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REPORTS

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ATTACHMENT I

JAQUEZ COM. C #1 AND JAQUEZ COM. E #1

REMEDIATION SYSTEM EVALUATION

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EL PASO FIELD SERVICES
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1 EXECUTIVE SUMMARY

PSC has managed the remediation system at the El Paso Field Services (EPFS) Jaquez Com. C #1 and Jaquez Com. E #1 meter sites since January 2000. The remediation system has functioned in accordance with the recommendations made in the *Jaquez Com. C #1 and Jaquez Com. E #1 Soil and Groundwater Remediation Pilot Test*, dated October 1999.

The original model predicted that the light non-aqueous phase liquid (LNAPL) hydrocarbon constituents in the ground water, located in the aquifer and the smear zone just above the water table, continue to act as a source of hydrocarbons in down-gradient wells. Therefore, the model for remediation of the site included air injection into the aquifer to volatilize the components of the LNAPL into the vadose zone where they can be biodegraded by microbial activity or extracted from the ground in a gaseous phase.

The soil vapor extraction (SVE) operations are performed in the vadose zone and the air injection (sparge) operations are performed on the aquifer. Results of the remediation system for the current year continue to indicate that the site has enough permeability to be a candidate for the treatment methods that were proposed and are currently in place. The operational adjustments recently incorporated at the site have improved the efficiency of the system and allow further modifications to be more easily discerned.

There are two options discussed in this report for remediating this site:

- **Option 1** involves operating the present system with the current configuration, venting seasonally and sparging at an increased pressure and flow rate.
- **Option 2** involves retaining the current remediation system and adding at least two sparge wells and one vapor extraction well that will operate continually and effect a more aggressive remediation system, anticipating accelerated results.

2 INTRODUCTION

EPFS gathers natural gas from two wells, Jaquez Com. C #1 and Jaquez Com. E #1, located in Section 6, Township 29N, Range 9W in San Juan County, New Mexico. The two meter stations are located 40-feet apart on the same site location. Past practices included discharge of pipeline liquids into an earthen pit at the site north of Citizens Ditch.

In 1993 a comprehensive soil and groundwater investigation was performed on the meter site location and nearby garden area. For several years remediation and bioremediation activities have been conducted. A total of twelve permanent groundwater monitoring wells and two temporary monitoring wells were installed, as illustrated in Figure 1. Passive skimmers and product recovery systems were utilized including efforts to depress the water table to improve product recovery.

In January 2000 EPFS began the air sparge system followed by the soil vapor extraction system. At the request of El Paso Field Services Company (EPFS), PSC has prepared the following report to evaluate this remediation system. This report is intended to discuss the field activities for the last six months and make recommendations for achieving an increased rate of progression.

The groundwater monitoring wells numbered R-1, R-2, R-3, R-4, R-5, and R-6 north of Citizens Ditch, as shown on Figure 1, have shown the most extensive concentrations of contaminants. These monitoring wells vary in degree of contamination with R-1, R-2 and R-4 exhibiting the most significant levels of benzene, toluene, ethyl benzene, and total xylenes (Appendix A).

The remediation system currently includes three sparge wells and one vapor extraction well. The vapor extraction system has run from a combination of two of the following points: the vent well (VW), R-1, and/or R-4. There are also five monitoring points, three shallow and two deep, for obtaining soil gas information.

The monitoring wells numbered M-1, M-2, M-3, M-4, M-5 and M-6, located south of Citizens Ditch, exhibit much lower concentrations of contaminants. A passive SVE system, with five wind turbines, is located between the ditch and M-3, M-4, and M-5. The passive system has also been used for nutrient injection to enhance bioremediation.

3 SITE ACTIVITIES

Activities at the Jaquez site this year have primarily involved extensive data gathering from groundwater, soil and air media as well as operational criterion from the remediation system. Appendix B includes a detailed summary chronologically listing site activities since May of this year. The last six months has included, but is not limited to, the following activities conducted on a routine basis:

- Groundwater sampling from R-1, R-2, R-3, R-4, R-5, R-6, M-1, M-2, M-3, M-4, M-5, and M-6 for benzene, toluene, ethyl benzene, total xylenes (BTEX);
- Groundwater sampling for total nitrates from M-3 and M-4;
- Soil samples from excavation areas and Citizens Ditch;
- Air samples from SVE effluent beginning May 2000;
- Field data from remediation system such as pressure in pounds per square inch from sparge and SVE magnehelics, flow rates from sparge and SVE site gauges, thermo-anemometer readings from VW, R-1, R-4, influent, effluent, SW-1, SW-2, and SW-3, and pressure in inches of water from each monitoring point.

In more recent months, October to present, the site activities have also included:

- Extensive evaluations of field data;
- Tests of system function under changes to pressure and various flow rates;
- Groundwater level data collected, PID measurements of discharge, and dissolved oxygen levels in groundwater;
- Adjustments to sparge and vapor extraction operations.

4 EVALUATION OF THE NORTH SIDE OF CITIZENS DITCH

Existing data shows the current remediation system is effecting slow and somewhat erratic progress in reducing the contaminant levels in the groundwater north of Citizens Ditch. Air sparging and soil vapor extraction remains a viable solution to remediating the soil and groundwater concentrations of contaminants.

4.1 Soil Vapor Extraction System

The soil vapor extraction system is designed to remove volatilized hydrocarbon contamination from the vadose zone by extracting vapors and air from the soil pore spaces above the water table. This process occurs by placing a slotted screen above the water table and removing the volatile contaminants from the soil through extractive airflow. Vapor extraction was initially conducted through VW and R-1 beginning in May 2000. The SVE was moved from VW to R-4 on July 26, 2000 since the highest concentrations of contaminants are found within these monitoring wells.

In order for air and vapors to be removed from the soil pore spaces the screen has to be located above the water table in the vadose zone. Monitoring well installation records, located in Appendix C, provide construction data for monitoring wells R-1 and R-4 that places the top of the screen 9.6-feet below ground surface, extending 10-feet to a total depth of approximately 20-feet below ground surface. Listed in Table 1 are the groundwater elevations from January through November with changes ranging from less than one foot to almost four feet due to seasonal fluctuations. The monitor well screens in R-1 and R-4 typically are near submersion from May through December.

Table 1- Water and Screen Levels in Monitor Well R-1 and R-4

	Monitor Well R-1		**Monitor Well R-4**	
	Depth to Water (fbg)	**Screen Above Water**	**Depth to Water (fbg)**	**Screen Above Water**
11/20/00	11.16	1.56	10.42	0.82
10/27/00	10.62	1.02	9.93	0.33
08/23/00	10.28	0.68	9.5	-0.1
07/26/00	10.63	1.03	9.9	0.3
06/26/00	10.73	1.13	9.9	0.3
05/31/00	11.07	1.47	10.31	0.71
04/28/00	11.63	2.03	10.88	1.28
03/29/00	13.74	4.14	12.94	3.34
01/20/00	11.87	2.27	11.01	1.41

Table 2 lists the flow rates of the dilution air and the total flow rates that include the dilution air. The soil vapor flow rate is calculated by subtracting the dilution flow from the total flow leaving the soil vapor flow rate. As shown in Table 2, when vapor extraction is conducted from VW and R-1 an average flow rate of approximately 40 cubic feet per minute (cfm) is achieved. When vapor extraction is conducted from the groundwater monitoring wells R-1 and R-4 the average flow rate is reduced to approximately 13 cubic feet per minute. The reduced flow rate, when vapor extraction occurs from R-1 and R-4, is indicative of the screen being below or nearly below groundwater.

Table 2 – SVE Flow Rates in SCFM

Date	Dilution Flow	Total Flow	Soil Vapor Flow	Extraction From Wells
06/08/00	49	75	26	VW and R-1
06/16/00	43	82	39	VW and R-1
06/23/00	42	82	40	VW and R-1
07/07/00	42	83	41	VW and R-1
07/13/00	42	82	40	VW and R-1
07/25/00	42	84	42	VW and R-1
08/01/00	53	65	12	R-1 and R-4
08/09/00	52	64	12	R-1 and R-4
08/18/00	52	64	12	R-1 and R-4
08/25/00	52	65	13	R-1 and R-4
09/01/00	53	66	13	R-1 and R-4
09/08/00	53	66	13	R-1 and R-4
09/22/00	53	66	13	R-1 and R-4
09/29/00	55	66	11	R-1 and R-4
10/06/00	53	66	13	R-1 and R-4
10/13/00	53	66	13	R-1 and R-4
10/22/00	53	66	13	R-1 and R-4

4.2 Air Sparge System

The air sparge system is designed to remediate volatile and semi-volatile organic compounds in groundwater by injecting air into or below the saturated zone near the area of contamination. The system has been sparging through three sparge wells, SW-1, SW-2, and SW-3, located approximately sixty to seventy feet apart. SW-2 was installed to assist in the remediation of residual hydrocarbon material within the initial excavation area where the gas well pit was located. SW-3 has reduced contaminant concentrations in R-3 to the extent that the last four quarters of groundwater samples exhibit no detectable levels of BTEX. SW-1, located between R-4 and R-1, provides oxygen to the unsaturated and saturated soils where the highest concentrations of contaminants appear to be located.

5 EVALUATION OF THE SOUTH SIDE OF CITIZENS DITCH

The monitoring wells south of the ditch have shown a downward trend in the concentrations of contaminants. The system is currently equipped with a passive vent system utilizing a series of five rotary wind turbines approximately of 6.5-feet above ground surface. Each rotary wind turbine is separated by 20-feet of four-inch .020 slotted PVC pipe and a second .020 slotted PVC pipe four inches below the first, approximately four-feet below ground surface (Appendix C).

Laboratory analysis for groundwater samples taken from M-1, M-2, and M-6 have demonstrated no detectable levels of BTEX (Appendix D). Laboratory analyses for groundwater samples taken from M-3 show trace levels of benzene and total xylenes. Groundwater samples from M-4 reflect the highest concentrations of BTEX with the benzene constituent, during the last quarter analysis, accounting for 99 ppb of the 104.5 ppb of total BTEX. Laboratory analysis from groundwater samples taken from M-5 have typically indicated no detectable levels of BTEX until the last two quarters of groundwater samples. The last two laboratory analyses have shown low levels of benzene dropping from 43 parts per billion to 2.6 parts per billion, respectively, and toluene, ethyl benzene and total xylenes non detectable.

6 CONCLUSIONS

The current remediation system, north of Citizens Ditch, with the existing sparge wells and single extraction point, is presently performing efficiently and will make progress with time. Dissolved oxygen measurements are significantly low in R-1, R-2 and R-4 when the sparge unit is not operational indicating oxygen consumption. The existing vapor extraction well may be used continuously, May through December, to apply negative pressure and allow SW-1 to sparge at an increased flow rate. Water level data from groundwater monitoring wells R-1 and R-4 indicate the water table is typically above the slotted screen from May through December. Seasonal soil vapor extraction would provide the most efficient use of this system. SW-1 will most efficiently supply oxygen to the subsurface organisms within the areas of highest contamination.

The conclusion previously stated in the pilot study that the model of volatilizing hydrocarbon constituents in the groundwater through the vadose zone for release into the atmosphere or biodegradation in the vadose zone continues to be a valid determination.

7 RECOMMENDATIONS

As a result of the evaluation summarized in this report, two options have been identified to enhance the Jaquez Com. C #1 and Jaquez Com. E #1 remediation system.

7.1 Option 1

The current system could continue to operate with the appropriate adjustments to the sparge and vapor extraction system at various times of the year. The vapor extraction system may run from the monitoring wells R-1 and R-4 when the groundwater table is low, typically January through April. When the water table is too high to effect efficient extraction, the vent system should serve the purpose of providing negative pressure for the remediation system from the VW alone. The role of the VW, from May through

December, would allow SW-1 to perform at increased pressure and flow rates increasing the supply of oxygen to the area with the highest concentrations of contaminants.

The sparge system may continue to operate primarily from SW-1 and utilize SW-2 and SW-3 only as necessary. Increases in dissolved oxygen concentrations have been observed recently, indicating sustained biodegradation. Dissolved oxygen will continue to be monitored to ensure concentrations remain elevated. Weekly data will be obtained to determine what adjustments and changes to the system need to be made and when the conditions are most optimal.

The costs are not anticipated to change significantly from the current operations and maintenance budget for the remediation system.

7.2 Option 2

Option 2 involves augmenting the current system with additional sparge wells and at least one additional vapor extraction well. The radius of influence from SW-1 is currently being re-evaluated and further field measurements and research will determine the appropriate distance and quantity of additional sparge wells that shall be necessary to effect the most aggressive remediation system. Vapor extraction wells typically have a radius of influence of 40 to 50 feet. Therefore, at least one additional vapor extraction well, VW-2, should be located east of the VW to fully initiate soil vapor extraction to the contaminated area within the vicinity of R-1, R-2 and R-4.

Further soil and groundwater investigations should be conducted to determine the extent of contamination beneath the former excavation area. If it is determined that contaminants in this area remain to be a source, SW-2 may continue to be utilized for sparging and installation of an additional vent well and groundwater monitoring well may be considered to enhance remediation of the original source area.

A detailed monitoring plan will be implemented that will include attaining weekly field data and conducting careful interpretation of the system function. Dissolved oxygen levels should be taken monthly to verify proper oxygen delivery to the subsurface and monitor migration from the contaminated zone. Monitoring points will also be checked to detect vapor migration from the contaminated zone. Groundwater samples shall be obtained on a quarterly basis to evaluate contaminant degradation.

The estimated costs associated with Option 2 would involve the installation of the additional sparge wells, vapor extraction well and any other associated equipment (i.e. piping, valves, flow meter, site gauges) and monitoring requirements that may be deemed necessary to develop a more aggressive remediation system. The sparge wells would be constructed of 2-inch PVC and installed so that the screened section of the wells is approximately 10 feet below the surface of the water table. The entire length of the well screen (2-5 feet) will be submerged beneath the water table. A filter pack will be placed around either a .010 or .020 slotted screen, depending on sieve analysis data.

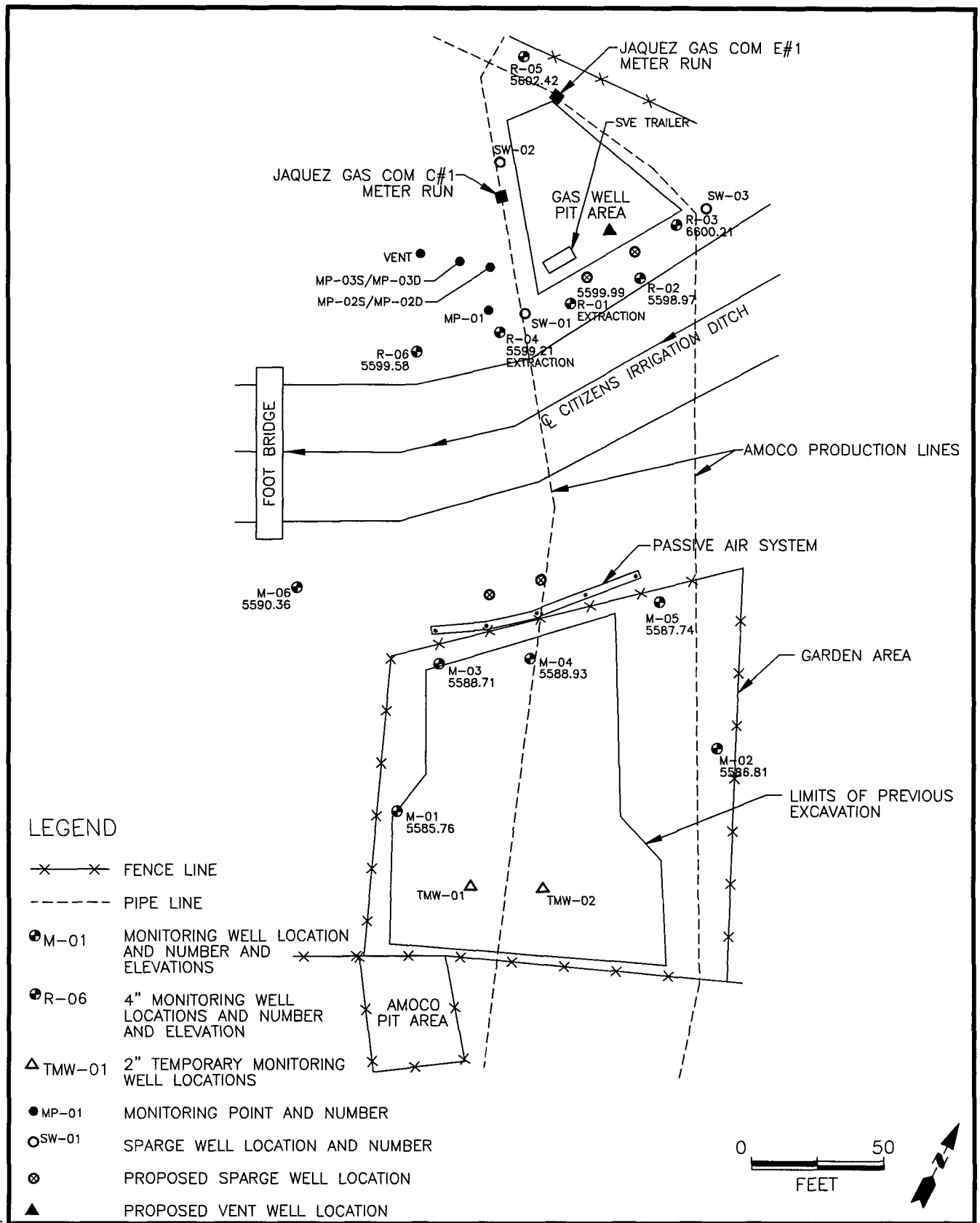
The estimated cost per sparge well is approximately $1,200.00. At least one additional vapor extraction well is recommended with an estimated cost of approximately $900.00. Costs for operations and maintenance of the system are not anticipated to change significantly from the current operations and maintenance budget.

7.3 Options South of Citizens Ditch

Due to much lower concentrations of contaminants south of Citizens Ditch two options are proposed in this report. The first option, a passive approach to the current system, involves placing ORC (magnesium peroxide) socks into M-3 and M-4. The ORC sock would increase the supply of oxygen to microbial activity and enhance the remediation process.

The second option involves sparging between the south side of the ditch bank and the passive air system and potentially conducting seasonal vapor extraction from the passive vent system when the water table is low. This option will require installation of additional sparge wells. The number of sparge wells required to effect this area would be dependent upon the extent of soil contamination. The current remediation system would not be capable of operating multiple sparge wells south of Citizens Ditch in addition to the sparge wells north of the ditch and maintain the appropriate flow rate necessary to achieve the anticipated results. Therefore, a compressor could be utilized for operating the sparge wells south of Citizens Ditch.

FIGURES



PHILIP SERVICES CORP	TITLE: SITE MAP WITH LOCATION OF PROPOSED WELLS	DWN: TMM / DES.: LW CHKD: MN / APPD: DATE: 12/12/00 / REV.: 4	PROJECT NO.: 62800364 EL PASO FIELD SERVICE COMPANY FIGURE 1

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Figure 2 – Benzene concentrations (reflected in ppb) detected in M-1, M-2, M-3, M-4, M-5, and M-6 at the end of each quarter during 2000.

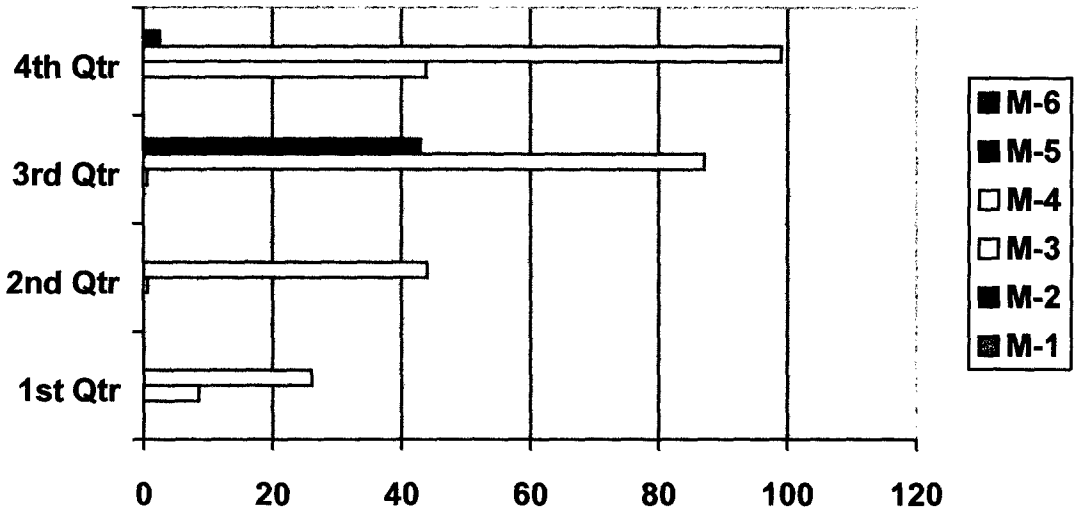


Figure 3 – Toluene concentrations (reflected in ppb) detected in M-1, M-2, M-3, M-4, M-5, and M-6 at the end of each quarter during 2000.

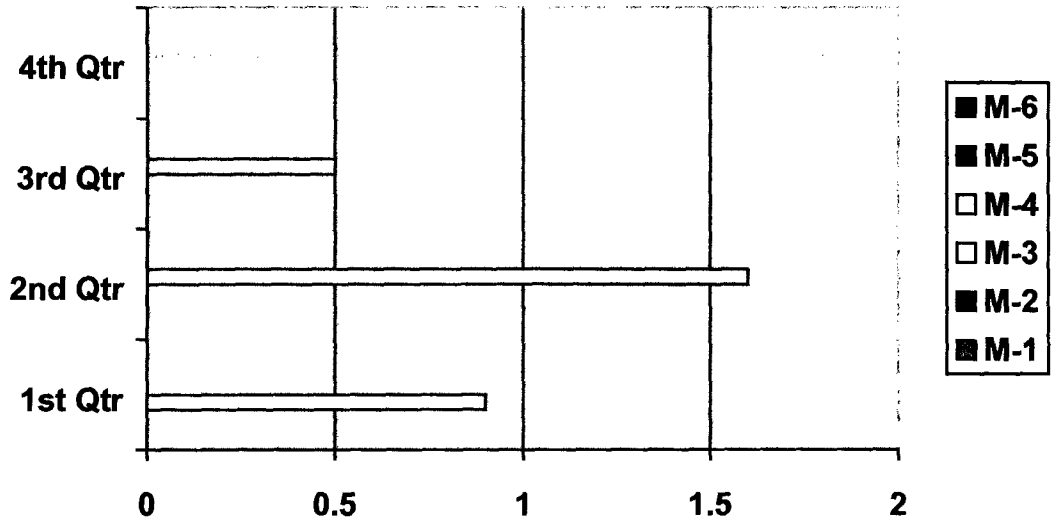


Figure 4 – Ethyl-benzene concentrations (reflected in ppb) detected in M-1, M-2, M-3, M-4, M-5, and M-6 at the end of each quarter during 2000.

