection Rule) Approved Laboratory, Laboratory ID No. ICRFL031

NFESC (Naval Facilities Engineering Services Center)

USACE (United States Army Corps. of Engineers), MRD

STL Pensacola also has a foreign soil permit to accept soils from locations other than the continental United States. Permit No. S-37599

certlist|condcert.lst revised 9/30/03

Total Pages of Report 27

Pinnacle Laboratories, Inc. — Interlab Chain of Custody

Date: 1/21/04 Page: 1 of 2

Network Project Manager: Jacinta Tenorio

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, NM 87107
(505) 344-3777 Fax (505) 344-4413

C401481

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA (Total)	TCLP RCRA (8) Metals	Metals-13 PP List	Metals-TAL (23 Metals)	Dissolved Fe, Mn, Pb (6010)	Dissolved Ca, Mg, K, Na (6010)	TOC	Gen Chemistry: EC, TDS, Cl, SO4	Br, F, Total Hardness	Alk + Bicarb / Carb / OH	Volatile Organics GC/MS (8260)	BOD	COD	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	PNA (8310)/8270 SIMS	8260 (TCLP 1311) ZHE		Base/Neutral Acid Compounds GC/MS (625/8270)	Uranium (ICP-MS)	Radium 226+228	Gross Alpha/Beta	TO-14	NUMBER OF CONTAINERS
MW-18 / 401053-01	1/19/04	1025	AQ		X					X		X	X	X													
MW-5 / 401053-02		1116			X					X		X	X	X													
MW-19 / 401053-03		1144			X					X		X	X	X													
MW-4 / 401053-04		1349			X					X		X	X	X													
MW-6 / 401053-05		1415			X					X		X	X	X													
MW-7 / 401053-06		1446			X					X		X	X	X													
MW-9 / 401053-07		1513			X					X		X	X	X													
MW-10 / 401053-08	↓	1537			X					X		X	X	X													
MW-20 / 401053-09	1/20/04	0942			X					X		X	X	X													
MW-21 / 401053-10	↓	1020	↓		X					X		X	X	X													

PROJECT INFORMATION		SAMPLE RECEIPT		SAMPLES SENT TO:	
PROJECT #:	401053	Total Number of Containers		PENSACOLA - STL-FL	X
PROJ. NAME:	BIO	Chain of Custody Seals		ESL - OR	
QC LEVEL:	STD. IV	Received Intact?		ATEL - AZ	
QC REQUIRED:	MS MSD BLANK	Received Good Cond./Cold		ATEL - MARION	
TAT:	STANDARD RUSH!!	LAB NUMBER:		ATEL - MELMORE	
				EHL	
DUE DATE:	2/4	COMMENTS:		GEL	
RUSH SURCHARGE:	—			U OF MIAMI	
CLIENT DISCOUNT:	—			WCAS	
SPECIAL CERTIFICATION REQUIRED:	YES NO			WOHL	

RELINQUISED BY: 1.	RELINQUISED BY: 2.
Signature: Francine Tanno Time: 1700	Signature: Time:
Printed Name: Francine Tanno Date: 1/21/04	Printed Name: Date:
Pinnacle Laboratories, Inc.	Company
RECEIVED BY: 1.	**RECEIVED BY: 2.**
Signature: Raven Hedaia Time: 940	Signature: Time:
Printed Name: Date: 01/22/04	Printed Name: Date:
Company STL	Company

Pinnacle Laboratories, Inc. — Interlab Chain of Custody

Date: 1/21/04 Page: 2 of 2

PINNACLE LABORATORIES

Network Project Manager: Jacinta Tenorio

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, NM 87107
(505) 344-3777 Fax (505) 344-4413

C401481

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA (Total)	TCLP RCRA (8) Metals	Metals-13 PP List	Metals-TAL (23 Metals)	Dissolved Fe, Mn, Pb (6010)	Dissolved Ca, Mg, K, Na (6000)	TOC	Gen Chemistry: EC, TDS, Cl, SO4	Br, F, Total Hardness	Alk + Bicarb/Carb/OH	Volatile Organics GC/MS (8260)	BOD	COD	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	PNA (8310)/8270 SIMS	8260 (TCLP 1311) ZHE		Base/Neutral Acid Compounds GC/MS (625/8270)	Uranium (ICP-MS)	Radium 226+228	Gross Alpha/Beta	TO-14	NUMBER OF CONTAINERS
MW-22/401053-11	1/20/04	1056	AQ		X					X		X	X	X													
MW-11/401053-12		1136			X					X		X	X	X													
MW-15/401053-13		1209			X					X		X	X	X													
MW-13/401053-14		1244			X					X		X	X	X													
MW-12/401053-15		1420			X					X		X	X	X													
Influent/401053-16		1452			X					X		X	X	X													
Effluent/401053-17	↓	1512	↓		X					X		X	X	X													