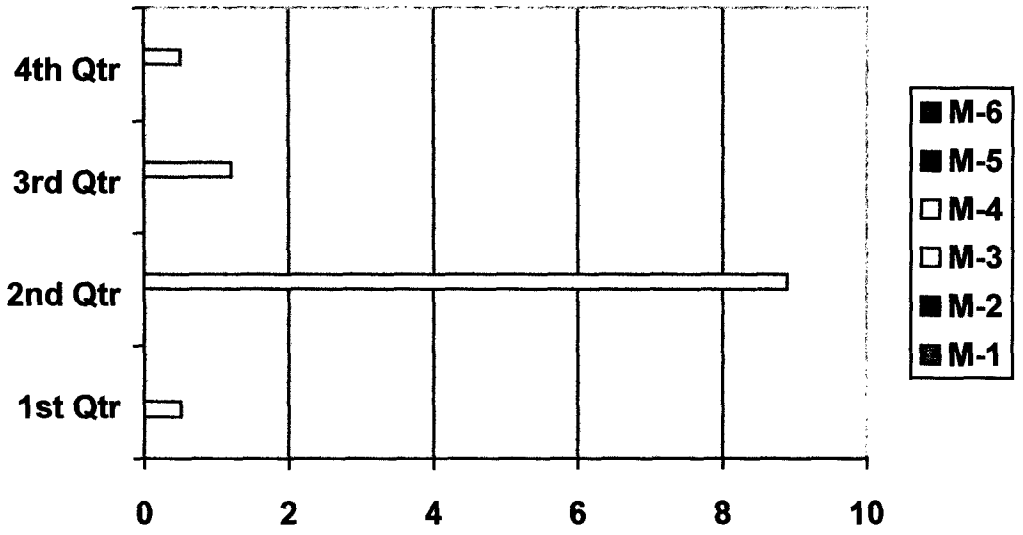


Figure 5 – Total Xylene concentrations (reflected in ppb) detected in M-1, M-2, M-3, M-4, M-5, and M-6 at the end of each quarter during 2000.

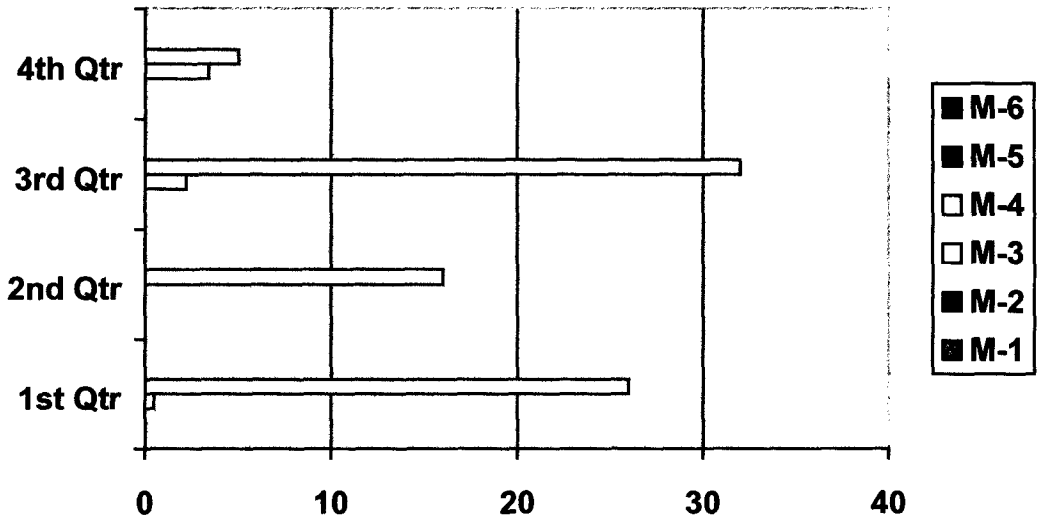


Figure 6 – Benzene concentrations (reflected in ppb) detected in R-1, R-2, R-3, R-4, R-5, and R-6 at the end of each quarter during 2000.

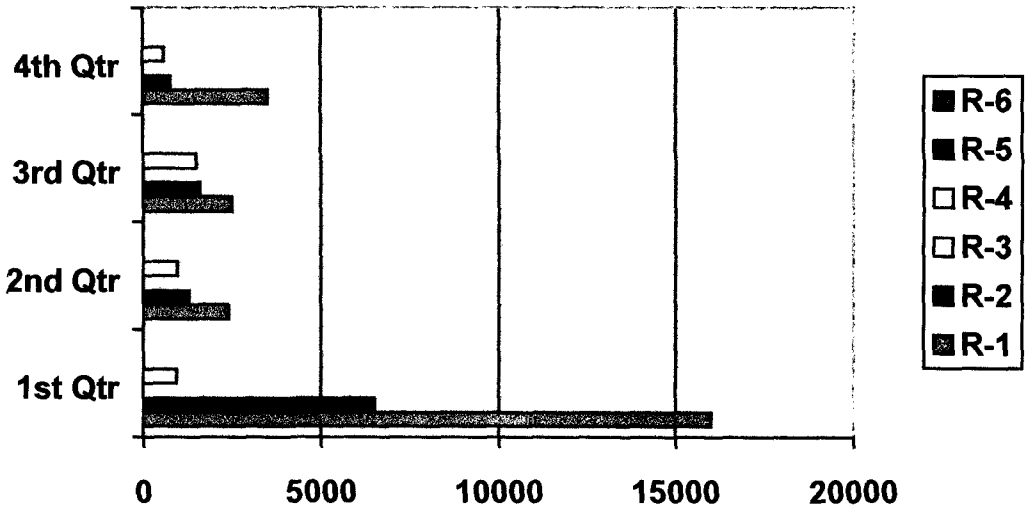


Figure 7 – Toluene concentrations (reflected in ppb) detected in R-1, R-2, R-3, R-4, R-5, and R-6 at the end of each quarter during 2000.

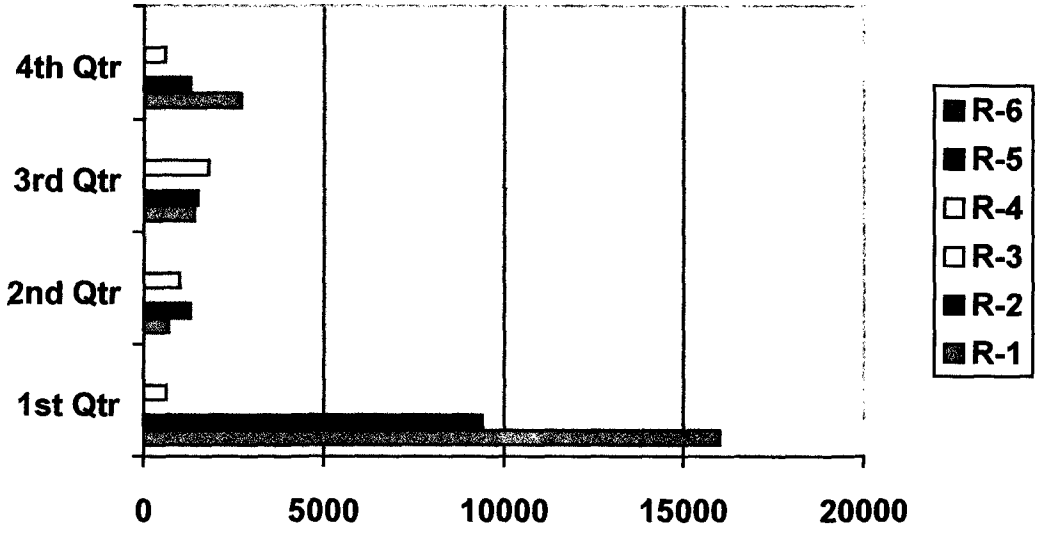


Figure 8 – Ethyl-benzene concentrations (reflected in ppb) detected in R-1, R-2, R-3, R-4, R-5, and R-6 at the end of each quarter during 2000.

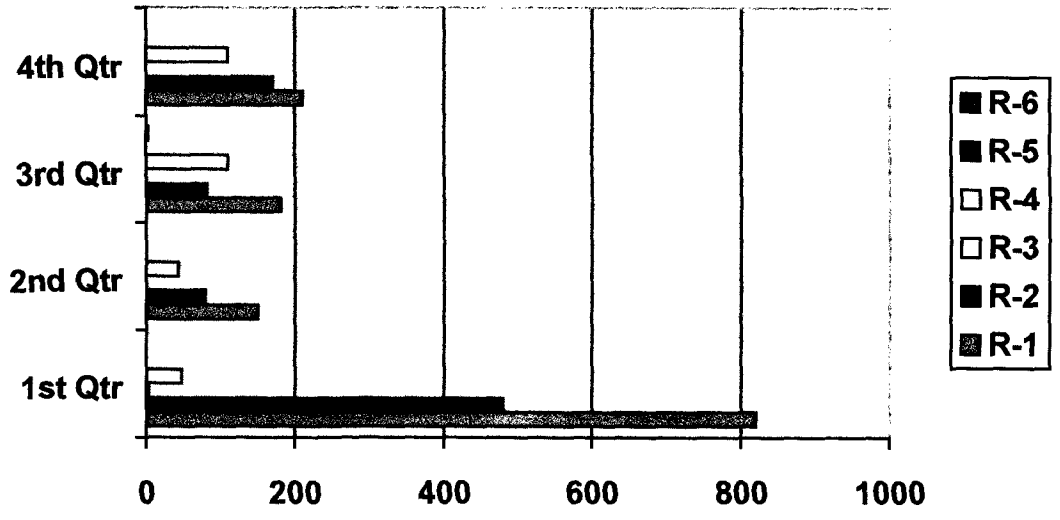
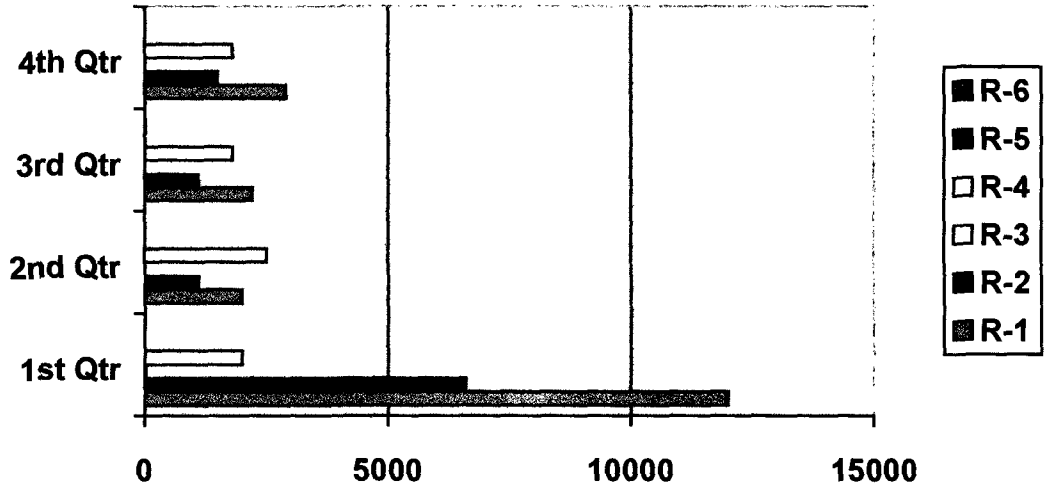


Figure 9 – Total Xylene concentrations (reflected in ppb) detected in R-1, R-2, R-3, R-4, R-5, and R-6 at the end of each quarter during 2000.



APPENDIX A

SUMMARY DATA

- Table 1 Groundwater Sampling Data for R Wells
- Table 2 Groundwater Sampling Data for M Wells
- Table 3 Weekly SVE/Sparge Data
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TABLE 1
JAQUEZ GROUNDWATER SAMPLING DATA 2000

Sample #	Sample Date	Benzene (PPB)	Toluene (PPB)	Ethyl-Benzene (PPB)	Total Xylenes (PPB)	Total BTEX PPB
Sample #	Sample Date	Benzene (PPB)	Toluene (PPB)	Ethyl-Benzene (PPB)	Total Xylenes (PPB)	Total BTEX PPB
Jaq-0001-R1	01/20/2000	2500	3800	180	1900	8380
Jaq-0003-R1	03/29/2000	16000	16000	820	12000	44820
Jaq-0004-R1	04/28/2000	240	360	20	340	960
Jaq-0005-R1	05/31/2000	2300	1000	120	2000	5420
Jaq-0006-R1	06/26/2000	2400	690	150	2000	5240
Jaq-0007-R1	07/26/2000	4900	2900	150	3100	11050
Jaq-0008-R1	08/23/2000	2500	1400	180	2200	6280
Jaq-0011-R1	11/20/2000	3500	2700	210	2900	9310
Jaq-0001-R2	01/20/2000	1200	2000	130	1500	4830
Jaq-0003-R2	03/29/2000	6500	9400	480	6600	22980
Jaq-0004-R2	04/28/2000	4000	3500	87	1700	9287
Jaq-0005-R2	05/31/2000	2300	3200	280	3000	8780
Jaq-0006-R2	06/26/2000	1300	1300	79	1100	3779
Jaq-0007-R2	07/26/2000	3600	3200	150	2300	9250
Jaq-0008-R2	08/23/2000	1600	1500	82	1100	4282
Jaq-0011-R2	11/20/2000	770	1300	170	1500	3740
Jaq-0001-R3	01/20/2000	< 0.5	< 0.5	0.5	5.2	6.7
Jaq-0003-R3	03/29/2000	0.5	0.5	3.5	33	37.5
Jaq-0004-R3	04/28/2000	0.5	1	0.5	0.5	2.5
Jaq-0005-R3	05/31/2000	1	1.4	0.5	5.4	8.3
Jaq-0006-R3	06/26/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0007-R3	07/26/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0008-R3	08/23/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0011-R3	11/20/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0001-R4	01/20/2000	280	89	60	690	1119
Jaq-0003-R4	03/29/2000	940	630	48	2000	3618
Jaq-0004-R4	04/28/2000	1000	480	29	1800	3309
Jaq-0005-R4	05/31/2000	960	980	29	1900	3869
Jaq-0006-R4	06/26/2000	950	1000	43	2500	4493
Jaq-0007-R4	07/26/2000	520	400	50	1600	2570
Jaq-0008-R4	08/23/2000	1500	1800	110	1800	5210
Jaq-0011-R4	11/20/2000	590	580	110	1800	3080
Jaq-0001-R5	01/20/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0003-R5	03/29/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0004-R5	04/27/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0005-R5	05/31/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0006-R5	06/26/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0008-R5	08/23/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0011-R5	11/20/2000	< 0.5	< 0.5	< 0.5	0.9	0.9
Jaq-0001-R6	01/20/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0003-R6	03/29/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0004-R6	04/27/2000	0.9	< 0.5	< 0.5	< 0.5	0.9
Jaq-0005-R6	05/31/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0006-R6	06/26/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0008-R6	08/23/2000	< 0.5	< 0.5	2.6	13	15.6
Jaq-0011-R6	11/20/2000	< 0.5	< 0.5	< 0.5	0.5	0.5
Jaq-0007-TMW01	07/13/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0007-TMW02	07/13/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A

TABLE 1
JAQUEZ GROUNDWATER SAMPLING DATA 2000

Sample #	Sample Date	Benzene (PPB)	Toluene (PPB)	Ethyl-Benzene (PPB)	Total Xylenes (PPB)	Total BTEX PPB
Jaq-0001-M1	01/19/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0003-M1	03/27/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0004-M1	04/27/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0005-M1	05/30/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0006-M1	06/22/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0008-M1	08/22/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0011-M1	11/17/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0001-M2	01/19/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0003-M2	03/27/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0004-M2	04/27/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0005-M2	05/30/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0006-M2	06/22/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0008-M2	08/22/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0011-M2	11/17/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0001-M3	01/19/2000	4.1	2.8	1.6	3.7	12.2
Jaq-0002-M3	02/24/2000	30	21	2.3	9.4	62.7
Jaq-0003-M3	03/27/2000	8.5	0.9	0.5	0.5	10.4
Jaq-0004-M3	04/27/2000	3.5	2.8	1.8	2.8	10.9
Jaq-0005-M3	05/30/2000	2.1	< 0.5	0.9	2.2	5.7
Jaq-0006-M3	06/22/2000	0.6	< 0.5	< 0.5	< 0.5	0.6
Jaq-0007-M3	07/25/2000	< 0.5	< 0.5	< 0.5	1.1	1.1
Jaq-0008-M3	08/22/2000	0.6	< 0.5	< 0.5	2.2	2.8
Jaq-0011-M3	11/17/2000	1.1	< 0.5	< 0.5	3.4	4.5
Jaq-0001-M4	01/19/2000	27	< 0.5	< 0.5	9.7	37.7
Jaq-0002-M4	02/24/2000	11	< 0.5	5.6	5.5	22.1
Jaq-0003-M4	03/27/2000	26	< 0.5	< 0.5	26	53
Jaq-0004-M4	04/27/2000	24	< 0.5	< 0.5	11	36
Jaq-0005-M4	05/30/2000	38	1.1	< 0.5	23	62.6
Jaq-0006-M4	06/22/2000	44	1.6	8.9	16	70.5
Jaq-0006-M4	07/25/2000	51	0.6	< 0.5	13	64.6
Jaq-0008-M4	08/22/2000	87	0.5	1.2	32	120.7
Jaq-0011-M4	11/17/2000	99	< 0.5	0.5	5	104.5
Jaq-0001-M5	01/19/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0003-M5	03/27/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0004-M5	04/27/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0005-M5	05/30/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0006-M5	06/22/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0008-M5	08/22/2000	43	< 0.5	< 0.5	< 0.5	43
Jaq-0011-M5	11/17/2000	2.6	< 0.5	< 0.5	< 0.5	2.6
Jaq-0001-M6	01/19/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0003-M6	03/27/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0004-M6	04/27/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0005-M6	05/30/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0006-M6	06/22/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0008-M6	08/22/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A
Jaq-0011-M6	11/17/2000	< 0.5	< 0.5	< 0.5	< 0.5	N/A

WEEKLY SVE/SPARGE DATA:

DATE:	VENT SYSTEM: Mag. Inf. (in. of H20)	Mag. Eff. (in. of H20)	Influent SCFM	Effluent SCFM	Vent Flow SCFM	SPARGE MAGNEHELIC (psi):	PID Effluent	MONITORING PTS (inches of H2O w/mag) MP-1	MP-2S	MP-2D	MP-3S	MP-3D
8-Jun	24.0	26.0	49.0	75.0	26.0	5.5		-0.04	-0.13	-0.17	-0.44	0.04
16-Jun	21.0	21.0	43.0	82.0	39.0	3.0 (5@1452)		-0.02	0.02	0.01	-0.41	0.05
23-Jun	22.0	22.0	42.0	82.0	40.0	5.0						
7-Jul	21.0	21.0	42.0	83.0	41.0	5.0		0.00	0.01	0.06	-0.42	0.05
13-Jul	20.5	21.0	42.0	82.0	40.0	5.0	0.4	0.00	0.00	0.05	-0.42	0.01
25-Jul	20.5	21.0	42.0	84.0	42.0	4.5		0.00	0.00	0.05	-0.40	0.04
1-Aug	29.5	29.5	53.0	65.0	12.0	5.5	0.0	0.00	0.00	0.30	0.00	0.20
9-Aug	28.5	28.5	52.0	64.0	12.0	5.5		0.00	0.00	0.30	0.01	0.05
18-Aug	28.0	28.0	52.0	64.0	12.0	5.5		0.00	0.00	0.30	0.00	0.05
25-Aug	29.0	29.0	52.0	65.0	13.0	5.5		0.00	0.00	0.05	0.01	0.05
1-Sep	29.0	29.0	53.0	66.0	13.0	5.5	0.9	0.00	0.00	0.02	0.00	0.08
8-Sep	29.0	29.0	53.0	66.0	13.0	5.5	0.2	0.00	0.00	0.01	0.00	0.02
22-Sep	29.0	29.0	53.0	66.0	13.0	5.5	0.0	0.00	0.00	0.02	0.00	0.06
29-Sep	29.0	29.0	55.0	66.0	11.0	5.0	0.0	0.00	0.00	0.02	0.00	0.08
6-Oct	29.0	29.0	53.0	66.0	13.0	5.0	0.0	0.00	0.00	0.02	0.00	0.02
13-Oct	29.0	29.0	53.0	66.0	13.0	5.5	0.7	0.00	0.00	0.00	0.00	
22-Oct	29.0	29.0	53.0	66.0	13.0	5.5	1.9	0.00	0.00	0.00	0.00	0.00
1-Dec	20.0	20.0	48.0	88.0	40.0	7.0						
8-Dec	20.0	20.0	46.0	86.0	40.0	7.0	0.1	0.00	0.05	0.11	0.44	0.44
					0.0							

	R - 01			Vent Well			INFLUENT			EFFLUENT			SW-01			SW - 02			SW - 03		
Date	CMPS	CFPM	TEMP	CMPS	CFPM	TEMP	CMPS	CFPM	TEMP	CMPS	CFPM	TEMP	CMPS	CFPM	TEMP	CMPS	CFPM	TEMP	CMPS	CFPM	TEMP
6/8/00	1.8	358	83.6	4.5	884	81.2	10.0	1975	86.7	18.0	3818	135.3	0.9	186		1.3	282		2.5	480	
6/16/00	1.7	310	97.1	19.2	3053	89.7	15.3	2680	102.5	20.2	4160	134.9	1.0	206	114	1.7	330	115	1.0	220	114
6/23/00	1.5	303	98.0	11.7	1833	84.0	22.7	3836	95.5	25.2	4979	131	0.9	184	103	1.1	341	110	1.0	99	120
7/7/00	1.7	350	102.3	32.7	540	87.5	21.2	3510	100.0	9.5	1880	135	0.9	190	110	1.0	200	115	1.0	200	115
7/13/00	1.4	277	104.5	2.0	428	93.9	17.7	3525	98.0	1.7	332	130	1.2	252	118.2	1.1	247	116.4	1.2	250	119.4
7/25/00	1.5	310	97.1	9.6	1893	89.9	16.6	3257	99.4	12.7	2523	138.1	0.8	194	114	0.9	204	118	0.9	206	123.7
12/0700				6.4	1290	44.7	13.7	2641	48.3	12.5	2609	88.6	0.9	191	42.6						
	R-01			R - 04			INFLUENT			EFFLUENT			SW-01			SW - 02			SW-03		
Date	CMPS	CFPM	TEMP	CMPS	CFPM	TEMP	CMPS	CFPM	TEMP	CMPS	CFPM	TEMP	CMPS	CFPM	TEMP	CMPS	CFPM	TEMP	CMPS	CFPM	TEMP
8/1/00	1.9	375	89.9	1.7	350	89.2	10.3	2009	88.9	18.6	3662	136	1.4	276	113.7	1.9	381	115.3	1.8	355	121.7
8/9/00	1.5	298	112.2	1.6	318	93.9	10.0	1969	104.3	17.8	3511	151.3	1.2	259	118.1	1.7	349	119.1	1.5	301	132.2
8/18/00	1.6	323.2	109.2	1.7	359	92.7	10.6	2019.1	105.7	17.2	3413	156.1	1.1	249	113.6	1.6	331	121.4	1.6	347.1	141
8/25/00	1.5	308	104.5	1.8	358	95.1	12.5	2448	93.5	16.7	3312	141.9	1.3	259	110.1	1.8	364	116.5	1.6	320	124.4
9/1/00	1.6	322	81.8	1.8	370	80.0	13.2	2572	75.1	6.5	1310	115.5	1.6	330	81.3	0.9	186	84.9	1.2	246	91.9
9/8/00	1.6	321	79.9	1.8	368	80.0	13.2	2568	75.1	6.5	1308	113.4	1.6	325	80.6	0.9	190	84.2	1.2	239	90.6
9/22/00	1.8	360	74.1	1.8	369	77.1	14.2	2773	73.7	17.1	3303	122.3	1.5	307	81.3	1.0	200	86.1	1.4	260	90.3
9/29/00	1.5	333	91.9	1.5	317	90.4	15.2	2906	89.2	18.1	3662	141.2	1.3	250	100	1.1	240	104.7	1.7	319	112.4
10/6/00	1.8	350	90.4	2.0	420	84.5	81.4	2660	81.1	18	3404	132.2	1.4	305	95.5	1.0	205	102.3	1.5	302	107.4
10/13/00	2.0	393	51.7	2.0	420	49.8	10.9	2255	51.2	15.7	2817	99.1	1.0	211	58.2	0.9	184	59.3	1.5	324	64.5
10/20/00	1.9	385	83.4	1.8	360	76.2	8.3	1725	78.9	14.9	2804	129.9	1.8	375	92.2	1.1	230	82.2	1.3	315	96.9

Water Level Data and Well Construction/Screen Depth:

R-01	Top of Screen (ft below ground)	Bottom of Screen (fbg)	Top of Riser	Depth to Water (TOR)	Depth to Water (fbg)	AMT OF SCREEN ABOVE WATER	AMT OF SCREEN BELOW WATER	Product
8/23/93	9.6	20	2.5					
*12/7/2000				12.92	10.42	0.82	9.58	
12/1/00				12.71	10.21	0.61	9.79	
11/20/00				13.66	11.16	1.56	8.84	
10/31/00				13.09	10.59	0.99	9.41	
10/27/00				13.12	10.62	1.02	9.38	
8/23/00				15.78 ~~9.31~~	6.81	-2.79	13.19	
7/26/00				13.13	10.63	1.03	9 37	*
6/26/00				13.23	10.73	1.13	9.27	*
5/31/00				13.57	11.07	1.47	8.93	*
4/28/00				14.13	11.63	2.03	8.37	*
3/29/00				16.24	13.74	4.14	6.26	*
1/20/00				14.37	11.87	2.27	8.13	

R-04	Top of Screen (ft below ground)	Bottom of Screen (fbg)	Top of Riser	Depth to Water (TOR)	Depth to Water (fbg)	AMT OF SCREEN ABOVE WATER	AMT OF SCREEN BELOW WATER	Product
8/23/93	9.6	20	2.5					
*12/7/2000				11.5	9.00	-0.60	11.00	
12/1/00				12.45	9.95	0.35	10.05	
11/20/00				12.92	10.42	0.82	9.58	
10/31/00				12.41	9.91	0.31	10.09	*
10/27/00				12.43	9.93	0.33	10.07	*
8/23/00				12.0	9.5	-0.1	10.5	*
7/26/00				12.4	9.9	0.3	10.1	
6/26/00				12.4	9.9	0.3	10.1	
5/31/00				12.81	10.31	0.71	9.69	*
4/28/00				13.38	10.88	1.28	9.12	*
3/29/00				15.44	12.94	3 34	7.06	
1/20/00				13.51	11.01	1.41	8.99	

R-02	Top of Screen (ft below ground)	Bottom of Screen (fbg)	Top of Riser	Depth to Water (TOR)	Depth to Water (fbg)	AMT OF SCREEN ABOVE WATER	AMT OF SCREEN BELOW WATER	Product
8/24/93	9.6	20	2.3					
*12/7/2000				12.03	9.73	0.13	10.27	
12/1/00				11.67	9.37	-0.23	10.63	
11/20/00				12.51	10.21	0.61	9.79	
10/31/00				11.93	9.63	0.03	10.37	
10/27/00				11.96	9.66	0.06	10.34	
8/23/00				11.54	9.24	-0.36	10.76	*
7/26/00				12.0	9.7	0.1	10.3	*
6/26/00				12.05	9.75	0.15	10.25	*
5/31/00				12.38	10.08	0.48	9.92	*
4/28/00				12.92	10.62	1.02	9 38	
3/29/00				15.09	12.79	3.19	7.21	*
1/20/00				15.21	12.91	3.31	7.09	

* indicates water level was taken during sparge operations from SW-01

APPENDIX B

FIELD DATA

- Chronological List of Site Activities
- Field Notes and Data Sheets

Chronological List of the Jaquez Site Activities:

May 2000

05/15/00	New Mexico Air Quality Board advises on permit and notice of intent requirements for the remediation system effluent.
05/30/00	Groundwater sampling conducted and various field measurements recorded. Groundwater samples indicate lower concentrations of contaminants in M3, M4, and R3 and high concentrations of contaminants in R1, R2, and R4.

June 2000

06/16/00	Soil samples obtained from excavation area.
06/16/00	Groundwater sampling conducted and various field data recorded. Groundwater samples indicate lower concentrations of contaminants in M3 and M4 and no contaminants detected in R3. High concentrations remain in the wells R1, R2, and R4.

July 2000

07/07/00	Groundwater sampling conducted and various field data recorded. Groundwater samples indicate lower concentration of contaminants in M4 and no contaminants detected in M3 or R3. No significant change observed in the high concentration wells R1, R2, and R4.
07/12/00	Meeting between EPFS and PSC.
07/13/00	Field data obtained from remediation system and air sample taken for laboratory analysis on system effluent.
07/25/00	Field data obtained from remediation system and air sample taken for laboratory analysis on system effluent.
07/26/00	Vapor extraction moved from the vent well to monitoring well R-4.

August 2000

08/01/00	Groundwater sampling conducted, an air sample taken for laboratory analysis on system effluent, and various field measurements recorded. Groundwater samples indicate lower concentration of contaminants in M3 and M4 and no contaminants detected in R3. No significant change observed in the high concentration wells R1, R2, and R4.
08/22/00	Air sample taken for laboratory analysis on system effluent.

08/25/00 Field data obtained from remediation system and air sample taken for laboratory analysis on system effluent.

September 2000

09/01/00 Field data obtained from remediation system and air sample taken for laboratory analysis on system effluent.

09/08/00 Field data obtained from remediation system.

09/22/00 Field data obtained from remediation system.

09/29/00 Field data obtained from remediation system and air sample taken for laboratory analysis on system effluent.

October 2000

10/06/00 Field data obtained from remediation system and air sample taken for laboratory analysis on system effluent.

10/10/00 Initial consultation with Mr. Curt Fahnestock in PSC's Columbia. Illinois office. Detailed information of site is needed by Mr. Fahnestock to evaluate the system. Data transmitted over the next seven days.

10/16/00 Field data obtained from remediation system and air sample taken for laboratory analysis on system effluent.

10/17/00 Consult with Mr. Fahnestock on the data. Conducted a site visit to obtain specific information on hardware and system function under various pressures and changes in air dilution.

10/20/00 Field data obtained from remediation system and air sample taken for laboratory analysis on system effluent.

10/25/00 Consult with Mr. Fahnestock on evaluation of remediation system.

10/26/00 Conducted a site visit to review system function and test changes to pressure and flow rates. Disconnected the vapor extraction system due to high groundwater levels and minimal amount of screen above groundwater resulting in an inefficient extraction rate. Sparge system temporarily discontinued so that field data could be obtained under static conditions.

10/27/00 Obtained static water levels and PID measurements from all R wells.

10/31/00 Obtained static water levels, PID measurements, and dissolved oxygen (using colorimetric test ampoules) levels. Sparge system resumed under increased pressure and higher flow rates.

November 2000

11/01/00 through

11/14/00 Continued to sparge at elevated pressure and flow rate.

11/15/00 Discontinued sparge system so data could be obtained under static conditions.

11/17/00 Groundwater sampling conducted from the M wells south of the ditch. Static water levels and dissolved oxygen levels taken and recorded.

11/20/00 Groundwater sampling conducted from the R wells north of the ditch. Static water levels and dissolved oxygen levels taken and recorded. Sparge system ceased operation for the holiday week.

11/27/00 Resume sparge system at an elevated pressure and flow rate. Evaluated potential system alternatives.

11/30/00 Evaluated proposed alternatives for effecting a more aggressive remediation system.

December 2000

12/1/00 Ceased operations from sparge wells numbered SW-2 and SW-3. Obtained water level data from R1, R2, R4, and VW. Initiated the soil vapor extraction system utilizing the vent well.

12/08/00 Field data obtained from remediation system, water level data from R-1, R-2, and R-4, PID measurements, DO from all R wells.

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Jaquez SVE Data

Well #	Date	O2	PID LEL	Pressure	Comments
MP-1	5/6/00	8.3 %	161 %	0.02	PID = 475 ppm
MP-2S	5/6/00	9.9 %	120 %	0.05	PID = 34 ppm
MP-2D	5/6/00	9.5 %	99 %	0.02	PID = 287 ppm
MP-3S	5/6/00	4.2 %	78 %	0.02	PID = 965 ppm
MP-3D	5/6/00	6.8 %	110 %	0.03	PID = 479 ppm
Vent Well	5/6/00	18.7 %	4 %	—	PID = 775 ppm
R-1	5/6/00	17.9%	151 %	—	PID = 30 ppm
R-2	5/6/00	19.5 %	92 %	—	PID = 43 ppm
R-3	5/6/00	19.8 %	12 %	—	PID = 29 ppm
R-4	5/6/00	19.9 %	15 %	—	PID = 40 ppm
R-5	5/6/00	20.3 %	1 %	—	PID = 3.8 ppm
R-6	5/6/00	19.3 %	1 %	—	PID = 0 ppm
					Sparge Mag = 6.5 " H_2O
Breathing Zone around SVE System = 0 ppm					
Breathing Zone around R-1 and R-2 Boxes = 0 ppm					
MP-1	5/11/00	10.8 %	42 %	.02	PID = 154 ppm
MP-2S	5/11/00	10.6 %	84 %	.04	PID = 23 ppm
MP-2D	5/11/00	6.8 %	112 %	.05	PID = 427 ppm
MP-3S	5/11/00	5.9 %	50 %	.04	PID = 764 ppm
MP-3D	5/11/00	5.3 %	105 %	.03	PID = 211 ppm
Vent Well	5/11/00	19.5 %	6 %	—	PID = 730 ppm
R-1	5/11/00	17.9 %	104 %	—	PID = 157 ppm
R-2	5/11/00	20.5 %	8 %	—	PID = 15 ppm
R-3	5/11/00	19.4 %	10 %	—	PID = 458 ppm Boiling
R-4	5/11/00	20.2 %	2 %	—	PID = 779 ppm Boiling
R-5	5/11/00	20.7 %	1 %	—	PID = 1 ppm
R-6	5/11/00	19.6 %	3 %	—	PID = 0
					Sparge Mag: 5.5 " H_2O Set to 6.5 " H_2O
Breathing Zone around SVE System = 0 ppm					
Breathing Zone around R-1 and R-2 boxes = 0 ppm					

Jaquez SVE Data

Well #	Date	O2	~~PID~~ LEL	Pressure	Comments
MP-1	5/17/00	10.2 %	3 %	0.01	PID = 184 ppm
MP-2S	5/17/00	18.7 %	13 %	0.10	PID = 200 ppm
MP-2D	5/17/00	9.3 %	124 %	.05	PID = 766 ppm
MP-3S	5/17/00	10.9 %	26 %	0.04	PID = 325 ppm
MP-3D	5/17/00	10.3 %	63 %	0.06	PID = 689 ppm
Vent Well	5/17/00	20.7 %	0 %	—	PID = 486 ppm
R-1	5/17/00	14.9 %	144 %	—	PID = 1485 ppm
R-2	5/17/00	19.8 %	0 %	—	PID = 32 ppm
R-3	5/17/00	21.5 %	0 %	—	PID = 6014 ppm Boiling
R-4	5/17/00	16.9 %	70 %	—	PID = 1891 ppm Boiling
R-5	5/17/00	21.3 %	1 %	—	PID = 2 ppm
R-6	5/17/00	21.7 %	2 %	—	PID = 0 ppm
					SPARGE MAG: 7" H_2O
Breathing Zone		around	SVE trailer	=	0 ppm
Breathing Zone		around	R-1 and R-2		Boxes = 0.6 ppm BREEZY conditions

MAY 2000

Jaquez SVE Data

Well #	Date	O2	~~PID~~ LEL	Pressure	Comments
MP-1	5/19/00	8.2%	12 %	—	PID = 219 ppm
MP-2S	5/19/00	19.2%	22 %	—	PID = 0 ppm
MP-2D	5/19/00	17.2%	11 %	—	PID = 1 ppm
MP-3S	5/19/00	12.3%	43 %	—	PID = 456 ppm
MP-3D	5/19/00	16.2%	73 %	—	PID = 356 ppm
VENT WELL	5/19/00	19.7%	11 %	—	PID = 15 ppm
	LEFT SYSTEM OFF				
	5/23/00	TURNED SYSTEM ON			
MP-1	5/23/00	15.3%	0 %	.04	PID = 24 ppm
MP-2S	5/23/00	20.4%	2%	.04	PID = 40 ppm
MP-2D	5/23/00	20.4%	1 %	.04	PID = 3.5 ppm
MP-3S	5/23/00	7.1%	12%	.04	PID = 258 ppm
MP-3D	5/23/00	19.5%	0%	.01	PID = 27 ppm
VENT WELL	5/23/00	19.2	0%	.02	PID = 2 ppm
R-6	5/23/00	20.5%	0 %	—	PID = 1 ppm
R-5	5/23/00	20.7%	0 %	—	1.3
R-3	5/23/00	20.2%	0 %		56.0
R-4	5/23/00	20.6%	0 %		
R-2	5/23/00	20.7%	0 %	—	
R-1	5/23/00	20.7	0 %		

MAGNEHELIC: SLIGHT BREEZE MEASURED DURING CALM.

PID LAMP OFF

PHILIP ENVIRONMENTAL

Well Number MW-01

☐ Development ☒ Purging

Serial No. WDPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name QUARTERLY GROUNDWATER SAMPLING Project Manager S STELLAVATO Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ SVE Site Address BLANCO, NM

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.35 TOR
Initial Depth to Water (feet) 4.14 TOR
Height of Water Column in Well (feet) 11.21
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.21	73.3	22.0
Gravel Pack			
Drilling Fluids			
Total			22.0

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
5/30/00	1145		X				5.5	5.5			24.1	7.72	298		very clear
"	1152		X				2.5	8.0			20.1	7.58	216		light brown
"															
"															

Circle the date and time that the development criteria are met.

Comments Well bailed dry at 8 gallons. Sampled Tested for BTEX at 1159

Developer's Signature(s) Jenn Wagner Date 5/30/00 Reviewer SKS Date 6/2/00

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PHILIP ENVIRONMENTAL

Well Number MW-02

☐ Development ☒ Purging

Serial No. WDPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name QUARTERLY GROUNDWATER SAMPLING Project Manager S. STELLAVATO Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ SVE Site Address BLANCO, NM

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.03 TOR
Initial Depth to Water (feet) 3.03 TOR
Height of Water Column in Well (feet) 12.00
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	12.00	7.80x3	23.4
Gravel Pack			
Drilling Fluids			
Total			23.4

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
5/30/00	1226		X				4.5	4.5			23.8	7.20	564		very clear
"	1230		X				4.5	9			21.8	7.12	491		very slightly brown
"	1234		X				4.5	13.5			20.8	7.10	444		"
"	1238		X				4.5	18			18.9	7.12	404		"
"	1242		X				4.5	22.5			18.2	7.15	393		"
"	1245		X				1	23.5			18.2	7.15	390		"

Circle the date and time that the development criteria are met.

Comments SAMPLED FOR BTEX ~~AND ETBE~~ AT 1250.

Developer's Signature(s) [signature] Date 5/30/00 Reviewer SKS Date 6/2/00

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PHILIP ENVIRONMENTAL

Well Number MW-03

☐ Development
☒ Purging

Serial No. WDPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name QUARTERLY GROUNDWATER SAMPLING Project Manager S STELLAVATO Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ SVE Site Address BLANCO, NM

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.15 TOR
Initial Depth to Water (feet) 4.10 TOR
Height of Water Column in Well (feet) 11.05
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.05	7.21 x 3	21.6
Gravel Pack			
Drilling Fluids			
Total			21.6

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
5/30/00	1356		X				4.5	4.5			26.6	7.16	422		grey, odor
"	1402		X				4.5	9			22.0	7.07	369		dark grey
"	1408		X				4.5	13.5			20.9	7.05	334		"
"	1414		X				4.5	18			20.6	7.03	319		black
"	1420		X				4	22			19.6	7.20	372		"

Circle the date and time that the development criteria are met.

Comments SAMPLED FOR BTEX + NITRATES AND PAH AT 1430

Developer's Signature(s) Jenn Wagner Date 5/30/00 Reviewer SKS Date 6/2/00

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WELL DEVELOPMENT AND PURGING DATA

Well Number MW-04 ☐ Development ☒ Purging

Serial No. WDPD-

Page 1 of 1

Project Name QUARTERLY GROUNDWATER SAMPLING Project Manager S. STELLAVATO Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.36 TOR
Initial Depth to Water (feet) 2.57 TOR
Height of Water Column in Well (feet) 12.79
Diameter (inches): Well 4" Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	12.79	8.35 x 3	25.0
Gravel Pack			
Drilling Fluids			
Total			

Instruments

	Serial No. (If applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/l)	Comments
5/30/00	1454		X				5	5			27.7	8.03	731		clear
"	1500		X				5	10			21.8	7.82	599		
"	1502		X				1	11			19.4	7.91	557		LIGHT BROWN

Circle the date and time that the development criteria are met.

Comments Well baled dry at 11 gallons, Sampled for BTEX, Nitrates + PAH at 1509.

Developer's Signature(s) Jason Wagner Date 5/30

Reviewer SKS Date 6/2/00

PHILIP ENVIRONMENTAL

Well Number MW-05

☐ Development ☒ Purging

Serial No. WDPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name QUARTERLY GROUNDWATER SAMPLING Project Manager S. STELLAVATO Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.06 TOR
Initial Depth to Water (feet) 3.69 TOR
Height of Water Column in Well (feet) 11.37
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.37	7.42 x 3	22.3
Gravel Pack			
Drilling Fluids			
Total			22.3

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
5/30/00	1307		X				4.5	4.5			25.3	7.72	311		Light Brown
"	1312		X				4.5	9.0			22.9	7.52	281		"
"	1316		X				4.5	13.5			21.8	7.46	275		"
"	1322		X				4.5	18			19.0	7.55	267		More Brown
"	1328		X				4.5	22.5			21.1	7.50	309		Brown, much sediment

Circle the date and time that the development criteria are met.

Comments SAMPLED FOR BTEX AT 1332.

Developer's Signature(s) Jessica Wagner Date 5/30/00 Reviewer SKS Date 6/2/00

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PHILIP ENVIRONMENTAL

Well Number MW-6

☐ Developing ☒ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Project Name QUARTERLY GROUNDWATER SAMPLING Project Manager S. STELLAVATO Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 17.92 TOR
Initial Depth to Water (feet) 7.29 TOR
Height of Water Column in Well (feet) 10.63
Diameter (inches): Well 4" Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	10.63	6.94×3	20.8
Gravel Pack			
Drilling Fluids			
Total			20.8

Instruments

	Serial No. (If applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
5/30/00	1025		X				4	4			22.0	7.55	775		LIGHT BROWN
"	1035		X				4	8			19.4	7.84	756		"
"	1041		X				4	12			19.1	7.89	769		CLOUDY + LIGHT BROWN
"	1049		X				4	16			19.1	7.85	721		"
"	1055		X				4	20			19.6	7.94	700		"
"	1059		X				1	21			19.5	7.97	705		"

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX 1105. JOHN JAQUEZ DISCUSSED W/ME THE IMPORTANCE OF REMEDIATING THE GARDEN AREA (CORN FIELD) NEAR THE HOUSE (ON MAP, THE LEFT SECTION OF CORN FIELD.) QUICKLY! HIS CONCERN WAS DRASTIC AND WILL NOT WAIT MUCH LONGER TO SEE THIS AREA CLEANED.

Developer's Signature(s) Jennifer Wagner Date 5/30/00 Reviewer SAS Date 6/2/00

PHILIP ENVIRONMENTAL

Well Number R-1

☐ Developing ☒ Purging

Serial No. WOPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name QUARTERLY GROUNDWATER SAMPLING Project Manager S. STELLAVATO Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ SVE Site Address BLANCO, NM

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.09 TOR
Initial Depth to Water (feet) 13.57 TOR
Height of Water Column in Well (feet) 8.52
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	8.52	5.56x3	16.7
Gravel Pack			
Drilling Fluids			
Total			16.7

Instruments

	Serial No. (If applicable)
☒ pH Meter	~~HYDAC~~ EXTECH
☐ DO Monitor	
☒ Conductivity Meter	~~HYDAC~~ EXTECH
☒ Temperature Meter	~~HYDAC~~ EXTECH
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
5/31/00	1509		X				3.5	3.5			NOT COLLECTED				Water is clear to
"	1514		X				3.5	7							grey with
"	1519		X				3.5	10.5							product
"	1523		X				3.5	14							"
"	1527		X				3	17							"
															"

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX at 1532. Water was clear with product, which is why I did not take temp., pH, or conductivity.

Developer's Signature(s) Jean Wagner Date 5/31/00 Reviewer SKS Date 6/2/00

PHILIP ENVIRONMENTAL

Well Number R-2

☐ Development ☒ Purging

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Serial No. WDPD-

Project Name QUARTERLY GROUNDWATER SAMPLING Project Manager S. STELLAVATO Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ SVE Site Address BLANCO, NM

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.12 TOR
Initial Depth to Water (feet) 12.38 TOR
Height of Water Column in Well (feet) 9.74
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	9.74	6.36x3	19.1
Gravel Pack			
Drilling Fluids			
Total			19.1

Instruments

	Serial No. (If applicable)
☒ pH Meter	~~HYDAC~~ EXTECH
☐ DO Monitor	
☒ Conductivity Meter	~~HYDAC~~ EXTECH
☒ Temperature Meter	~~HYDAC~~ EXTECH
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
5/31/00	1404		X				3.5	3.5			22.1	7.35	430		water has sheen
"	1413		X				3.5	7			19.2	7.25	440		grey, odor
"	1420		X				3.5	10.5			20.1	7.43	570		"
"	1428		X				3.5	14			18.9	7.58	320		"
"	1436		X				3.5	17.5			18.5	7.63	310		"
"			X				2	19.5			NOT COLLECTED				"

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX at 1448. Increment #6 Temp, pH, cond. not collected due to presence of Product.

Developer's Signature(s) Jamal Vapor Date 5/31/00 Reviewer SKS Date 6/2/00

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PHILIP ENVIRONMENTAL

Well Number R-3 ☐ Development ☒ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Project Name QUARTERLY GROUNDWATER SAMPLING Project Manager S. STELLAVATO Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ SVE Site Address BLANCO, NM

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.20 TOR
Initial Depth to Water (feet) 13.36 TOR
Height of Water Column in Well (feet) 8.84
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	8.84	5.77 x 3	17.3
Gravel Pack			
Drilling Fluids			
Total			17.3

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
5/31/00	1110		X				3.5	3.5			22.5	7.53	938		orange
"	1115		X				3.5	7			18.7	7.33	837		"
"	1121		X				3.5	10.5			18.0	7.22	882		orange-brown
"	1126		X				3.5	14			17.2	7.30	748		clear-orange
"	1131		X				3.5	17.5			18.0	7.29	571		black
"	1135		X				3	20.5			17.3	7.31	669		"

Circle the date and time that the development criteria are met.