PROJECT INFORMATION		SAMPLE RECEIPT		SAMPLES SENT TO:	
PROJECT #:	401053	Total Number of Containers		PENSACOLA - STL-FL	X
PROJ. NAME:	BIO	Chain of Custody Seals		ESL - OR	
QC LEVEL:	(STD) IV	Received Intact?		ATEL - AZ	
QC REQUIRED:	(MS) MSD BLANK	Received Good Cond./Cold		ATEL - MARION	
TAT:	(STANDARD) RUSH!!	LAB NUMBER:		ATEL - MELMORE	
				EHL	
DUE DATE:	2/4	COMMENTS:		GEL	
RUSH SURCHARGE:	—			U OF MIAMI	
CLIENT DISCOUNT:	—			WCAS	
SPECIAL CERTIFICATION REQUIRED:	YES (NO)			WOHL	

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.
Signature: Francine Tanio Time: 1700	Signature: Time:
Printed Name: Francine Tanio Date: 1/21/04	Printed Name: Date:
Pinnacle Laboratories, Inc.	Company
RECEIVED BY: 1.	**RECEIVED BY: 2.**
Signature: Raven Hedaia Time: 940	Signature: Time:
Printed Name: Date: 01/22/04	Printed Name: Date:
Company STL	Company

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 1-21-4 PAGE: 1 OF 2

LAB ACCESSION #: 401653

SHADED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: Teddy Griffin

COMPANY: Biotech Remediation Inc.

ADDRESS: 501 Airport Dr. Suite 109
Farmington, NM. 87401

PHONE: 505-327-4968

FAX:

BILL TO:

COMPANY:

ADDRESS:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐/DBCP ☐	PH	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics ☐PBMS	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151) -	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry: EC, TDS, Cl	SO4, Br, F, Alk + Bicarb w/ Calc	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8) + Hardness	RCRA Metals by TCLP (Method1311)	Metals: Diss. Ca, Mg, K, Na		NUMBER OF CONTAINERS
MW-18	1-19-4	1025	H2O	01					X						X								X	X	X			X		X		
MW-5		1116		02					X						X								X	X	X			X		X		
MW-19		1144		03					X						X								X	X	X			X		X		
MW-4		1349		04					X						X								X	X	X			X		X		
MW-6		1415		05					X						X								X	X	X			X		X		
MW-7		1446		06					X						X								X	X	X			X		X		
MW-9		1513		07					X						X								X	X	X			X		X		
MW-10		1537		08					X						X								X	X	X			X		X		
MW-20	1-20-4	0942		09					X						X								X	X	X			X		X		
MW-21		1020		10					X						X								X	X	X			X		X		

WEEKEND ANALYSES MAY RESULT IN AN ADDITIONAL SURCHARGE - PLEASE INQUIRE.

PROJECT INFORMATION

PROJ. NO.: 810

PROJ. NAME: T-Way Refinery

P.O. NO.:

SHIPPED VIA: Bus.

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐24hr* ☐48hr* ☐72hr* ☐1 WEEK (NORMAL) ☐
*NOT AVAILABLE ON ALL ANALYSES

CERTIFICATION REQUIRED ☐ NM ☐ SDWA ☐ AZ ☐ OTHER

METHANOL PRESERVATION ☐ | METALS ☐ TOTAL ☐ DISSOLVED

COMMENTS:

53° Temp Blank

SAMPLE RECEIPT

NO. OF CONTAINERS:	20
CUSTODY SEALS:	
RECEIVED INTACT:	
BLUE ICE/ICE:	

RELINQUISHED BY: 1.

Signature: Time: 0900

Printed Name: Mike Beauregard Date: 1-21-4

Company: Biotech

See Reverse side (Force Majeure)

RECEIVED BY: 1.

Signature: Time:

Printed Name: Date:

Company:

RELINQUISHED BY: 2.

Signature: Time:

Printed Name: Date:

Company:

RECEIVED BY: (LAB) 2.

Signature: Time: 1535

Printed Name: Date: 1/21/04

American Environmental Network (NM), Inc.

CHAIN OF CUSTODY
(Continuation Sheet)

PAGE 2 OF 2

CLIENT: Biotech Remediation Inc.
P.O. NUMBER J-Way Refinery 810
AEN(NM) Accession #: 401053

PARAMETERS

CLIENT SAMPLE ID	LAB ID	DATE AND TIME	MATRIX	8021 BTEX	pH, K, Na	8270 SIMS	SO4, Br, F	TDS, Cl, Hard	Ca, Mg, K, Na, Alk Gr.	BOTTLE TYPE & NO.	NET PRICE
MW-22		1-20-4 1056	H2O	X	X	X	X	X	X		
MW-11		↓ 1136	↓	X	X	X	X	X	X		
MW-15		1209		X	X	X	X	X	X		
MW-13		1244		X	X	X	X	X	X		
MW-12		1420		X	X	X	X	X	X		
Influent		1452		X	X	X	X	X	X		
Effluent		↓ 1512	↓	X	X	X	X	X	X		
Trip Blank		12/30/03 - 0950	AQ	X							
(57) Rec'd											

SAMPLES RELINQUISHED BY (SIGNATURE)	DATE AND TIME	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE AND TIME
[signature]	1-21-4 0900		
SAMPLES RECEIVED BY (SIGNATURE)	DATE AND TIME		

DISTRIBUTION: White - AEN (NM), Canary - Originator