Comments SKS ~~TESTED~~ FOR BTEX AT 1142. SAMPLED.

Developer's Signature(s) Jon Wagner Date 5/31/00 Reviewer SKS Date 6/2/00

PHILIP ENVIRONMENTAL

Well Number R-4

☐ Developing
☒ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Project Name QUARTERLY GROUNDWATER SAMPLING Project Manager S. STELLAVATO Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ SVE Site Address BLANCO, NM

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.22 TOR
Initial Depth to Water (feet) 12.81 TOR
Height of Water Column in Well (feet) 9.41
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	9.41	6.14×3	18.4
Gravel Pack			
Drilling Fluids			
Total			18.4

Instruments

	Serial No. (If applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
5/31/00	1206		X				3.5	3.5			23.8	6.80	579		grey to black
"	1211		X				3.5	7			20.6	6.82	579		opaque grey
"	1217		X				3.5	10.5			20.5	7.00	741		black, product visible
"	1227		X				3.5	14			22.8	9.46	4430		"
"	1237		X				3.5	17.5			24.1	6.00	1027		"
"	1247		X				1	18.5			17.1				Water quality meter malfunctioned, did not get last gallon reading

Circle the date and time that the development criteria are met.

Comments SKS TESTED FOR BTEX AT 1310. SAMPLED. Water Quality Meter MALfunctioned.

Developer's Signature(s) Jason Wagner Date 5/31/00 Reviewer Date

PHILIP ENVIRONMENTAL

Well Number R-5

☐ Development ☒ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Project Name QUARTERLY GROUNDWATER SAMPLING Project Manager S. STELLAVATO Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ SVE Site Address BLANCO, NM

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 24.48 TOR
Initial Depth to Water (feet) 16.22 TOR
Height of Water Column in Well (feet) 8.26
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	8.26	54 x 3	16.2
Gravel Pack			
Drilling Fluids			
Total			16.2

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Incremental	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Incremental	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
5/31/00	1028		X				3.5	3.5			22.4	7.92	752		clear
"	1033		X				3.5	7			19.8	7.09	745		light brown
"	1040		X				3	10			19.8	7.58	990		"

Circle the date and time that the development criteria are met.

Comments Well bailed dry at 10 gallons. Sampled for BTEX at 1040.

Developer's Signature(s) [signature] Date 5/31/00 Reviewer SAS Date 6/2/00

PHILIP ENVIRONMENTAL

Well Number R-6

☐ Development ☒ Purging

Serial No. WDPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name QUARTERLY GROUNDWATER SAMPLING Project Manager S STELLAVATO Project No. 62800107

Client Company EPFS Phase,Task No. 0301

Site Name JAQUEZ SVE Site Address BLANCO, NM

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 21.94-TOC
Initial Depth to Water (feet) 14.88 TOC
Height of Water Column in Well (feet) 7.06
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	7.06	41 x 3	13.8
Gravel Pack			
Drilling Fluids			
Total			13.8

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/l)	Comments
5/31/00	950		X				3	3			20.0	7.85	355		clear
"	954		X				3	6			17.6	7.57	309		light brown
"	1007		X				2.5	8.5			18.9	7.45	325		brown, much sediment

Circle the date and time that the development criteria are met.

Comments Well bailed dry at 8.5 gal. Sampled for BTEX at 1007

Developer's Signature(s) Jason Wagner Date 5/31/00 Reviewer SKS Date 6/2/00

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PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62800165
Project Manager S. STELLAVATO
Cost Code
Client Company EPFS
Project Name JAQUEZ SVE
Site Name JAQUEZ
Sampler J. WAGNON

Date 6/8/00
Time 1530

Vent System		
Mag. Inf.	24	
Mag. Eff.	26	
Inf. SCFM	49	
Eff. SCFM	75	

Sparge	
Mag.	5.5

READINGS FROM T.A.			
	MPS	FPM	TEMP
R-1	1.8	358	83.6
VW	4.5	884	81.2
INF.	10.0	1975	86.7
EFF.	18.	3818	135.3
SPG. 1	0.9	186	
SPG. 2	1.3	282	
SPG. 3	2.5	480	

	INCHES OF WATER		
	MP-1	.04	
	MP-2S	.13	
	MP-2D	.17	
	MP-3S	.44	
+*	MP-3D	.04	

J://Z Misc Folders/jnw/forms/SVE Data Sheet

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62800165 **Project Manager** S. [illegible]

Cost Code 55 **Client Company** EPES

Project Name JADE I SVE **Site Name** JADE I

Sampler J. WAGNON

Date 6/13 [illegible]

Time 1420

Vent System	
Mag. Inf.	21.0
Mag. Eff.	[illegible]
Inf. SCFM	[illegible]
Eff. SCFM	[illegible]

Reading from guages

Sparge	
Mag.	3

Reading from guage

5 [illegible]

5.3 [illegible]

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.7	[illegible]	[illegible]
VW	1.9	[illegible]	[illegible]
INF.	[illegible]	[illegible]	[illegible]
EFF.	[illegible]	[illegible]	1349
SPG. 1	1.0	206	[illegible]
SPG. 2	1.7	[illegible]	[illegible]
SPG. 3	1.8	320	[illegible]

Using Thermo-Anemometer

WA [illegible] WHEN I [illegible] ADD VALVE (1420)

INCHES OF WATER		
MP-1	-0.02	LOW VALVE
MP-2S	0.02	HIGH VALVE
MP-2D	0.01	HIGH VALVE
MP-3S	-0.41	LOW VALVE
MP-3D	0.03	HIGH VALVE

Using Magnehelic

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

PHILIP ENVIRONMENTAL

Well Number M-01

☐ Development ☒ Purge

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ M-01 Site Address RURAL SAN JUAN CO.

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.35 TOR
Initial Depth to Water (feet) 3.50 TOR
Height of Water Column in Well (feet) 11.85
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.85	7.7×3	23.2
Gravel Pack			
Drilling Fluids			
Total			23.2

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6/22/00	1116		X				4	4			25.7	8.03	258		CLEAR, NO ODOR
"	1121		X				3	7			24.3	7.87	231		"

Circle the date and time that the development criteria are met.

Comments Well bailed dry at seven gallons. Let recharge & Sampled for BTEX at 1130.

Developer's Signature(s) Jon Wagner Date 6/22/00 Reviewer RT Date 6/22/00

PHILIP ENVIRONMENTAL

Well Number M-02

☐ D[illegible] ☒ Purg[illegible]

WELL DEVELOPMENT AND PURG[illegible] DATA

Serial No. WDPD-

Page 1 of 1

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ M-02 Site Address RURAL SAN JUAN CO.

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.03 TOR
Initial Depth to Water (feet) 3.42 TOR
Height of Water Column in Well (feet) 11.61
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.61	7.58 x 3	22.7
Gravel Pack			
Drilling Fluids			
Total			22.7

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6/22/00	1148		X				4	4			27.1	7.31	370		CLEAR, NO ODOR
"	1151		X				4	8			23.0	7.08	453		"
"	1154		X				4	12			21.4	7.01	451		"
"	1157		X				4	16			20.1	7.00	465		"
"	1200		X				4	20			19.2	6.98	472		"
"	1203		X				3	23			18.4	7.13	462		"

Circle the date and time that the development criteria are met.

Comments Water is clear, no odor, no particles floating. Sampled for BTEX at 1207

Developer's Signature(s) Jenn Wagner Date 6/22/00 Reviewer RT Date 6/22/00

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PHILIP ENVIRONMENTAL

Well Number M-03

☐ D[illegible]
☒ Pu[illegible]

WELL DEVELOPMENT AND PURGE DATA

Page 1 of 1

Serial No. WDPD-

Project Name EPES QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPES Phase.Task No. 0301

Site Name JAQUEZ M-03 Site Address RURAL SAN JUAN CO.

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.15 TOR
Initial Depth to Water (feet) 4.0 TOR
Height of Water Column in Well (feet) 11.15
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.15	7.28×3	21.8
Gravel Pack			
Drilling Fluids			
Total			21.8

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KNIZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6/22/00	1344		X				4	4			26.8	8.07	249		SLIGHTLY CLOUDY
"	1349		X				4	8			21.8	7.83	272		"
"	1354		X				11	12			19.8	8.94	270		SLIGHT HC ODOR
"	1358		X				4	16			19.4	10.38	278		"
"	1405		X				4	20			20.4	11.08	380		"
"	1409		X				2	22			19.4	11.50	397		"

Circle the date and time that the development criteria are met.

Comments water is light brown + cloudy with a very slight HC odor. Sampled for BTEX at 1413 (and nitrates)

Developer's Signature(s) Jason Wagner Date 6/22/00 Reviewer RT Date 6/22/00

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WELL DEVELOPMENT AND PURGE DATA

ENVIRONMENTAL

Well Number M-04 ☐ Development ☒ Purge

Serial No. WDPD-

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Project Name EPES QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPES Phase/Task No. 0301

Site Name JAQUEZ M-04 Site Address RURAL SAN JUAN CO.

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.36 TOR
Initial Depth to Water (feet) 2.58 TOR
Height of Water Column in Well (feet) 12.78
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	12.78	8.34x3	25.0
Gravel Pack			
Drilling Fluids			
Total			25.0

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KLITZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6/22/00	1307		X				5	5			27.8	7.69	523		CLEAR
"	1312		X				5	10			24.7	7.71	477		CLOUDY - LT. BROWN
"	1315		X				1	11			22.2	7.75	466		"

Circle the date and time that the development criteria are met.

Comments Well bailed dry at 11 gal: let recharge and sampled for BTEX and nitrates at 1323

Developer's Signature(s) Jim Wagner Date 6/22/00 Reviewer RT Date 6/22/00

PHILIP ENVIRONMENTAL

Well Number M-05

Serial No. WDPD-

WELL DEVELOPMENT AND PURGE DATA

Page 1 of 1

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ M-05 Site Address RURAL SAN JUAN CO.

Development Criteria

- ☒ 3 to 5 Casing Volumes of Water Removal
- ☒ Stabilization of Indicator Parameters
- ☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.06 TOR

Initial Depth to Water (feet) 3.606 TOR

Height of Water Column in Well (feet) 11.4

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.4	74 x 3	22.32
Gravel Pack			
Drilling Fluids			
Total			22.32

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6/22/00	1227		X				4	4			25.5	7.94	277		CLEAR NO ODOR
"	1230		X				4	8			21.3	7.59	311		"
"	1234		X				4	12			19.9	7.50	303		BIT CLOUDY-LT. BROW
"	1237		X				4	16			17.7	7.49	304		"
"	1241		X				3	19			19.4	7.46	322		

Circle the date and time that the development criteria are met.

Comments Well bailed dry at 19 feet let recharge + sampled for BTEX at 1245

Developer's Signature(s) Jana Wagner Date 6/22/00 Reviewer RT Date 6/22/00

4

PHILIP ENVIRONMENTAL

Well Number M-06

☐ D ☒ Purging

Serial No. WDPD-

WELL DEVELOPMENT AND PURGE DATA

Page 1 of 1

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ M-06 Site Address RURAL SAN JUAN CO.

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 17.94 TOR
Initial Depth to Water (feet) 6.71 TOR
Height of Water Column in Well (feet) 11.23
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.23	73 x 3	21.9
Gravel Pack			
Drilling Fluids			
Total			21.9

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6/22/00	1017		X				4	4			20.9	7.38	847		CLOUDY, LIGHT BROWN
"	1023		X				4	8			19.2	7.20	831		"
"	1028		X				4	12			18.9	7.30	820		"
"	1032		X				4	16			18.4	7.49	757		"
"	1037		X				4	20			19.5	7.74	713		CLOUDY, MUCH SEDIMENT
"	1041		X				2	22			18.8	7.70	697		"

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX at 1047. Water is turbid with light brown sediment

Developer's Signature(s) Jean Wagner Date 6/22/00 Reviewer RT Date 6/22/00

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PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62800165

Project Manager S STELLAVATO

Cost Code

Client Company

Project Name JAQUEZ O+M

Site Name JAQUEZ SVE

Sampler S STELLAVATO

Date 6/23/00

Time 1245

Vent System	
Mag. Inf.	22
Mag. Eff.	22
Inf. SCFM	42
Eff. SCFM	82

Reading from guages

Sparge	
Mag.	5.0

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.5	303	98
VW	11.7	1833	84
INF.	22.7	3836	95.5
EFF.	25.2	4979	131
SPG. 1	0.9	184	103
SPG. 2	1.1	341	110
SPG. 3	1.0	99	120

Using Thermo-Anemometer

INCHES OF WATER	
MP-1	
MP-2S	
MP-2D	
MP-3S	
MP-3D	

Using Magnehelic

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

PHILIP ENVIRONMENTAL

Well Number R-1 ☐ Dev ☒ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Page 1 of 1

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ R-1 Site Address RURAL SAN JUAN CO.

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.09 TOR
Initial Depth to Water (feet) 13.23 TOR
Height of Water Column in Well (feet) 8.86
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	8.86	5.78 x 3	17.4
Gravel Pack			
Drilling Fluids			
Total			17.4

Instruments

	Serial No. (If applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6/26/00											NO PARAMETERS			TAKEN; PRODUCT	
													IN WELL		
											↓	↓	↓		

Circle the date and time that the development criteria are met.

Comments Water is black w/ Heavy HC oder & Significant Sheen. Sampled for BTEX at 1427

Developer's Signature(s) Jason Wagner Date 6/26/00 Reviewer RT Date 7/5/00

Form A0101 Rev. 10/6/94

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PHILIP ENVIRONMENTAL

Well Number R-2 ☐ Development ☒ Purging

Serial No. WDPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ R-2 Site Address RURAL SAN JUAN CO.

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.12 TOR
Initial Depth to Water (feet) 12.05 TOR
Height of Water Column in Well (feet) 10.07
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	10.07	6.573	19.7
Gravel Pack			
Drilling Fluids			
Total			19.7

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/l)	Comments
6/26/00											NO PARAMETERS TAKEN; PRODUCT IN WELL				
											↓	↓	↓		

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX at 1345. Water is grey with significant sheen.

Developer's Signature(s) Jean Wagner Date 6/26/00 Reviewer RT Date 7/5/00

PHILIP ENVIRONMENTAL

Well Number R-3

☐ Dev ☒ Purg

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ R3 Site Address RURAL SAN JUAN CO.

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.20 TOR
Initial Depth to Water (feet) 12.00 TOR
Height of Water Column in Well (feet) 10.2
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	10.2	6.6 x 3	19.9
Gravel Pack			
Drilling Fluids			
Total			19.9

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6/26/00	1139		X				4	4			21.8	7.65	924		CLEAR W/ ORANGE-BROWN FLOATIN SED.
"	1144		X				4	8			19.5	7.10	958		"
"	1149		X				4	12			18.6	7.43	865		"
"	1154		X				4	16			19.0	7.93	675		SLIGHTLY GREY
"	1159		X				4	20			19.5	7.77	743		"

Circle the date and time that the development criteria are met.

Comments Well is "boiling". In purge bucket water is orange. In sampling cup, water is as stated under "comment" column above. Sampled for BTEX at 1204

Developer's Signature(s) Jason Wagner Date 6/26/00 Reviewer RT Date 7/5/00

PHILIP ENVIRONMENTAL

Well Number R-4 ☐ Dev ☒ Purg

Serial No. WDPD-

WELL DEVELOPMENT AND PURGING DATA

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address RURAL SAN JUAN CO.

Development Criteria

☒ 1 to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.22 TOR
Initial Depth to Water (feet) 12.40 TOR
Height of Water Column in Well (feet) 9.82
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	9.82	6.41	19.2
Gravel Pack			
Drilling Fluids			
Total			19.2

Instruments

	Serial No. (If applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6/26/00	1227		X				4	4			25.7	7.82	504		GREY, CLOUDY, HC ODOR, SHEEN
"	1233		X				4	8			23.4	7.19	508		" "
"	1239		X				4	12			23.2	7.16	581		" "
"	1246		X				4	16			23.4	7.20	733		" "
"	1252		X				4	20			22.7	7.30	873		" "

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX at 1256

Developer's Signature(s) Jason Wagner Date 6/26/00 Reviewer RT Date 7/5/00

PHILIP ENVIRONMENTAL

Well Number R-5

Serial No. WDPD-

☐ Development ☒ Purging

WELL DEVELOPMENT AND PURGING DATA

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ R-5 Site Address RURAL SAN JUAN CO.

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 24.48 TOR
Initial Depth to Water (feet) 15.28 TOR
Height of Water Column in Well (feet) 9.2
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	9.2	6.01 x 3	18.01
Gravel Pack			
Drilling Fluids			
Total			18.01

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6/26/00	1059		X				4	4			23.5	7.77	757		CLEAR, VERY LT. BROWN
"	1105		X				4	8			23.4	7.59	796		"
"	1111		X				4	12			21.8	7.78	1046		CLOUDY, LT. BROWN

Circle the date and time that the development criteria are met.

Comments Well bailed dry at 12 gallons let recharge and sampled for BTEX at 1120.

Developer's Signature(s) Jena Wagner Date 6/26/00 Reviewer RT Date 7/5/00

PHILIP ENVIRONMENTAL

Well Number R-6 ☐ Development ☒ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Project Name EPES QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPES Phase.Task No. 0301

Site Name JAQUEZ R-6 Site Address RURAL SAN JUAN CO.

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 21.94 TOR
Initial Depth to Water (feet) 13.52 TOR
Height of Water Column in Well (feet) 8.42
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	8.42	5.5 x 3	16.5
Gravel Pack			
Drilling Fluids			
Total			16.5

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6/26/00	1030		X				4	4			20.2	7.19	399		LT. BROWN, CLEAR, NO ODOR
"	1036		X				2.5	6.5			19.6	7.10	395		"

Circle the date and time that the development criteria are met.

Comments Well bailed dry at 6.5 gallons, let recharge & sampled for BTEX at 1046

Developer's Signature(s) Jena Wagner Date 6/26/00 Reviewer RT Date 7/5/00

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62800165
Project Manager S. STELLAVATO
Cost Code 55
Client Company EPFS
Project Name JAQUEZ SVE
Site Name JAQUEZ SVE
Sampler J. WAGNON

Date 27/07/09
Time 13:09

Vent System	
Mag. Inf.	21
Mag. Eff.	21
Inf. SCFM	42
Eff. SCFM	83

Reading from guages

Sparge	
Mag.	5

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.7	350	102.3
VW	22.7	* 540	87.5
INF.	21.0	3210	103.3
EFF.	9.5	1880	135
SPG. 1	0.9	190	110
SPG. 2	0.9	208	109
SPG. 3	1.0	200	115

HOSE IS DETERIORATING (AND LEAKING)

Using Thermo-Anemometer

INCHES OF WATER	
MP-1	0
MP-2S	0.01
MP-2D	0.06
MP-3S	-0.42
MP-3D	0.05

Using Magnehelic

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 6280165
Project Manager S. STELLAVATO
Cost Code 55
Client Company DOE
Project Name JAQUEZ SVE
Site Name JAQUEZ SVE
Sampler J. GLASMAN

Date 7/12/04
Time 1242

Vent System	
Mag. Inf.	
Mag. Eff.	
Inf. SCFM	42
Eff. SCFM	82

Reading from guages

Sparge	
Mag.	5

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.4		
VW			
INF.	17.7		
EFF.			
SPG. 1			
SPG. 2	1.1	247	116.4
SPG. 3	1.2	250	119.4

Using Thermo-Anemometer

INCHES OF WATER	
MP-1	0.0
MP-2S	0.0
MP-2D	0.05
MP-3S	-0.42
MP-3D	0.01

Using Magnehelic

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

Soil Vapor Extraction Data Sheet

Project Number 62800165
Project Manager S. STELLAVATO
Cost Code 55
Client Company EPFS
Project Name JAQUEZ SVE
Site Name JAQUEZ PLANT NM
Sampler

Date 7/25/02
Time 1241

Vent System	
Mag. Inf.	20.5
Mag. Eff.	21.0
Inf. SCFM	42
Eff. SCFM	84

Reading from guages

Sparge	
Mag.	4.5

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.5	[illegible]	[illegible]
VW	7.6	893	79.[illegible]
INF.	16.6	3257	90.[illegible]
EFF.	12.7	2523	84.1
SPG. 1	0.8	194	114.0
SPG. 2	0.9	204	118.2
SPG. 3	0.9	206	123.7

Using Thermo-Anemometer

INCHES OF WATER	
MP-1	0
MP-2S	0
MP-2D	0.05
MP-3S	-0.40
MP-3D	0.04

Using Magnehelic

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62800165
Project Manager S. Stellavato
Cost Code 55
Client Company EPFS
Project Name Jaquez SVE
Site Name Jaquez
Sampler J Wagnon

Date 8/1/00
Time 1040

Vent System	
Mag. Inf.	29.5
Mag. Eff.	29.5
Inf. SCFM	53
Eff. SCFM	65

Reading from guages

Sparge	
Mag.	5.5

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.9	375	89.0
R4 [illegible]	1.7	350	89.2
INF.	10.3	2009	88.9
EFF.	18.6	3662	136.0
SPG. 1	1.4	276	113.7
SPG. 2	1.9	381	115.3
SPG. 3	1.8	355	121.7

Using Thermo-Anemometer

PID at eff pipe : 0.0 ppm

PID of Air Sample: 0.3 ppm

INCHES OF WATER	
MP-1	0
MP-2S	0
MP-2D	0.03
MP-3S	0
MP-3D	0.07

Using Magnehelic

VW 0

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

J://Z Misc Folders/jnw/forms/SVE Data Sheet

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62800165
Cost Code 55
Project Name JAQUEZ SVE
Sampler J. WAGNON

Project Manager S. STELLAVATO
Client Company EPFS
Site Name JAQUEZ

Date 8/9/00
Time ~~1400~~ 1520

Vent System	
Mag. Inf.	28.5
Mag. Eff.	28.5
Inf. SCFM	52
Eff. SCFM	64

Reading from guages

Sparge	
Mag.	5.5

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.5	298	112.2
~~VW~~ R4	1.6	318	93.9
INF.	10	1969	104.3
EFF.	17.8	3511	151.3
SPG. 1	1.2	259	118.1
SPG. 2	1.7	349	119.1
SPG. 3	1.5	301	132.2

Using Thermo-Anemometer

INCHES OF WATER	
MP-1	0
MP-2S	0
MP-2D	0.03
MP-3S	0.01
MP-3D	0.05

Using Magnehelic

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62800165 | Project Manager D FERNALD

Cost Code 55 | Client Company EPFS

Project Name JAQUEZ SVE | Site Name JAQUEZ SVE

Sampler J. WAGNON

Date 8/18/00

Time 1520

Vent System	
Mag. Inf.	28
Mag. Eff.	28
Inf. SCFM	52
Eff. SCFM	64

Reading from guages

Sparge	
Mag.	5.5

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.6	323.3	109.2
~~VW~~ R-4	1.7	359.0	92.7
INF.	10.2	2019.1	105.7
EFF.	17.2	3413.4	156.1
SPG. 1	1.1	249.0	113.6
SPG. 2	1.6	331.0	121.4
SPG. 3	1.6	347.1	141.0

Using Thermo-Anemometer

INCHES OF WATER	VALVE High or Low
MP-1	0.0 H
MP-2S	0.0 H
MP-2D	0.3 H
MP-3S	0.0 H
MP-3D	0.05 H

Using Magnehelic

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

PHILLIP ENVIRONMENTAL

Well Number M-03 ☐ Development ☑ Purging

Serial No. WDPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ M-03 Site Address BLANCO, NM

Development Criteria

☑ 3 to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.15 TOR
Initial Depth to Water (feet) 3.41 TOR
Height of Water Column in Well (feet) 11.74
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.74	7.7x3	23
Gravel Pack			
Drilling Fluids			
Total			23

Instruments

	Serial No. (If applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, N

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
7/25/00	1408		X				4	4			23.9	7.74	354		CLEAR, NO ODOR
"	1412		X				4	8			23.3	7.64	382		SLIGHTLY CLOUDY
"	1417		X				4	12			22.9	7.68	389		" "
"	1421		X				4	16			21.5	7.78	368		" "
"	1425		X				4	20			20.7	7.57	354		" "
"	1432		X				4	24			20.9	7.71	376		GREY, CLOUDY

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX at 1445.

Developer's Signature(s) [signature] Date 7/25/00 Reviewer RT Date 8/3/00

PHILIP ENVIRONMENTAL

Well Number M-04 ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

- ☑ 3 to 5 Casing Volumes of Water Removal
- ☑ Stabilization of Indicator Parameters
- ☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.36 TOR
Initial Depth to Water (feet) 2.15 TOR
Height of Water Column in Well (feet) 13.21
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	13.21	8 x 3	25.8
Gravel Pack			
Drilling Fluids			
Total			25.8

Instruments

	Serial No. (If applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
7/25/00	1323		X				5	5	5	5	27.2	7.86	526		CLEAR, NO ODOR
"	1329		X				5	10			24.6	7.83	509		"
	1333		X				1	11			21.6	7.84	545		"

Circle the date and time that the development criteria are met.

Comments Bailed dry at 11 gallons. Let recharge and sampled for BTEX at 1343.

Developer's Signature(s) Jean Wagner Date 7/25/00 Reviewer RT Date 8/3/00

PHILIP ENVIRONMENTAL

Well Number R-1 ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING "A"

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

- ☑ 1 to 5 Casing Volumes of Water Removal
- ☑ Stabilization of Indicator Parameters
- ☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.09 TOR
Initial Depth to Water (feet) 13.13 TOR
Height of Water Column in Well (feet) 8.96
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	8.96	5.8 x 3	17.5
Gravel Pack			
Drilling Fluids			
Total			17.5

Instruments

	Serial No. (if applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
											PRODUCT IN WELL, NO PARAMETERS TAKEN				
											↓	↓	↓		

Circle the date and time that the development criteria are met.

Comments Water is grey, clear, with black particulates. Product is clear, HC odor with sheen. Bailed 18 gal and sampled at 1107.

Developer's Signature(s) Jean Wagner Date 7/26/00 Reviewer RT Date 8/3/00

PHILIP ENVIRONMENTAL

Well Number R-2 ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING FORM

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

☑ 3 to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.12 TOR
Initial Depth to Water (feet) 12.0 TOR
Height of Water Column in Well (feet) 10.12
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	10.12	6.6×3	19.8
Gravel Pack			
Drilling Fluids			
Total			19.8

Instruments

	Serial No. (if applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
											PRODUCT IN WELL; NO PARAMETERS TAKEN				
											↓	↓	↓		

Circle the date and time that the development criteria are met.

Comments Well baled dry at 13 gal. let recharge and Sampled for BTEX at 1149. Water is grey-clear with clear product and HC odor.

Developer's Signature(s) Jason Wagner Date 7/20/00 Reviewer RT Date 8/3/00

PHILIP ENVIRONMENTAL

Well Number R-3

☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

- ☑ (3) to 5 Casing Volumes of Water Removal
- ☑ Stabilization of Indicator Parameters
- ☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.20 TOR
Initial Depth to Water (feet) 12.85 TOR
Height of Water Column in Well (feet) 9.35
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	9.35	6.1 x 3	18.3
Gravel Pack			
Drilling Fluids			
Total			18.3

Instruments

	Serial No. (if applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
7/26/00	1212		X				4	4			21.8	6.90	1144		CLEAR - SLIGHTLY YELLOW
"	1216		X				4	8			20.9	6.86	1172		CLEAR
"	1220		X				4	12			21.0	6.91	1178		"
"	1224		X				4	16			20.4	7.09	1182		"
"	1229		X				3	19			19.1	7.15	1105		"

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX at 1235

Developer's Signature(s) Jeff Wagner Date 7/26/00 Reviewer RT Date 8/3/00

PHILIP ENVIRONMENTAL

Well Number R-4 ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING FORM

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

☑ 3 to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other _____

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other _____

Water Volume Calculation

Initial Depth of Well (feet) 22.22 TOR
Initial Depth to Water (feet) 12.40 TOR
Height of Water Column in Well (feet) 9.82
Diameter (inches): Well 4 Gravel Pack ____

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	9.82	6.4 x 3	19.2
Gravel Pack			
Drilling Fluids			
Total			19.2

Instruments

	Serial No. (if applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
7/26/00	934		X				4	4			25.8	7.06	521		COLORLESS, CLOUDY, SHEE
"	941		X				4	8			22.9	7.08	569		CLOUDY, GREY, SLIGHT OI
"	955		X				4	12			23.6	7.19	618		"
"	1001		X				4	16			21.0	7.21	782		BLACK, CLOUDY, ODOR
"	1007		X				4	20			19.5	7.32	862		" "

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX at 1015

Developer's Signature(s) Jesse Wagner Date 7/26/00 Reviewer RT Date 8/3/00

PHILIP ENVIRONMENTAL

Well Number MW-01 ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMP. Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

☑ ③ to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other _____

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other _____

Water Volume Calculation

Initial Depth of Well (feet) 15.38' TOR
Initial Depth to Water (feet) 4.5' TOR
Height of Water Column in Well (feet) 10.88
Diameter (inches): Well 4" Gravel Pack ____

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	10.88	2.18	21.8
Gravel Pack			
Drilling Fluids			
Total			21.8

Instruments

	Serial No. (if applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
8/22/00	1126		X				4	4			22.5	7.83	370		CLEAR, NO ODOR
"	1136		X				4	8			22.7	7.52	340		" "
"	1151		X				11	19			24.7	7.51	300		" "
"	1206		X				2.5	21.5			24.2	7.45	286		" "

Circle the date and time that the development criteria are met.

Comments Well bailed dry at [illegible] gallons, sampled for BTEX at 1207

Developer's Signature(s) [signature] Date 8/22/00 Reviewer _____ Date _____

PHILIP ENVIRONMENTAL

Well Number M2 ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMP. Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

☑ (3) to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.12 TDR
Initial Depth to Water (feet) 3.49 TDR
Height of Water Column in Well (feet) 11.63
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.63	7.6 x 3	22.8
Gravel Pack			
Drilling Fluids			
Total			22.8

Instruments

	Serial No. (If applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
8/22/00	1228		X				4	4			21.3	7.83	430		CLEAR, NO ODOR
"	1235		X				4	8			23.6	7.80	403		"
"	1239		X				4	12			22.4	7.38	392		"
"	1242		X				4	16			21.3	7.41	387		"
"	1246		X				4	20			22.2	7.25	393		"
"	1250		X				4	24			22.0	7.28	390		"

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX + MTBE

Developer's Signature(s) [signature] Date 8/22/00 Reviewer Date

PHILIP ENVIRONMENTAL

Well Number M3 ☐ Development ☑ Purging

Serial No. WDPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name EPFS QUARTERLY SAMP. Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

- ☑ (3) to 5 Casing Volumes of Water Removal
- ☑ Stabilization of Indicator Parameters
- ☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.18' TOR

Initial Depth to Water (feet) 3.00' TOR

Height of Water Column in Well (feet) 12.18

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	12.18'	8 x 3	24
Gravel Pack			
Drilling Fluids			
Total			24

Instruments

	Serial No. (if applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
8/22/00	1418		X				5	5			25.0	7.12	1.01		CLEAR, SLIGHT SEPTIC ODOR
"	1422		X				5	10			21.9	7.01	374		"
"	1425		X				5	15			19.9	7.12	346		"
"	1431		X				5	20			20.2	7.35	341		"
"			X				4	24			19.3	7.33	336		"

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX

Developer's Signature(s) [signature] Date Reviewer Date

PHILIP ENVIRONMENTAL

Well Number MW4 ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMP. Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

☑ (3) to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other _____

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other _____

Water Volume Calculation

Initial Depth of Well (feet) 15.38' TOB
Initial Depth to Water (feet) 1.9' TOB
Height of Water Column in Well (feet) 13.48
Diameter (inches): Well 4" Gravel Pack ____

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	1.8.12	8.323	24.9
Gravel Pack			
Drilling Fluids			
Total			24.9

Instruments

	Serial No. (If applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other _____	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
8/22/00	1344		X				5	5			30.2	7.11	647		CLEAR, NO ODOR
"	1349		X				5	10			23.4	7.88	589		"
"	1400		X				2	12			24.0	7.81	714		LT BROWN, CLOUDY

Circle the date and time that the development criteria are met.

Comments Bailed dry at 12 gal. Sampled for BTEX and Nitrates at 14 gal.

Developer's Signature(s) Jesse A. Tapia Date 8/22/00 Reviewer _____ Date _____

PHILIP ENVIRONMENTAL

Well Number MS ☐ Development ☑ Purging

Serial No. WDPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name EPFS QUARTERLY SAMP. Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

☑ (3) to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.05 TOC
Initial Depth to Water (feet) 3.80 TOC
Height of Water Column in Well (feet) 11.25
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.25	7.343	22
Gravel Pack			
Drilling fluids			
Total			22

Instruments — Serial No. (if applicable)

☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
8/22/00	1307		X				4	4			26.8	7.87	400		CLEAR, No odor
"	1312		X				4	8			23.1	7.79	398		"
"	1316		X				4	12			20.3	7.82	360		"
"	1320		X				4	16			21.3	7.47	395		"
"	1324		X				4	20			20.1	7.41	406		"
"	1328		X				4	24			21.7	7.38	479		"

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX + TPH.

Developer's Signature(s) [signature] Date 8/22/00 Reviewer _____ Date _____

PHILIP ENVIRONMENTAL

Well Number MW6

☐ Development ☒ Purging

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMP. Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

☒ (3) to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other _____

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other _____

Water Volume Calculation

Initial Depth of Well (feet) 17.11 TOC
Initial Depth to Water (feet) 4.35 TOC
Height of Water Column in Well (feet) 11.56
Diameter (inches): Well 4 Gravel Pack ____

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.56	7.5x3	20.6
Gravel Pack			
Drilling Fluids			
Total			20.6

Instruments

	Serial No. (if applicable)
☒ pH Meter	HYDAC
☐ DO Monitor	
☒ Conductivity Meter	HYDAC
☒ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
8/22/00	1451		X				4	4			25.3	7.3	1055		TURBID, BROWN
"	1502		X				4	8			21.7	7.16	962		"
"	1507		X				4	12			20.3	7.21	853		"
"	1513		X				4	16			19.1	7.32	693		"
"	1518		X				4	20			17.7	7.37	646		"
"			X				3	23			17.6	7.41	607		"

Circle the date and time that the development criteria are met.

Comments Sampled @ 1526

Developer's Signature(s) [signature] Date 8/22/00 Reviewer _____ Date _____

PHILIP ENVIRONMENTAL

Well Number R1 ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Page 1 of 1

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

☑ 3 to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.09' TOR
Initial Depth to Water (feet) 12.78' TOR
Height of Water Column in Well (feet) 9.31
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	9.31	6.1 x 3	18.2
Gravel Pack			
Drilling Fluids			
Total			18.2

Instruments

	Serial No. (if applicable)
☐ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
8/23/00	1401		X				3	3			19.5	4.63	1870		CLEAR, HC ODOR, SLIGHT
"	1408		X				3	6			21.0	4.46	1583		" SHEEN
"	1412		X				3	9			21.5	4.20	1482		"
"	1417		X				3	12			20.8	4.11	1402		"
"	1421		X				3	15			19.9	4.05	1682		GREY W/BLACK
"	1426		X				3.5	18.5			20.1	4.00	1552		" PARTICULATES

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX at 1435.

Developer's Signature(s) Jean Wagnon Date 8/23/00 Reviewer Date

PHILIP ENVIRONMENTAL

Well Number R4 ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WOPD-

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

- ☑ 10 to 5 Casing Volumes of Water Removal
- ☑ Stabilization of Indicator Parameters
- ☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.22 TOR
Initial Depth to Water (feet) 12.00
Height of Water Column in Well (feet) 10.22
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	10.22	6.7 x 3	20.0
Gravel Pack			
Drilling Fluids			
Total			20.0

Instruments

	Serial No. (if applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Comments
8/23/00	1316		X								No Parameters taken,				
											collected in well				
	↓										↓	↓	↓		
	1336														

Circle the date and time that the development criteria are met.

Comments PRODUCT FROM 11.2' TO 11.8' (0.6' PRODUCT) Sampled BTEX at 1336. Water is black with yellow, coagulated product, HC ODOR

Developer's Signature(s) Jenn Wagner Date 8/23/00 Reviewer Date

PHILIP ENVIRONMENTAL

Well Number R2 ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

- ☑ 10 to 5 Casing Volumes of Water Removal
- ☑ Stabilization of Indicator Parameters
- ☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.12' TOR

Initial Depth to Water (feet) 11.54' TOR

Height of Water Column in Well (feet) 10.58'

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	10.58	69.43	30.7
Gravel Pack			
Drilling Fluids			
Total			

Instruments

	Serial No. (if applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARETOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/l)	Comments
8/23/00	1243		X								DID NOT	TAKE	PARAMETERS;		
											PRODUCT	IN	WELL.		
↓	1300		↓								↓	↓	↓	↓	

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX at 1300. Water is grey-clear with oily sheen and clear product.

Developer's Signature(s) Jenn Wagman Date 8/23/00 Reviewer Date

PHILIP ENVIRONMENTAL

Well Number R3 ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

☑ 10 to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.20 TOR
Initial Depth to Water (feet) 12.31 TOC
Height of Water Column in Well (feet) 9.89
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	0.89	6.65	19.3
Gravel Pack			
Drilling Fluids			
Total			19.3

Instruments

	Serial No. (if applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
8/23/00	1158		X				4	4			22.2	3.88	1099		CLEAR W/RED PARTICULATE
"	1203		X				4	8			22.3	3.94	1156		"
"	1208		X				4	12			20.8	3.78	1091		"
"	1212		X				4	16			20.4	3.77	1114		"
"	1217		X				4	20			19.8	3.75	1041		CLEAR

Circle the date and time that the development criteria are met

Comments Sampled for BTEX + MTBE

Developer's Signature(s) Jenn Wagner Date 8/23/00 Reviewer Date

PHILIP ENVIRONMENTAL

Well Number R5 ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING FORM A

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

- ☑ 3 to 5 Casing Volumes of Water Removal
- ☑ Stabilization of Indicator Parameters
- ☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 24.48' TOR
Initial Depth to Water (feet) 15.17' TOR
Height of Water Column in Well (feet) 9.31
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	9.31	6.1 x 3	18.2
Gravel Pack			
Drilling Fluids			
Total			18.2

Instruments

	Serial No. (if applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
8/23/00	1124		X				4	4			22.7	4.85	703		SLIGHTLY TURB. @ BEGIN.
"	1131		X				4	8			22.4	4.32	615		"
"	1136		X				2.5	10.5			21.9	4.26	650		"

Circle the date and time that the development criteria are met.

Comments Bailed dry at 10.5 gal. Let recharge & Sampled at 1140.

Developer's Signature(s) Jean Wagner Date 8/23/00 Reviewer Date

ENVIRONMENTAL

Well Number RL ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Project Name EPFS QUARTERLY SAMPLING Project Manager R. THOMPSON Project No. 62800107

Client Company EPFS Phase.Task No. 0301

Site Name JAQUEZ Site Address BLANCO, NM

Development Criteria

- ☑ 0 to 5 Casing Volumes of Water Removal
- ☑ Stabilization of Indicator Parameters
- ☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 21.94' TOR
Initial Depth to Water (feet) 12.38 TOR
Height of Water Column in Well (feet) 9.56
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	9.22	6.903	18.7
Gravel Pack			
Drilling Fluids			
Total			18.7

Instruments

	Serial No. (if applicable)
☑ pH Meter	HYDAC
☐ DO Monitor	
☑ Conductivity Meter	HYDAC
☑ Temperature Meter	HYDAC
☐ Other	

Water Disposal

KUTZ SEPARATOR, BLOOMFIELD, NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
8/23/00	1053		X				4	4			21.1	7.26	408		SLIGHTLY TURBID, BROWN
"	1100		X				4	8			22.0	6.81	400		"
"	1108		X				4	12			23.4	5.95	372		"

Circle the date and time that the development criteria are met.

Comments Bailed dry at 12 gal. Let recharge. Sampled & BTEX at 1115.

Developer's Signature(s) Jenn Wagner Date 8/23/00 Reviewer Date

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62900165 | Project Manager D. FERNALD

Cost Code 55 | Client Company EPFS

Project Name JAQUEZ Farm (SVE) | Site Name JAQUEZ

Sampler J WAGNER

Date 8/25/00

Time 12 52

Vent System	
Mag. Inf.	29
Mag. Eff.	20
Inf. SCFM	52
Eff. SCFM	65

Reading from guages

Sparge	
Mag.	5.5

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.5	308	104.5
~~MW~~	1.8	357	95.1
INF.	12.5	2448	93.5
EFF.	16.7	3312	141.9
SPG. 1	1.3	257	110.1
SPG. 2	1.8	304	116.5
SPG. 3	1.6	320	124.4

Using Thermo-Anemometer

INCHES OF WATER	VALVE High or Low
MP-1	0	H
MP-2S	0	H
MP-2D	0.045	H
MP-3S	0.01	H
MP-3D	0.05	H

Using Magnehelic

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62800165
Project Manager D. FERNALD
Cost Code 55
Client Company EPFS
Project Name JAQUEZ SVE
Site Name JAQUEZ
Sampler J. WAGNON

Date 9/1/00
Time 0930

TRAILER

Vent System	
Mag. Inf.	29
Mag. Eff.	29
Inf. SCFM	53
Eff. SCFM	66

Reading from guages

TRAILER

Sparge	
Mag.	5.5

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.6	322	81.8
R-4	1.8	370	80.0
INF.	13.2	2572	75.1
EFF.	6.5	1310	115.5
SPG. 1	1.6	330	81.3
SPG. 2	0.9	186	84.9
SPG. 3	1.2	~~246~~	91.9

Using Thermo-Anemometer

INCHES OF WATER		VALVE High or Low
MP-1	0.0	H
MP-2S	0.0	H
MP-2D	0.02	H
MP-3S	0.00	H
MP-3D	0.08	H

Using Magnehelic

We need rubber grommets to fit valves; getting a good seal is difficult by just using our hands.

PID EFFLUENT = 0.9 ppm

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

(FIELD SAMPLE INTO ZIPLOCK SHOWED 1.4 ppm.)

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62800165
Project Manager D Fernald
Cost Code SS
Client Company EPFS
Project Name JAQUEZ SVE
Site Name JAQUEZ
Sampler C. Nunez

Date 9 8 00
Time 1500

Vent System	
Mag. Inf.	29
Mag. Eff.	29
Inf. SCFM	53
Eff. SCFM	66

Reading from guages

Sparge	
Mag.	5.5

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.6	321	79.9
R-4	1.8	369	80.0
INF.	17.2	2569	75.1
EFF.	6.5	1309	113.4
SPG. 1	1.6	325	80.6
SPG. 2	0.9	190	84.2
SPG. 3	1.2	239	90.6

Using Thermo-Anemometer

INCHES OF WATER		VALVE High or Low
MP-1	0.0	H
MP-2S	0.0	H
MP-2D	0.01	H
MP-3S	0.00	H
MP-3D	0.02	H

Using Magnehelic

(PID EFFLuent 0.2 ppm)

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62900165
Project Manager LISA WINN
Cost Code 55
Client Company EPFS
Project Name JAQUEZ SVE
Site Name JAQUEZ
Sampler C. MAEZ

Date 9-22-00
Time 1019

Vent System	
Mag. Inf.	29
Mag. Eff.	29
Inf. SCFM	53
Eff. SCFM	56

Reading from guages

Sparge	
Mag.	5.5

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.8	360	74.1
R-4	1.8	369	72.1
INF.	14.2	2772	73.7
EFF.	17.1	3303	122.3
SPG. 1	1.5	307	81.3
SPG. 2	1.0	200	86.1
SPG. 3	1.4	260	90.3

Using Thermo-Anemometer

INCHES OF WATER	VALVE High or Low
MP-1	0.0 H
MP-2S	0.0 H
MP-2D	0.02 H
MP-3S	0.00 H
MP-3D	0.06 H

Using Magnehelic

pid Effluent 0.0
windy conditions

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62800165
Cost Code 55
Project Name JAQUEZ SVE
Sampler C Mares

Project Manager
Client Company EPFS
Site Name JAQUEZ

Date 09-29-00
Time 1630

Vent System	
Mag. Inf.	29
Mag. Eff.	29
Inf. SCFM	55
Eff. SCFM	66

Reading from guages

Sparge	
Mag.	5

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.5	333	91.9
R-4	1.5	317	90.4
INF.	15.2	2096	87.2
EFF.	18.1	3662	141.2
SPG. 1	1.3	250	100.0
SPG. 2	1.1	240	104.7
SPG. 3	1.7	319	112.4

Using Thermo-Anemometer

INCHES OF WATER		VALVE High or Low
MP-1	0.0	H
MP-2S	0.0	H
MP-2D	0.02	H
MP-3S	0.00	H
MP-3D	0.08	H

Using Magnehelic

Collected Air Sample 1449

pid Reading AT EXHAUST 0.0

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62900165
Project Manager Lisa Winn
Cost Code 55
Client Company EPFS
Project Name JAguez SVE
Site Name JAguez
Sampler C. Maez

Date 10-06-00
Time 13 00

Vent System	
Mag. Inf.	20
Mag. Eff.	20
Inf. SCFM	53
Eff. SCFM	66

Reading from guages

Sparge	
Mag.	5.0

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.8	350	90.4
R-4	2.0	420	94.5
INF.	81.4	2660	81.1
EFF.	18.0	3404	132.2
SPG. 1	1.4	305	95.5
SPG. 2	1.6	205	102.3
SPG. 3	1.5	302	107.4

Using Thermo-Anemometer

INCHES OF WATER		VALVE High or Low
MP-1	0.0	H
MP-2S	0.0	H
MP-2D	0.02	H
MP-3S	0.0	H
MP-3D	0.02	H

Using Magnehelic

P.I.D. Effluent 0.0

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62800165
Cost Code 55
Project Name JAguez SVE
Sampler C maez

Project Manager Lisa winn
Client Company EPFS
Site Name JAguez

Date 10-13-00
Time 0935

Vent System	
Mag. Inf.	29
Mag. Eff.	29
Inf. SCFM	53
Eff. SCFM	66

Reading from guages

Sparge	
Mag.	5.5

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	2.0	393	51.7
R-4	2.0	420	49.8
INF.	10.9	2255	51.2
EFF.	15.7	2817	99.1
SPG. 1	1.0	211	58.2
SPG. 2	0.9	184	59.3
SPG. 3	1.5	324	64.5

Using Thermo-Anemometer

INCHES OF WATER	VALVE High or Low
MP-1	0.0 H
MP-2S	0.0 H
MP-2D	0.0 H
MP-3S	0.0 H
MP-3D	

Using Magnehelic

pid EFFluenT 0.7 ppm

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

PHILIP ENVIRONMENTAL

Soil Vapor Extraction Data Sheet

Project Number 62800165
Project Manager LISA WINN
Cost Code 55
Client Company EPFS
Project Name JAQUEZ SVE
Site Name JAQUEZ
Sampler C. MAEZ

Date 10 20 00
Time 1607

Vent System	
Mag. Inf.	29
Mag. Eff.	29
Inf. SCFM	53
Eff. SCFM	66

Reading from guages

Sparge	
Mag.	5.5

Reading from guage

READINGS FROM T.A.			
	MPS	FPM	TEMP (F)
R-1	1.9	385	83.4
R-4	1.8	360	76.2
INF.	8.3	1725	78.9
EFF.	14.9	2804	129.9
SPG. 1	1.8	375	92.2
SPG. 2	1.1	230	82.2
SPG. 3	1.3	315	96.9

Using Thermo-Anemometer

INCHES OF WATER	VALVE High or Low
MP-1	0.0 H
MP-2S	0.0 H
MP-2D	0.00 H
MP-3S	0.00 H
MP-3D	0.00 H

Using Magnehelic

PID EFFLuent = 1.9 ppm

Note: if magnehelic hose is on "Low" valve, the pressure represented is negative; if hose is on "High" valve, the pressure is positive.

PHILIP SERVICES CORP.

Industrial Services Group
Central Region
4000 Monroe Road
Farmington, NM 87401

Well Observation Data

Serial No. WOD-

Page ____ of ____

Project Name JAQUEZ SVE

Project No. 624001.65

Project Manager LISA WINN

Phase.Task No. 55

Client Company EPFS

Date 10-27-00

Site Name JAQUEZ G.C. "C1 (70995)

Depth Measurement Instrument Type PID ppm

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (feet)	Depth to Water (feet)	Depth to Sinking Product (feet)	Total Well Depth (feet)	Floating Product Thickness (feet)	~~Sinking Product Thickness (feet)~~	Comments
R-5	14.20			15.39				0000	T.O.R
R-6	1425			13.24					T.O.R
R-3	1431			21 93				002.9	T.O.R.
S-3	1436			13 59				001.6	TOP OF FITTING
S-2	1442			15,08				002.0	TOP OF FITTING
S-1	14.46			13.84				002.1	TOP OF FITTING
R-4	14.51		12.33	12.42			.10	299	TOP OF R-4
R-3	14.54			13.12				224.5	T.O.R
R-2	1502			11.96				032.4	T.O.R (Slotted 10m)
V-1W	15.13			11.08				000.7	T.O.R
Mp-3S								003.1	
Mp-3D								004.8	
Mp-S2								003.7	
Mp-2D								007.4	
Mp-1								002.0	

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments Allowing several minutes on PID Readings climbing then stabilize.

Signature Chris A. Mann Date 10-27-00 Reviewer _____ Date _____

PHILIP SERVICES CORP.

Industrial Services Group
Central Region
4000 Monroe Road
gton, NM 87401

Well Observation Data

Serial No. WOD-

Page ____ of ____

Project Name JAGUEZ SVE

Project No. 62800165

Project Manager ____

Phase.Task No. 55

Client Company ____

Date 10-31-00

Site Name JAGUEZ

Depth Measurement Instrument Type ____

Well or Piezometer	Time	Reason Not Measured / Measured	Depth to Floating Product (feet)	Depth to Water (feet)	Depth to Sinking Product (feet)	Total Depth (feet)	Floating Product Thickness (feet)	Sinking Product Thickness (feet)	D.O. Comments
R 05	1200	20.7%		15.29		0.0			0.5-0.75 ppm
R 06	12:1[illegible]	20.7%		13.35		0.0			5 ppm
R 03	12 18			12 [illegible]		35			2
S-03	12[illegible]			[illegible]		39			
S-02	12[illegible]			15 02		45			
S-01	12 33			13 [illegible]		12.6			
R-02	1234			[illegible]		374			1
R-01	12-2			13 [illegible]		312			1
R-04	1246		12 [illegible]	[illegible]		386	.04		0.5
[illegible]	12-0	✓		11 52		14			
MP1	PID→ 7.6								
MP2D	PID→ 12.8								
MP 2S	PID→ 9.1								
MP3D	PID→ 14.7								
MP3S	PID 9.5								

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments Sparge Pt at 7.0 psi / flow gauge ~~Pt~~ SW1 open @ 4 scfm, SW2 open @ 2-3 scfm, SW3 ½ open @ 8 scfm

Signature [signature] Date 10-31-00 Reviewer ____ Date ____

Form A0102 Rev. 02/24/94 Conforms to ASTM D 4750

SCFM range 3-20

PHILIP ENVIRONMENTAL

Well Number M-01 ☐ Developing ☑ Purging

Serial No. WDPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name EPFS Quarterly Sampling Project Manager R. Thompson Project No. 92800107

Client Company El paso Field Services Phase.Task No. 0301

Site Name JAQUEZ Gas Com E #1 Site Address Blanco N.M.

Development Criteria

☑ 3 to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.36
Initial Depth to Water (feet) 3.88
Height of Water Column in Well (feet) 11.48
Diameter (inches): Well 4" Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.48	2.49 X 3	22.47
Gravel Pack			
Drilling Fluids			
Total			22.47

Instruments

	Serial No. (if applicable)
☑ pH Meter	Hydac
☐ DO Monitor	
☑ Conductivity Meter	Hydac
☑ Temperature Meter	Hydac
☐ Other	

Water Disposal

Kutz Seperator Bloomfield N.M.

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
11-17-00	1127		X				4.5	4.5			7.5	5.81	334		Clear no odor
	1134		X				4.5	9			8.7	5.60	325		no change
	1240						4.5	13.5						2.85	
							4.5	18							
							4.5	22.5							

Circle the date and time that the development criteria are met.

Comments After Bailing Approximately 18 Gallons Bailed well Dry Let Recover Collected BTex Sample 1227

Developer's Signature(s) Chris A. Hill Date 11-17-00 Reviewed R. Thompson Date 11/21/00

PHILIP ENVIRONMENTAL

Well Number M 02

☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Serial No. WDPD-

Project Name EPFS Quarterly Sampling

Project Manager R Thompson

Project No. 62900107

Client Company El Paso Field Services

Phase.Task No. 0301

Site Name Jaquez

Site Address Blanco N.M.

Development Criteria

☑ 3 to 5 Casing Volumes of Water Removal

☑ Stabilization of Indicator Parameters

☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.09

Initial Depth to Water (feet) 3.75

Height of Water Column in Well (feet) 11.34

Diameter (inches): Well 4" Gravel Pack

Item	Water Volume in Well: Cubic Feet	Gallons	Gallons to be Removed
Well Casing	11.34	7.40x3	22.2
Gravel Pack			
Drilling Fluids			
Total			22.2

Instruments

	Serial No. (If applicable)
☑ pH Meter	Hydac
☐ DO Monitor	
☑ Conductivity Meter	Hydac
☑ Temperature Meter	Hydac
☐ Other	

Water Disposal

Enviro Seperator Bloomfield

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
11-17-00	1012		X				4.5	4.5			7.0	6.24	503		Clear no odor
	1019		X				4.5	9			9.9	6.08	508		" "
	1027		X				4.5	13.5			8.5	5.86	523		" "
	1031		X				4.5	18			10.6	5.75	542		" "
	1036		X				4.5	22.5			11.3	5.73	552		no charge
	1057													254	

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX 1046

Developer's Signature(s) Chris A. Mann Date 11-17-00 Reviewer J. Williams Date 11/21/00

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PHILIP ENVIRONMENTAL

Well Number M-03 ☐ Develop ☑ Purging

Serial No. WDPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name EPFS Quarterly Sampling Project Manager J. Thompson Project No. 62800107

Client Company El Paso Field Services Phase.Task No. 0301

Site Name Jaquez Site Address Blanco, NM

Development Criteria

☑ 3 to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.13
Initial Depth to Water (feet) 3.62
Height of Water Column in Well (feet) 11.51
Diameter (inches): Well 5 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Gallons	Gallons to be Removed
Well Casing	11.51	7.51 X 3	22.53
Gravel Pack			
Drilling Fluids			
Total			22.53

Instruments

	Serial No. (If applicable)
☐ pH Meter	Hydac
☐ DO Monitor	
☐ Conductivity Meter	Hydac
☐ Temperature Meter	Hydac
☐ Other	

Water Disposal

F.L.T.C. Separator Bloomfield NM.

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/l)	Comments
11-17-00	1159		X				4.5	4.5			10.2	5.86	347		Cloudy Rotten egg odor
	1205		X				4.5	9			9.4	5.79	383		" "
	1209		X				4.5	13.5			9.1	5.76	359		" "
	1216		X				4.5	18			9.6	5.79	361		" "
	1220		X				4.75	22.75			9.6	5.72	340		no Change
	1245													1.24	

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX 1231

Developer's Signature(s) [signature] Date 11-17-00 Reviewer [signature] Date 11/21/00

PHILIP ENVIRONMENTAL

Well Number M - 04 ☐ Develop ☑ Purge

WELL DEVELOPMENT AND PURGING DATA

Serial No. WDPD-

Project Name EDFS Quarterly Sampling Project Manager R Thompson Project No. 62800107

Client Company El Paso Field Services Phase.Task No. 0301

Site Name JAQUEZ GAS Com. E #1 Site Address Blanco NM

Development Criteria

☑ 3 to 5 Casing Volumes of Water Removal

☑ Stabilization of Indicator Parameters

☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.37

Initial Depth to Water (feet) 2.72

Height of Water Column in Well (feet) 12.65

Diameter (inches): Well 4" Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	10.1	8.25	24.75
Gravel Pack			
Drilling Fluids			
Total			24.75

Instruments

	Serial No. (if applicable)
☑ pH Meter	Hydac
☐ DO Monitor	
☑ Conductivity Meter	Hydac
☑ Temperature Meter	Hydac
☐ Other	

Water Disposal

Knock Separator

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/l)	Comments
11-17-00	1345		X				5	5			12.6	5.94	2.310		cloudy no odor
	1351		X				4.75	9.75			13.1	5.56	2.930		no change
	1452													3.87	

Circle the date and time that the development criteria are met.

Comments Bailed Approximately 9.75 gallons. Bailed until Water Was Clear. Sampled for BTEX 7435

Developer's Signature(s) Chris A. Ott Date 11-17-00 Reviewed by [illegible] Date 11/21/00

PHILIP ENVIRONMENTAL

Well Number M 05 ☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Serial No. WDPD-

Project Name EPFS quarterly Sampling Project Manager R Thompson Project No. 62800102

Client Company El Paso Field Services Phase.Task No. 0301

Site Name Jaquez Gas Com E #1 Site Address Blanco N.M.

Development Criteria

☑ 3 to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 15.06
Initial Depth to Water (feet) 3.65
Height of Water Column in Well (feet) 11.41
Diameter (inches): Well 4" Gravel Pack

Item	Water Volume in Well: Cubic Feet	Gallons	Gallons to be Removed
Well Casing	11.41	73.48 3	22.32
Gravel Pack			
Drilling Fluids			
Total			22.32

Instruments

	Serial No. (If applicable)
☑ pH Meter	Hydac
☐ DO Monitor	
☑ Conductivity Meter	Hydac
☑ Temperature Meter	Hydac
☐ Other	

Water Disposal

Kurtz Seperator Bloomfield NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
11-17-00	1411		X								9.2	5.80	14410		Cloudy No odor
	1416		X								10.0	5.62	1400		" "
	1421		X								10.2	5.59	1200		" "
	1426		X								10.4	5.48	1150		" "
	1431		X								10.3	5.46	1190		no Change
	1459													4.47	

Circle the date and time that the development criteria are met.

Comments Sampled for BTex 1445

Developer's Signature(s) Chris A. Mac Date 11-17-00 Reviewed R Winn Date 11/21/00

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PHILIP ENVIRONMENTAL

Well Number M-05M-06 ☐ Development ☑ Purging

Serial No. WDPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name EPFS Quarterly Sampling Project Manager R. Thompson Project No. 62800107

Client Company El Paso Field Services Phase/Task No. 0301

Site Name Jaquez Gas Com. E #1 Site Address Blanco NM

Development Criteria

☐ 3 to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 12.86
Initial Depth to Water (feet) 2.88
Height of Water Column in Well (feet) 10.98
Diameter (inches): Well 4" Gravel Pack

Item	Water Volume in Well Cubic Feet	Gallons	Gallons to be Removed
Well Casing	12.96	2.16 x 3	32.98
Gravel Pack			
Drilling Fluids			
Total			32.98

Instruments

	Serial No. (if applicable)
☑ pH Meter	Hydac
☐ DO Monitor	
☑ Conductivity Meter	Hydac
☑ Temperature Meter	Hydac
☐ Other	

Water Disposal

Key Separator Bloomfield NM

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
11-17-00	1533		X				5.25	5.25			9.0	5.29	1160		Cloudy Brown no odor
	1535		X				2.25	8.50			10.6	5.55	1210		" "
	1539		X				4.25	12.75			10.2	5.49	1210		" "
	1543		X				4.25	17			10.2	5.45	1170		" "
	1548		X				5.50	22.50			10.0	5.58	1090		no change
	1609													0.88	

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX AT 1602

Developer's Signature(s) [signature] Date 11-17-00 Reviewed [signature] Date 11/21/00

PHILIP ENVIRONMENTAL

Well Number R 01 ☐ Dev ☑ Purge

WELL DEVELOPMENT AND PURGE DATA

Serial No. WDPD-

Page 1 of 1

Project Name EPFS quarterly Sampling Project Manager R Thompson Project No. 620 00107

Client Company El paso Field Services Phase.Task No. 0301

Site Name Jaquez G.C. #C1 (70995) Site Address Kirtland N.M.

Development Criteria

☑ 3 to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.09
Initial Depth to Water (feet) 13.66
Height of Water Column in Well (feet) 8.43
Diameter (inches): Well Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	8.43	55.0 x 3	16.5
Gravel Pack			
Drilling Fluids			
Total			16.5

Instruments

	Serial No. (if applicable)
☑ pH Meter	Hydac
☐ DO Monitor	
☑ Conductivity Meter	Hydac
☑ Temperature Meter	Hydac
☐ Other	

Water Disposal

Knit Separator Bloomfield N.M.

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
11-20-00	1305		X				3.5	3.5			15.2	5.48	1540		Clear Black flakes Oily Sheen product odor
	1309						3.5	7			13.4	5.34	1670		" "
	1315						3.5	10.5			15.0	5.85	1570		" "
	1320						3.5	14			14.9	5.79	1450		" "
	1325						3.5	17.5			14.8	5.83	1230		No Change
	1440													0.16	

Circle the date and time that the development criteria are met.

Comments Sample for BTEX 1330

Developer's Signature(s) Chris A. Wing Date 11-20-00 Reviewer [signature] Date 11/21/00

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PHILIP ENVIRONMENTAL

Well Number R-02

Serial No. WDPD-

WELL DEVELOPMENT AND PURGE DATA

Page 1 of 1

Project Name EPFS quarterly sampling | Project Manager R Thompson | Project No. 62800107

Client Company El paso Field Services | Phase.Task No. 0301

Site Name JAguez 6 C #C1 (70995) | Site Address Blanco N.M.

Development Criteria

- ☑ 3 to 5 Casing Volumes of Water Removal
- ☑ Stabilization of Indicator Parameters
- ☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.12

Initial Depth to Water (feet) 12.51

Height of Water Column in Well (feet) 9.61

Diameter (inches): Well 4 " Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	9.61	6.27X3	18.81
Gravel Pack			
Drilling Fluids			
Total			18.81

Instruments

	Serial No. (if applicable)
☑ pH Meter	Hydac
☐ DO Monitor	
☑ Conductivity Meter	Hydac
☑ Temperature Meter	Hydac
☐ Other	

Water Disposal

1-12 Seperator Bloomfield NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumul. Vol.	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/l)	Comments
11-20-00	1127		X				4	4			11.8	5.32	930		Clear product
	1134		X				4	8			12.9	5.94	1010		Cloudy product
	1142		X				4	12			13.2	5.83	786		No Change
	1152		X				4	16			12.2	5.65	584		Grey product
	1202		X				4	20			13.1	5.48	552		No Change
	1248													0.40	

Circle the date and time that the development criteria are met.

Comments Bailed well Dry Approximately 12 gallons Let Recover 10 minutes in Between 16 gallons and 20 Let Recover collected BTex Sample 1202

Developer's Signature(s) [signature] Date 11-20-00 Reviewer [signature] Date 11/21/00

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PHILIP ENVIRONMENTAL

Well Number R 03

Serial No. WDPD-

☐ Development ☑ Purging

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name EPFS quarterly Sampling Project Manager R. Thompson Project No. 62800107

Client Company EL paso Field services Phase.Task No. 0301

Site Name Aguez GAS com. #C1 (70995) Site Address Blanco N.M.

Development Criteria

☐ 3 to 5 Casing Volumes of Water Removal

☑ Stabilization of Indicator Parameters

☐ Other _____

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other _____

Water Volume Calculation

Initial Depth of Well (feet) 22.20

Initial Depth to Water (feet) 13.95

Height of Water Column in Well (feet) 8.25

Diameter (inches): Well 4" Gravel Pack ____

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	5.25	5.2153	12.15
Gravel Pack			
Drilling Fluids			
Total			12.15

Instruments

	Serial No. (if applicable)
☑ pH Meter	Hydac
☐ DO Monitor	
☑ Conductivity Meter	Hydac
☑ Temperature Meter	Hydac
☐ Other _____	

Water Disposal

Kin Tz Separator Bloomfield N.M.

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
11-20-00	10 31		X				3.5	3.5			10.3	5.96	949		Cloudy Orange in Clr Slight Rotten Egg Odor
	10 39		X				5	8			12.2	5.54	1040		" "
	10 45		X				5	13			11.9	5.40	1020		" "
	10 49		X				3.5	16.5			12.2	5.27	977		Cloudy Orange Tint Slight Rotten Egg odor
	10 53		X				3.5	20			12.2	5.39	907		No Change
	12 19													1.21	

Circle the date and time that the development criteria are met.

Comments Sampled for BTEX 10:50

Developer's Signature(s) Chris A. Mann Date 11-20-00 Reviewer [signature] Date 11/21/00

PHILIP ENVIRONMENTAL

Well Number R-04

Serial No. WDPD-

WELL DEVELOPMENT AND PURGE DATA

Page 1 of 1

Project Name EPFS Quarterly Sampling Project Manager R Thompson Project No. G2800107

Client Company El Paso Field Services Phase.Task No. 0301

Site Name Jaquez GC. #C1 (70995) Site Address Blanco NM

Development Criteria

- ☑ 3 to 5 Casing Volumes of Water Removal
- ☑ Stabilization of Indicator Parameters
- ☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.22

Initial Depth to Water (feet) 12.92

Height of Water Column in Well (feet) 9.3

Diameter (inches): Well 4" Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	9.3	6.02 X 3	18.21
Gravel Pack			
Drilling Fluids			
Total			18.21

Instruments

	Serial No. (If applicable)
☑ pH Meter	Hydac
☐ DO Monitor	
☑ Conductivity Meter	Hydac
☑ Temperature Meter	Hydac
☐ Other	

Water Disposal

Kurtz Separator Bloomfield NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
11-20-00	1344		X				3.75	3.75			12.0	5.76	929		Cloudy Gray product
	1349		X				3.75	7.50			12.9	5.67	436		" "
	1354		X				3.75	11.25			13.5	5.63	426		" "
	1359		X				3.75	15			13.6	5.47	488		Cloudy Black product
	1406		X				3.75	18.75			13.1	5.55	504		no Change
	1415													2.36	

Circle the date and time that the development criteria are met.

Comments Level To product 1286 Grab Sample Collected @ 1413

Developer's Signature(s) Chris A Williams Date 11-20-00 Reviewer [signature] Date 11/21/00

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PHILIP ENVIRONMENTAL

Well Number R-05 ☐ Pre ☑ Pur

WELL DEVELOPMENT AND PURGI[illegible] DATA

Serial No. WOPD-

Project Name EPFS quarterly Sampling Project Manager R Thompson Project No. 62800107

Client Company Phase.Task No. 0301

Site Name Jaquez G.C. #C1 (70995) Site Address Blanco N.M.

Development Criteria

☐ 3 to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump: ☐ Centrifugal ☐ Submersible ☐ Peristallic

Bailer: ☑ Bottom Valve ☐ Double Check Valve ☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 24.48
Initial Depth to Water (feet) 15.77
Height of Water Column in Well (feet) 8.71
Diameter (inches): Well 4" Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	8.71	5.68X3	17.04
Gravel Pack			
Drilling Fluids			
Total			17.04

Instruments

	Serial No. (If applicable)
☑ pH Meter	Hydac
☐ DO Monitor	
☑ Conductivity Meter	Hydac
☑ Temperature Meter	Hydac
☐ Other	

Water Disposal: K.T.2 Seperator

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Project Volume Removed (gallons): Increment	Project Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
11-20-00	0853		X				3.5	3.5			9.8	6.51	533		Clear No odor
	0959		X				3.5	7			10.0	6.09	573		Cloudy
	0906		X				2.5	9.5			9.7	5.76	907		cloudy Brown no odor
	1229													1.60	

Circle the date and time that the development criteria are met.

Comments After Bailing Approximately 9.5 gallons Bailed well Dry Let Recover Collected BTex Samples 0930

Developer's Signature(s) Chris A. Mc... Date 11-20-00 Reviewer JWW Date 11/21/00

PHILIP ENVIRONMENTAL

Well Number R-06

Serial No. WOPD-

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name EPFS Quarterly Sampling

Project Manager R. Thompson

Project No. 62800107

Client Company El Paso Field Services

Phase.Task No. 0301

Site Name Jaquez G.C. #C1 (70995) Site address Blanco N.M.

Development Criteria

- ☐ 3 to 5 Casing Volumes of Water Removal
- ☑ Stabilization of Indicator Parameters
- ☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 21.94

Initial Depth to Water (feet) 14.27

Height of Water Column in Well (feet) 7.67

Diameter (inches): Well 4" Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	7.67	5.0X3	15
Gravel Pack			
Drilling Fluids			
Total			15

Instruments

	Serial No. (if applicable)
☑ pH Meter	Hydac
☐ DO Monitor	
☑ Conductivity Meter	Hydac
☑ Temperature Meter	Hydac
☐ Other	

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Disposal: to T2 seperator Bloomfield NM

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°F)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/l)	Comments
11 20 00	0953		X				5	5			10.2	5.59	310		Clear Gasoline Odor
	0957						5	10			10.6	6.25	295		Color Change
	1240						5	15						6.70	No Change

Circle the date and time that the development criteria are met.

Comments After Bailing Approx 1 gallon of Product well dry Let Recover Collected BTex Samples 1030

Developer's Signature(s) Chris A. Wall Date 11-22-00 Reviewed L. Wills Date 11/21/00

Form AD101 Rev. 10/6/94

F:\NEWFORM\PE_AD101.DOT 1/31/96

PHILIP ENVIRONMENTAL

Jaquez Remediation System Data Sheet and Field Notes

Project Number - *62800165*

Cost Code - *55*

Project Name - *Jaquez SVE O&M*

Date 12-1-00

Time _____

Project Manager - *Lisa Winn*

Client Company *EPFS*

Sampler C. Mace

Vent System	
Mag. Influent (H2O")	20
Mag. Effluent (H2O")	20
Inf. SCFM	48
Eff. SCFM	98
Vent Flow	

Sparge	
Magnehelic Gauge (psi)	7
Flow Gauge - Sparge 2	
Flow Gauge - Sparge 3	
Flow Gauge - Sparge 1	2

PID Effluent	

INCHES OF WATER		VALVE High or Low
MP-1		
MP-2S		
MP-2D		
MP-3S		
MP-3D		

Note: Record pressure as negative if hose is on "Low" valve

Record pressure as possitive if hose is on "High" valve

READINGS FROM THERMO ANEMOMETER	MPS	FPM	TEMP (F)
R-1			
R-4			
INFLUENT			
EFFLUENT			
SPG. 1			
SPG. 2			
SPG. 3			

	PID	Avail Screen	DO (ppm)	Temp (°F)
R-1				
R-2				
R-3				
R-4				
R-5				
R-6				
VE				
M-1				
M-2				
M-3				
M-4				
M-5				
M-6				

WATER LEVEL DATA	
R-1	12.71
R-2	11.67
R-4	12.45
V.W.	12.11

SITE NOTES: R4 Bubbling

R1 ALSO Bubbling Ripples

missing on piezometers

PHILIP ENVIRONMENTAL

Jaquez Remediation System Data Sheet and Field Notes

Project Number - *62800165*
Cost Code - *55*
Project Name - *Jaquez SVE O&M*
Date 12 07 00
Time 0930

Project Manager - *Lisa Winn*
Client Company *EPFS*
Sampler C. Maez

Vent System	
Mag. Influent (H2O")	46
Mag. Effluent (H2O")	86
Inf. SCFM	20
Eff. SCFM	20
Vent Flow	

Sparge	
Magnehelic Gauge (psi)	7
Flow Gauge - Sparge 2	off
Flow Gauge - Sparge 3	off
Flow Gauge - Sparge 1	2

PID Effluent	0.1

INCHES OF WATER		VALVE High or Low
MP-1	0.0	H
MP-2S	0.05	L
MP-2D	0.11	H
MP-3S	0.44	L
MP-3D	0.44	L

Note: Record pressure as negative if hose is on "Low" valve
Record pressure as possilive if hose is on "High" valve

READINGS FROM THERMO ANEMOMETER	MPS	FPM	TEMP (F)
VW	6.4	1290	44.7
INFLUENT	13.7	2641	98.3
EFFLUENT	12.5	2609	88.6
SPG. 1	0.9	191	42.6
~~SPG. 2~~			
~~SPG. 3~~			

	PID	~~Avail. Screen.~~ DO (ppm)	~~DO (ppm)~~ DO (%)	Temp (°f)	
R-1 5	613	6.93	70.3	15.5	
R-2 4	457	0.47	4.7	14.8	
R-3 3	323	0.93	9.3	15.1	13.0
R-4 6	864	7.42	74.4	14.9	
R-5 2	0.0	1.18	12.1	16.0	15.71
R-6 1	0.0	5.9	58.8	14.7	
VE					
M-1					
M-2					
M-3					
M-4					
M-5					
M-6					

WATER LEVEL DATA	
R-1	12.92
R-2	12.03
R-4	11.50

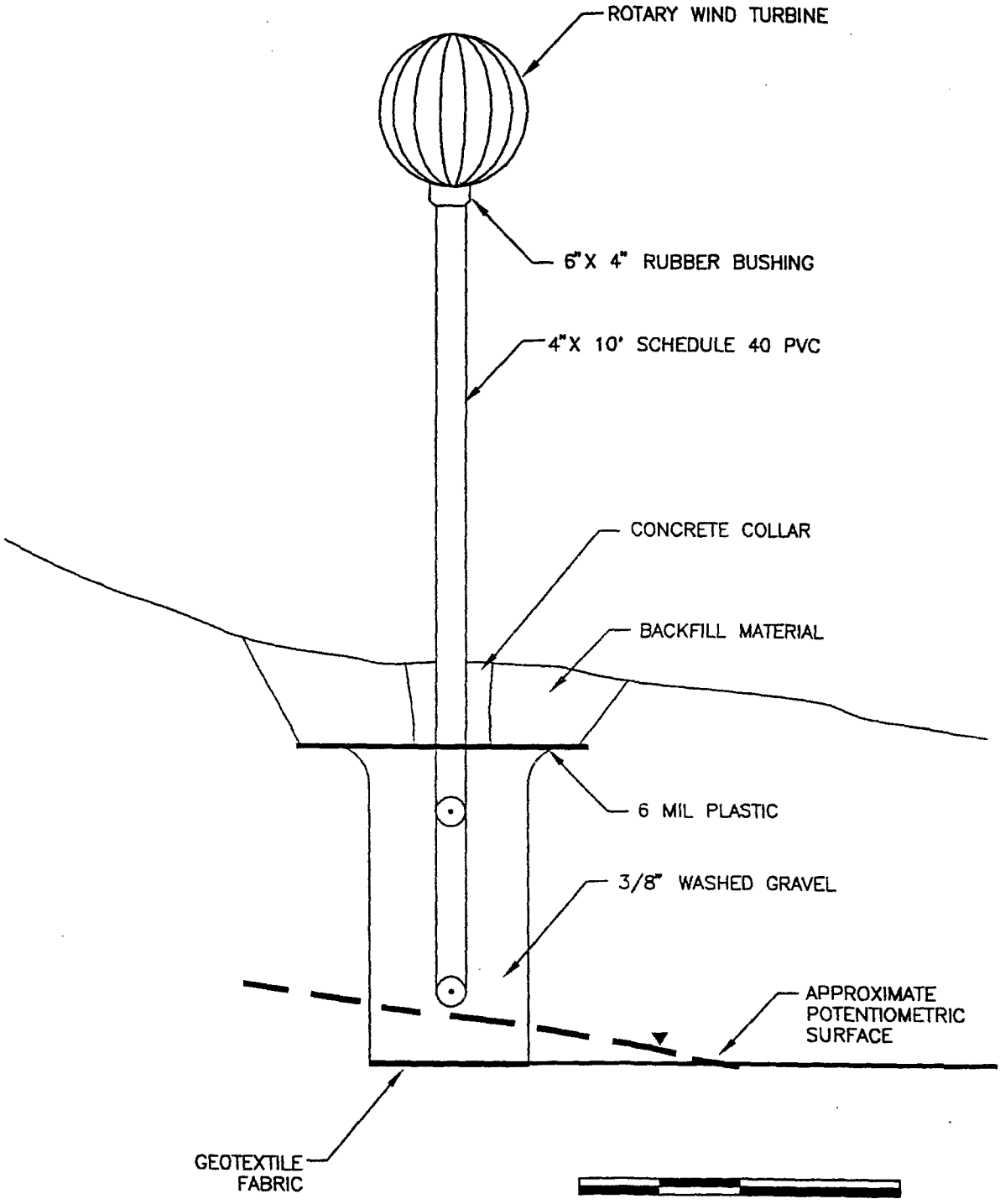
SITE NOTES: Level in [illegible] Appears To be Approximately 4' Lower Than usual, [illegible] R2 & R-1 pid meter [illegible] 100 And Above

J:/628/62800165/Field Data Sheet

APPENDIX C

WELL INSTALLATION LOGS

- Passive Vent System
- Monitoring Well Installation Records for R-1, R-2, R-4
- Monitoring Well Installation Record for Sparge Well
- Monitoring Well Installation Record for Vapor Extraction Well



PROJECT MANAGER

DOCUMENT MANAGER

CHECKED BY

DRAWN BY

10633A-002
REV. DATE
11/4/93

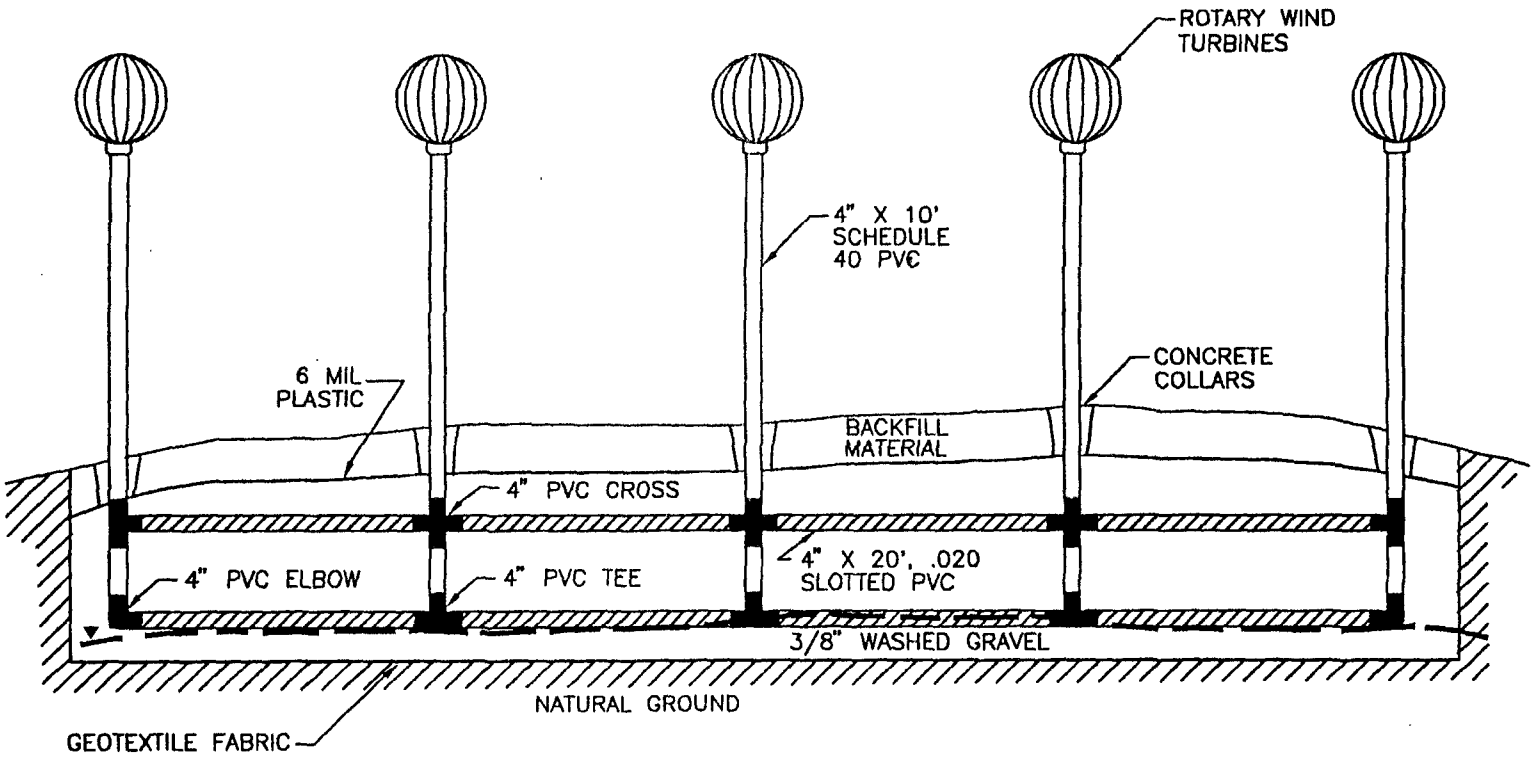
Burlington Environmental Inc.

PASSIVE VENTING SYSTEM
CROSS SECTION 1

JAQUEZ
BLANCO, NEW MEXICO
10633

FIGURE 1

10633A-003 REV. DATE 11/5/93	DRAWN BY		CHECKED BY		DOCUMENT MANAGER		PROJECT MANAGER	



EXPLANATION

▼ APPROXIMATE LOCATION OF POTENTIOMETRIC SURFACE ON SEPTEMBER 22, 1993

APPROXIMATE HORIZONTAL SCALE IN FEET

0 12 24

0 4 8

APPROXIMATE VERTICAL SCALE IN FEET

Burlington Environmental Inc.

PASSIVE VENTING SYSTEM
CROSS SECTION 2

JAQUEZ
BLANCO, NEW MEXICO
10633

FIGURE 2

APPENDIX D

LABORATORY ANALYSES

- May 2000 Laboratory Analysis of Groundwater Samples from M Wells
- May 2000 Laboratory Analysis of Groundwater Samples from R Wells
- June 2000 Laboratory Analysis of Groundwater Samples from M Wells
- June 2000 Laboratory Analysis of Groundwater Samples from R Wells
- July 2000 Laboratory Analysis of Groundwater Samples from M Wells
- July 2000 Laboratory Analysis of Groundwater Samples from R Wells
- August 2000 Laboratory Analysis of Groundwater Samples from M Wells
- August 2000 Laboratory Analysis of Nitrates in Groundwater Samples from M Wells
- August 2000 Laboratory Analysis of Groundwater Samples from R Wells
- November 2000 Laboratory Analysis of Groundwater Samples from M Wells
- November 2000 Laboratory Analysis of Nitrates Groundwater Samples from M Wells
- November 2000 Laboratory Analysis of Groundwater Samples from R Wells

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL PINNACLE I.D.: 006015
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	JAQ-0005-MW01	AQUEOUS	05/30/00	NA	06/05/00	1
02	JAQ-0005-MW02	AQUEOUS	05/30/00	NA	06/05/00	1
03	JAQ-0005-MW03	AQUEOUS	05/30/00	NA	06/05/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0005-MW01	JAQ-0005-MW02	JAQ-0005-MW03
BENZENE	0.5	**UG/L**	< 0.5	< 0.5	**2.1**
TOLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
ET' '.BENZENE	0.5	**UG/L**	< 0.5	< 0.5	**0.9**
TO.. L XYLENES	0.5	**UG/L**	< 0.5	< 0.5	**2.2**
SURROGATE:					
BROMOFLUOROBENZENE (%)			96	111	109
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL PINNACLE I.D.: 006015
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	JAQ-0005-MW04	AQUEOUS	05/30/00	NA	06/05/00	1
05	JAQ-0005-MW05	AQUEOUS	05/30/00	NA	06/05/00	1
06	JAQ-0005-MW06	AQUEOUS	05/30/00	NA	06/05/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0005-MW04	JAQ-0005-MW05	JAQ-0005-MW06
BENZENE	0.5	**UG/L**	**38**	< 0.5	< 0.5
TOLUENE	0.5	**UG/L**	**1.1**	< 0.5	< 0.5
ET LBENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOTAL XYLENES	0.5	**UG/L**	**23**	< 0.5	< 0.5
SURROGATE:					
BROMOFLUOROBENZENE (%)			111	107	103
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 006015
BLANK I. D.	: 060500	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 06/05/00
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5
SURROGATE:		
BROMOFLUOROBENZENE (%)		108
SURROGATE LIMITS:	(80 - 120)	

COMMENTS:

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

TEST	: EPA 8021 MODIFIED		
MSMSD #	: 006015-01	PINNACLE I.D.	: 006015
CLIENT	: PHILIP ENVIRONMENTAL	DATE EXTRACTED	: NA
PROJECT #	: 62800107	DATE ANALYZED	: 06/05/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	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	18.6	93	19.2	96	3	(80 - 120)	20
TOLUENE	<0.5	20.0	20.2	101	20.4	102	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.9	105	21.6	108	3	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	63.8	106	64.9	108	2	(80 - 120)	20

C[redacted]MIST NOTES:
N/A

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

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

STL
Commited To *Your* Success

LOG NO: C0-06085
Received: 03 JUN 00
Reported: 09 JUN 00

Mr. MITCH RUBENSTEIN
Pinnacle Laboratories
2709-D Pan American Freeway Northeast
Albuquerque, NM 87107

Project: 006015, PHIL-EPFS QTRLY SAMPLING
Sampled By: Client
Code: 08560069

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
06085-1	006015-03	05-30-00/14:30
06085-2	006015-04	05-30-00/15:09

PARAMETER	06085-1	06085-2
Nitrate-Nitrite, Nitrogen (353.2/354.1/4500-NO3)		
Nitrate + Nitrite-N, mg/l	<0.1	<0.1
Nitrate-N, mg/l	<0.1	<0.1
Nitrite-N, mg/l	<0.1 R4	<0.1 R4
Analyst	WG	WG
Prep Date	06.03.00	06.03.00
Analysis Date	06.06.00	06.06.00
Batch ID	N3W39A	N3W39A
Prep Method	4500-NO3	4500-NO3
Dilution Factor	1	1

STL
Commited To Your Success

LOG NO: C0-06085
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Mr. MITCH RUBENSTEIN
Pinnacle Laboratories
2709-D Pan American Freeway Northeast
Albuquerque, NM 87107

Project: 006015, PHIL-EPFS QTRLY SAMPLING
Sampled By: Client
Code: 08560069

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
06085-1	006015-03	05-30-00/14:30
06085-2	006015-04	05-30-00/15:09

PARAMETER	06085-1	06085-2
Polynuclear Aromatic Hydrocarbons (8310)		
Acenaphthene, ug/l	<1.0	<1.0
Acenaphthylene, ug/l	<1.0	<1.0
Anthracene, ug/l	<1.0	<1.0
Benzo(a)anthracene, ug/l	<1.0	<1.0
Benzo(a)pyrene, ug/l	<1.0	<1.0
Benzo(b)fluoranthene, ug/l	<1.0	<1.0
Benzo(g,h,i)perylene, ug/l	<1.0	<1.0
Benzo(k)fluoranthene, ug/l	<1.0	<1.0
Chrysene, ug/l	<1.0	<1.0
Dibenzo(a,h)anthracene, ug/l	<1.0	<1.0
Fluoranthene, ug/l	<1.0	<1.0
Fluorene, ug/l	<1.0	<1.0
Indeno(1,2,3-cd)pyrene, ug/l	<1.0	<1.0
Naphthalene, ug/l	<1.0	<1.0
Phenanthrene, ug/l	<1.0	<1.0
Pyrene, ug/l	<1.0	<1.0
1-Methylnaphthalene, ug/l	<1.0	<1.0
2-Methylnaphthalene, ug/l	<1.0	<1.0
Surrogate - 2-Chloroanthracene	88 %	76 %
Analyst	SB	SB
Prep Date	06.05.00	06.05.00
Analysis Date	06.07.00	06.07.00
Batch ID	PAW136	PAW136
Prep Method	3520C	3520C
Dilution Factor	1	1

STL
Commited To *Your* Success

LOG NO: C0-06085
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Mr. MITCH RUBENSTEIN
Pinnacle Laboratories
2709-D Pan American Freeway Northeast
Albuquerque, NM 87107

Project: 006015, PHIL-EPFS QTRLY SAMPLING
Sampled By: Client
Code: 08560069

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
06085-3	Method Blank	
06085-4	Lab Control Standard % Recovery	
06085-5	Matrix Spike % Recovery	
06085-6	Matrix Spike Duplicate % Recovery	

PARAMETER	06085-3	06085-4	06085-5	06085-6
Nitrate-Nitrite, Nitrogen (353.2/354.1/4500-NO3)				
Nitrate + Nitrite-N, mg/l	<0.1	103 %	95 %	95 %
Nitrate-N, mg/l	<0.1	103 %	95 %	95 %
Nitrite-N, mg/l	<0.1	90 %	125 %	125 %
Analyst	WG	WG	WG	WG
Prep Date	06.03.00	06.03.00	06.03.00	06.03.00
Analysis Date	06.06.00	06.06.00	06.06.00	06.06.00
Batch ID	N3W39A	N3W39A	N3W39A	N3W39A
Prep Method	4500-NO3	4500-NO3	4500-NO3	4500-NO3
Dilution Factor	1	1	1	1

STL
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LOG NO: C0-06085
Received: 03 JUN 00
Reported: 09 JUN 00

Mr. MITCH RUBENSTEIN
Pinnacle Laboratories
2709-D Pan American Freeway Northeast
Albuquerque, NM 87107

Project: 006015, PHIL-EPFS QTRLY SAMPLING
Sampled By: Client
Code: 08560069

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
06085-3	Method Blank	
06085-4	Lab Control Standard % Recovery	
06085-5	Matrix Spike % Recovery	
06085-6	Matrix Spike Duplicate % Recovery	

PARAMETER	06085-3	06085-4	06085-5	06085-6
Polynuclear Aromatic Hydrocarbons (8310)				
Acenaphthene, ug/l	<1.0	---	---	---
Acenaphthylene, ug/l	<1.0	60 %	52 %	61 %
Anthracene, ug/l	<1.0	---	---	---
Benzo(a)anthracene, ug/l	<1.0	---	---	---
Benzo(a)pyrene, ug/l	<1.0	---	---	---
Benzo(b)fluoranthene, ug/l	<1.0	---	---	---
Benzo(g,h,i)perylene, ug/l	<1.0	---	---	---
Benzo(k)fluoranthene, ug/l	<1.0	86 %	78 %	88 %
Chrysene, ug/l	<1.0	92 %	79 %	91 %
Dibenzo(a,h)anthracene, ug/l	<1.0	---	---	---
Fluoranthene, ug/l	<1.0	---	---	---
Fluorene, ug/l	<1.0	---	---	---
Indeno(1,2,3-cd)pyrene, ug/l	<1.0	---	---	---
Naphthalene, ug/l	<1.0	---	---	---
Phenanthrene, ug/l	<1.0	85 %	74 %	90 %
Pyrene, ug/l	<1.0	80 %	77 %	87 %
1-Methylnaphthalene, ug/l	<1.0	---	---	---
2-Methylnaphthalene, ug/l	<1.0	---	---	---
Surrogate - 2-Chloroanthracene	84 %	84 %	81 %	87 %
Analyst	SB	SB	SB	SB
Prep Date	06.05.00	06.05.00	06.05.00	06.05.00
Analysis Date	06.07.00	06.07.00	06.07.00	06.07.00
Batch ID	PAW136	PAW136	PAW136	PAW136
Prep Method	3520C	3520C	3520C	3520C
Dilution Factor	1	1	1	1

STL
Commited To *Your* Success

LOG NO: C0-06085
Received: 03 JUN 00
Reported: 09 JUN 00

Mr. MITCH RUBENSTEIN
Pinnacle Laboratories
2709-D Pan American Freeway Northeast
Albuquerque, NM 87107

Project: 006015, PHIL-EPFS QTRLY SAMPLING
Sampled By: Client
Code: 08560069

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
06085-3	Method Blank	
06085-4	Lab Control Standard % Recovery	
06085-5	Matrix Spike % Recovery	
06085-6	Matrix Spike Duplicate % Recovery	

PARAMETER	06085-3	06085-4	06085-5	06085-6

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

Lance Larson, Project Manager

Final Page Of Report

Severn Trent Laboratories, Inc.
Pensacola, FL 32514
Tel: (850) 474-1001
Fax: (850) 478-2671

Committed to *Your* Success

Data Qualifiers for Final Report

STL-Pensacola Inorganic/Organic

J4	(For positive results)	Temperature limits exceeded (≤2°C or ≥ 6°C), non-reportable for NDPES compliance monitoring.
J6	(For positive results)	LCS or Surrogate %R is > upper control limit (UCL), results may be biased high
J9	(For positive results)	LCS or Surrogate %R is < lower control limit (LCL), results may be biased low
J7	The reported value is > the laboratory MDL and < lowest calibration standard; therefore, the quantitation is an estimation (this qualifier should only be used when the STL-PN RL is below the lowest calibration standard in the initial calibration).	
J (description)	The analyte was positively identified, the quantitation is estimation	
R1	(For nondetects)	Temperature limits exceeded (≤2°C or ≥ 6°C); non-reportable for NDPES compliance monitoring
R2	Improper preservation, no preservative present or insufficient amounts of preservative in sample upon receipt, non-reportable for NDPES compliance monitoring	
R3	Improper preservation, incorrect preservative present in sample upon receipt, non-reportable for NPDES compliance	
R4	Holding time exceeded, non-reportable for NDPES compliance monitoring.	
R5	Collection requirements not met, improper container used for sample	
R6	LCS or surrogate %R is < LCL and analyte is not detected or surrogate %R is < 10% for detects/nondetects.	
R7	Internal standard area outside –50% to +100% of initial calibration midpoint standard.	
R8	Initial calibration or any calibration verification exceeds acceptance criteria.	
R10	Headspace >1/4" in diameter in volatile vials, non-reportable for NPDES compliance monitoring	
R12	Analysis performed outside the 12-hour tune or not within tune criteria.	
R (description)	The data may be unusable due to deficiencies in the ability to analyze the sample and meet QC criteria	
F	The reported value is < STL-Pensacola RL and > the STL-Pensacola MDL; therefore, the quantitation is estimation (assume the STL-PN RL is at or above lowest calibration standard in the initial calibration curve).	
U	The reported value is ≤ Laboratory MDL (value for result will be the MDL, never below the MDL)	
B3	The analyte was found in the associated blank as well as in the associated sample(s) (qualifier is applied to the sample, not to the blank).	
B1	The analyte was detected in the associated method blank (sample itself is flagged even though sample is ND).	
B2	The analyte was detected in the sample(s) and in the associated method blank analyzed on the day samples were extruded; however, this analyte was not detected in the blank analyzed with the samples.	
B4	Sample results were corrected due to contaminants in Fractionation Blank (a certification statement is required to be submitted with the final report for MA EPH and NC-Modified MA EPH)	
@	Adjusted reporting limit due to sample composition, not due to overcal (dilution prior to digestion and/or analysis).	
#	Elevated reporting limit due to insufficient sample size	
M	A matrix effect was present ([1]sample, MS or MSD was analyzed twice to confirm surrogate/spike failure, [2]sample and/or MS/MSD chromatogram(s) had interfering peaks, [3]sample result was > 4 X spike added, [4]metals serial dilution was performed, or [5]metals post spike is < 40% R)	
NoMS	Not enough sample provided to prepare and/or analyze a method-required matrix spike (MS) and/or duplicate (MSD)	
N/C*	Not Calculable; Sample spiked is > 4X spike concentration (may also use this flag in place of negative numbers)	
D	Diluted out	
T	Second-column or detector confirmation exceeded the SW-846 criteria of 40% RPD for this compound.	
TIC	The compound is not within the initial calibration curve. It is searched for qualitatively or as a Tentatively Identified Compound.	
E	Compound concentration exceeds the upper calibration range of the instrument.	
S2	Incorrect sample amount was submitted to the laboratory for analysis	
S3	This method is not designed for solids and the results may not be accepted by any regulator for such purposes.	

Normally used for Inorganics Only

R9	Not filtered and preserved at time of collection.
R11	Samples were filtered and preserved within 4 hours of collection.
* (Metals & Wet Chem)	Elevated reporting limit due to matrix interference (dilution prior to digestion and/or analysis)
W	Post-digestion spike for Furnace AA is out of control limits (85-115%), while sample absorbance is less than 50% spike absorbance.
G	Sample and/or duplicate result is at or below 5 X (times) the STL Reporting Limit and the absolute difference between the sample and duplicate result is at or below the STL reporting limit; therefore, the results are "in control".
Q	The analytical (post digestion) spike is reported due to the percent recovery being outside limits on the matrix (pre-digestion) spike.
H1	Sample and/or duplicate is below 5 X (times) the STL Reporting Limit and the absolute difference between the results exceeds the STL Reporting Limit; therefore, the results are "out of control"
H2	Sample and duplicate (or MS and MSD) RPD is above control limit.
NH	Sample and duplicate results are "out of control". The sample is nonhomogeneous.
J8	Matrix spike and post spike recoveries are outside control limits. See out of Control Events/Corrective Action Form.
S1	The Method of Standard Additions (MSA) has been performed on this sample.

SEVERN TRENT LABORATORIES, INC. – PENSACOLA, FLORIDA
STATE CERTIFICATIONS

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, (No Laboratory ID No. assigned by state) (Environmental)

State of California, Department of Health Services, Laboratory ID No. 2338 (Hazardous Waste and Wastewater)

State of Connecticut, Department of Health Services, Connecticut Lab Approval No. PH-0697 (Drinking Water, Hazardous Waste and Wastewater)

Delaware Health & Social Services, Division of Public Health, Laboratory ID No. FL094 (Drinking Water by Reciprocity with FL)

Florida DOH Laboratory ID No. 81142 (Drinking Water), Laboratory ID No. E81010 (Hazardous Waste and Wastewater)

Florida, Radioactive Materials License No. G0733-1

Foreign Soil Permit, Permit No. S-37599

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

Commonwealth of Kentucky, Natural Resources and Environmental Protection Cabinet, Laboratory ID No. 90043 (Drinking Water)

State of Louisiana, DHH, Office of Public Health Division of Laboratories, Laboratory ID No. LA000017 (Drinking Water)

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

Commonwealth of Massachusetts, DEP, Laboratory ID No. M-FL094 (Hazardous Waste and Wastewater)

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

New Hampshire DES ELAP, Laboratory ID No. 250599A (Wastewater)

State of New Jersey, Department of Environmental Protection & Energy, Laboratory ID No. 49006 (Wastewate and Hazardous Waster)

New York State, Department of Health, Laboratory ID No. 11503 (Wastewater and Solids/Hazardous Waste)

North Carolina Department of Environment & Natural Resources, Laboratory ID No. 314 (Hazardous Waste and Wastewater)

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

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

Commonwealth of Pennsylvania, Department of Environmental Resources, Laboratory ID No. 68-467 (Drinking Water)

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

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

Tennessee Division of Underground Storage Tanks Approved Laboratory

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

State of Washington, Department of Ecology, Laboratory ID No. C282 (Hazardous Waste and Wastewater)

West Virginia Division of Environmental Protection, Office of Water Resources, Laboratory ID No. 136 (Hazardous Waste and Wastewater by Reciprocity with FL)

American Industrial Hygiene Association (AIHA) Accredited Laboratory, Laboratory ID No. 100704

Severn Trent Laboratories of Florida
PROJECT SAMPLE INSPECTION FORM

Lab Order #: C006085 Date Received: 6-3-00

1.	Was there a Chain of Custody?	(Yes)	No*		
2.	Was Chain of Custody properly filled out and relinquished?	(Yes)	No*		
3.	Were samples received cold? (Criteria: 2° - 6°C: STL-SOP 1055)	(Yes)	No*	N/A	
4.	Were all samples properly labeled and identified?	(Yes)	No*		
5.	Did samples require splitting or compositing♦? Req By: PM Client Other♦	Yes*	(No)		
6.	Were samples received in proper containers for analysis requested?	(Yes)	No*		
7.	Were all sample containers received intact?	(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	
9.	Is there sufficient volume for analysis requested?	(Yes)	No*	N/A *(Can)*	
10.	Were samples received within Holding Time? (REFER TO STL-SOP 1040)	(Yes)	No*		
11.	Is Headspace visible > ¼" in diameter in VOA vials?* If any headspace is evident, comment in out-of-control section.	Yes*	No	(N/A)	
12.	If sent, were matrix spike bottles returned?	Yes	No*	(N/A)	
13.	Was Project Manager notified of problems? (initials: LLK)	(Yes)	No*	N/A	

Airbill Number(s): 1Z8781684443663914 Shipped By: UPS

Cooler Number(s): Client Shipping Charges: N/A

Cooler Weight(s): N/A Cooler Temp(s) (°C): 2°C

CCK1 SN 5812

(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

Two (4 ounce) Plastic bottles have H_2SO_4 as preservative PH taken samples are not preserved (PH 7).

(USE BACK OF PSIF FOR ADDITIONAL NOTES AND COMMENTS) ☞

Inspected By: LLK Date: 03-Jun-02 Logged By: LLK Date: 03-Jun-02

♣ *Note all Out-of-Control and/or questionable events on Comment Section of this form.*

♦ *If Other, note who requested the splitting or compositing of samples on the Comment Section of this form. 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 preservatives for the State of North Carolina, the State of New York, and other requested samples are to be recorded on the sheet provided to record pH results (STL-SOP 938, section 2.2.9).*

* *According to EPA, ¼" of headspace is allowed in 40 ml vials requiring volatile analysis, however, STL makes it policy to record any headspace as out-of-control (STL-SOP 938, section 2.2.12).*

Pinnacle Laboratories, Inc. — **Interlab Chain of Custody** — Date: 6/2 Page: 1 of 1

Network Project Manager: Jacinta A. Tenorio	ANALYSIS REQUEST

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

Samples were sent w/o paperwork

C006085

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	RCRA TCLP METALS	Metals-13 PP List	Metals-TAL (23 METALS)		TOX	TOC	Gen Chemistry - Total NO_3		Oil and Grease	Volatile Organics GC/MS (8260)	BOD	COD	PESTICIDES/PCB (608/8082)	Herbicides (615/8151)	PNA (8310)	8240 (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
006015-03	5/30	1430	AQ									X								X							
-04	"	1509	"									X								X							

PROJECT INFORMATION	SAMPLE RECEIPT	SAMPLES SENT TO:	RELINQUISED BY: 1.	RELINQUISED BY: 2.
PROJECT #: 006015	Total Number of Containers	PENSACOLA - STL-FL X	Signature: Time: Francine Torrivio 1815	Signature: Time:
PROJ. NAME: PHIL	Chain of Custody Seals	ESL - OR	Printed Name: Date: Francine Torrivio 6/2/00	Printed Name: Date:
QC LEVEL: (STD) IV	Received Intact?	STL - CT	Pinnacle Laboratories, Inc.	Company
QC REQUIRED: MS MSD BLANK	Received Good Cond./Cold	ATEL - AZ	RECEIVED BY: 1.	RECEIVED BY: 2
TAT: (STANDARD) RUSH!!	LAB NUMBER:	ATEL - MARION	Signature: Time: Linda L. Kitt 0940	Signature: Time:
DUE DATE: 6/13	COMMENTS:	ATEL - MELMORE	Printed Name: Date 6/3/00 Linda L. Kitt	Printed Name Date:
RUSH SURCHARGE: —		BARRINGER	Company STL-FL	Company
CLIENT DISCOUNT: —		WCAS		
SPECIAL CERTIFICATION REQUIRED: YES (NO)		WOHL		

PHILIP ENVIRONMENTAL

Chain of Custody Record

4000 Monroe Road
Farmington, NM 87401
(505) 326-2262 Phone
(505) 326-2388 FAX

006015

COC Serial No. C 2563

Project Name EPFS QUARTERLY SAMPLING
Project Number 68800107 Phase . Task 0301 .
Samplers J. WAGNON
Laboratory Name PINNACLE LABS
Location ALBUQUERQUE, NM

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: BTEX	NITRATES	PAH	Lab ID	Comments
JAQ-0005-MW01	5/30/00	1159	H_2O	2	X			01	JAQUEZ M1
JAQ-0005-MW02	5/30/00	1250	H_2O	2	X			02	JAQUEZ M2
JAQ-0005-MW03	5/30/00	1430	H_2O	6	X	X	X	03	JAQUEZ M3
JAQ-0005-MW04	5/30/00	1509	H_2O	6	X	X	X	04	JAQUEZ M4
JAQ-0005-MW05	5/30/00	1332	H_2O	2	X			05	JAQUEZ M5
JAQ-0005-MW06	5/30/00	1105	H_2O	2	X			06	JAQUEZ M6

Relinquished by:

Signature	Date	Time
Jennifer Thi Wagnon	6/2/00	0500

Received By:

Signature	Date	Time
Jeanine Jimenez	6/2/00	1730

Samples Iced: ☒ Yes ☐ No

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☒ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☒ Other (Specify) NITRATES H_2SO_4
- ☐ Other (Specify) _____

Carrier: GREYHOUND LINES
Airbill No. GLI1606918610

Shipping and Lab Notes:

PLEASE INVOICE EL PASO FIELD SERVICES DIRECTLY.
PLEASE SEND RESULTS TO PHILIP SERVICES AND A COPY TO EL PASO FIELD SERVICES.
Rec'd @ 4.3°C

PINNACLE LABORATORIES

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

Pinnacle Lab ID number **006016**
June 07, 2000

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELY STREET
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: *Robert Thompson/LeAudra Stanley*

On 06/02/00 Pinnacle Laboratories, Inc. 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
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 006016
PROJECT #	: 62800107	DATE RECEIVED	: 06/02/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 06/07/00

PIN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	JAQ-0005-R1	AQUEOUS	05/31/00
02	JAQ-0005-R2	AQUEOUS	05/31/00
03	JAQ-0005-R3	AQUEOUS	05/31/00
04	JAQ-0005-R4	AQUEOUS	05/31/00
05	JAQ-0005-R5	AQUEOUS	05/31/00
06	JAQ-0005-R6	AQUEOUS	05/31/00
07	TRIP BLANK	AQUEOUS	05/31/00

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL PINNACLE I.D.: 006016
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	JAQ-0005-R1	AQUEOUS	05/31/00	NA	06/05/00	20
02	JAQ-0005-R2	AQUEOUS	05/31/00	NA	06/05/00	50
03	JAQ-0005-R3	AQUEOUS	05/31/00	NA	06/05/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0005-R1	JAQ-0005-R2	JAQ-0005-R3
BENZENE	0.5	**UG/L**	**2300**	**2300**	**1.0**
TOLUENE	0.5	**UG/L**	**1000**	**3200**	**1.4**
ETHYLBENZENE	0.5	**UG/L**	**120**	**280**	**0.5**
TOTAL XYLENES	0.5	**UG/L**	**2000**	**3000**	**5.4**
SURROGATE:					
BROMOFLUOROBENZENE (%)			109	117	113
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PINNACLE I.D.: 006016
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	JAQ-0005-R4	AQUEOUS	05/31/00	NA	06/05/00	25
05	JAQ-0005-R5	AQUEOUS	05/31/00	NA	06/05/00	1
06	JAQ-0005-R6	AQUEOUS	05/31/00	NA	06/05/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0005-R4	JAQ-0005-R5	JAQ-0005-R6
BENZENE	0.5	**UG/L**	**960**	< 0.5	< 0.5
TOLUENE	0.5	**UG/L**	**980**	< 0.5	< 0.5
ETHYLBENZENE	0.5	**UG/L**	**29**	< 0.5	< 0.5
T .L XYLENES	0.5	**UG/L**	**1900**	< 0.5	< 0.5
SURROGATE:					
BROMOFLUOROBENZENE (%)			110	102	109
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PINNACLE I.D.: 006016
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
07	TRIP BLANK	AQUEOUS	05/31/00	NA	06/05/00	1

PARAMETER	DET. LIMIT	UNITS	TRIP BLANK
BENZENE	0.5	UG/L	< 0.5
TOLUENE	0.5	UG/L	< 0.5
ETHYLBENZENE	0.5	UG/L	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5

S ROGATE:
[redacted]MOFLUOROBENZENE (%) 88
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/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 8021 MODIFIED	PINNACLE I.D.	: 006016
BLANK I. D.	: 060500	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 06/05/00
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5
SURROGATE:		
BROMOFLUOROBENZENE (%)		108
SURROGATE LIMITS:	(80 - 120)	

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED		
MSMSD #	: 006015-01	PINNACLE I.D.	: 006016
CLIENT	: PHILIP ENVIRONMENTAL	DATE EXTRACTED	: NA
PROJECT #	: 62800107	DATE ANALYZED	: 06/05/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	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	18.6	93	19.2	96	3	(80 - 120)	20
TOLUENE	<0.5	20.0	20.2	101	20.4	102	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.9	105	21.6	108	3	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	63.8	106	64.9	108	2	(80 - 120)	20

MIST NOTES:
N/A

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

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

006016

Chain of Custody Record

PHILIP ENVIRONMENTAL

4000 Monroe Road
Farmington, NM 87401
(505) 326-2262 Phone
(505) 326-2388 FAX

COC Serial No. C 2562

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107 Phase . Task 0301.
Samplers J. WAGNON
Laboratory Name PINNACLE LABS
Laboratory Location ALBUQUERQUE, NM

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: BTEX	Lab ID #	Comments
JAQ-0005-R1	5/31/00	1532	H_2O	2	X	01	JAQUEZ SVE R1
JAQ-0005-R2	5/31/00	1448	H_2O	2	X	02	JAQUEZ SVE R2
JAQ-0005-R3	5/31/00	1142	H_2O	2	X	03	JAQUEZ SVE R3
JAQ-0005-R4	5/31/00	1310	H_2O	2	X	04	JAQUEZ SVE R4
JAQ-0005-R5	5/31/00	1046	H_2O	2	X	05	JAQUEZ SVE R5
JAQ-0005-R6	5/31/00	1007	H_2O	2	X	06	JAQUEZ SVE R6
TRIP BLANK	5/31	—	"	1		07	

Relinquished by:

Signature	Date	Time
Jennifer L Wagnon	6/2/00	0800

Received By:

Signature	Date	Time
Jennifer Junio	6/2/00	1730

Samples Iced: ☒ Yes ☐ No

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☒ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Carrier: GREYHOUND LINES
Airbill No. GLI 1600691861 0

Shipping and Lab Notes:
PLEASE INVOICE EL PASO FIELD SERVICES DIRECTLY.
PLEASE SEND RESULTS TO PHILIP SERVICES AND A COPY TO EL PASO FIELD SERVICES.
Rec'd @ 4.3°C

PE-176 4/95

PINNACLE LABORATORIES

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

Pinnacle Lab ID number **006089**
July 03, 2000

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELY STREET
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: ROBERT THOMPSON/LEAUDRA STANLEY

On 06/23/00 Pinnacle Laboratories, Inc. 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
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 006089
PROJECT #	: 62800107	DATE RECEIVED	: 06/23/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 07/03/00

PIN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	JAQ-0006-M6	AQUEOUS	06/22/00
02	JAQ-0006-M1	AQUEOUS	06/22/00
03	JAQ-0006-M2	AQUEOUS	06/22/00
04	JAQ-0006-M5	AQUEOUS	06/22/00
05	JAQ-0006-M4	AQUEOUS	06/22/00
06	JAQ-0006-M3	AQUEOUS	06/22/00

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PINNACLE I.D.: 006089
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	JAQ-0006-M6	AQUEOUS	06/22/00	NA	06/27/00	1
02	JAQ-0006-M1	AQUEOUS	06/22/00	NA	06/27/00	1
03	JAQ-0006-M2	AQUEOUS	06/22/00	NA	06/27/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0006-M6	JAQ-0006-M1	JAQ-0006-M2
BENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5	< 0.5	< 0.5
SURROGATE:					
BROMOFLUOROBENZENE (%)			108	104	113
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PINNACLE I.D.: 006089
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	JAQ-0006-M5	AQUEOUS	06/22/00	NA	06/27/00	1
05	JAQ-0006-M4	AQUEOUS	06/22/00	NA	06/27/00	1
06	JAQ-0006-M3	AQUEOUS	06/22/00	NA	06/27/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0006-M5	JAQ-0006-M4	JAQ-0006-M3
BENZENE	0.5	**UG/L**	< 0.5	**44**	**0.6**
TOLUENE	0.5	**UG/L**	< 0.5	**1.6**	< 0.5
ETHYLBENZENE	0.5	**UG/L**	< 0.5	**8.9**	< 0.5
T[illegible]L XYLENES	0.5	**UG/L**	< 0.5	**16**	< 0.5
SURROGATE:					
BROMOFLUOROBENZENE (%)			104	114	108
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/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 8021 MODIFIED	PINNACLE I.D.	: 006089
BLANK I. D.	: 062700	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 06/27/00
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5
SURROGATE:		
BROMOFLUOROBENZENE (%)		109
SURROGATE LIMITS:	(80 - 120)	

MIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED		
MSMSD #	: 062700	PINNACLE I.D.	: 006089
CLIENT	: PHILIP ENVIRONMENTAL	DATE EXTRACTED	: NA
PROJECT #	: 62800107	DATE ANALYZED	: 06/27/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	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	17.9	90	17.7	89	1	(80 - 120)	20
TOLUENE	<0.5	20.0	21.0	105	19.8	99	6	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.8	109	21.4	107	2	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	66.6	111	64.5	108	3	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

STL
Commited To *Your* Success

LOG NO: C0-06697
Received: 24 JUN 00
Reported: 29 JUN 00

Mr. MITCH RUBENSTEIN
Pinnacle Laboratories
2709-D Pan American Freeway Northeast
Albuquerque, NM 87107

Project: 006089,PHIL-EPFS
Sampled By: Client
Code: 151800629

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
06697-1	006089-05	06-22-00/13:23
06697-2	006089-06	06-22-00/14:13

PARAMETER	06697-1	06697-2
Nitrate-Nitrite, Nitrogen (353.2/354.1/4500-NO3)		
Nitrate + Nitrite-N, mg/l	<0.1	0.14
Nitrate-N, mg/l	<0.1	0.14
Nitrite-N, mg/l	<0.1	<0.1
Dilution Factor	1	1
Prep Date	06.24.00	06.24.00
Analysis Date	06.28.00	06.28.00
Batch ID	N3W44A	N3W44A
Prep Method	4500-NO3	4500-NO3
Analyst	WG	WG

STL
Commited To *Your* Success

LOG NO: C0-06697
Received: 24 JUN 00
Reported: 29 JUN 00

Mr. MITCH RUBENSTEIN
Pinnacle Laboratories
2709-D Pan American Freeway Northeast
Albuquerque, NM 87107

Project: 006089,PHIL-EPFS
Sampled By: Client
Code: 151800629

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
06697-3	Method Blank	
06697-4	Lab Control Standard % Recovery	
06697-5	Matrix Spike % Recovery	
06697-6	Matrix Spike Duplicate % Recovery	

PARAMETER	06697-3	06697-4	06697-5	06697-6
Nitrate-Nitrite, Nitrogen (353.2/354.1/4500-NO3)				
Nitrate + Nitrite-N, mg/l	<0.1	105 %	107 %	106 %
Nitrate-N, mg/l	<0.1	105 %	107 %	106 %
Nitrite-N, mg/l	<0.1	95 %	95 %	100 %
Dilution Factor	1	1	1	1
Prep Date	06.24.00	06.24.00	06.24.00	06.24.00
Analysis Date	06.28.00	06.28.00	06.28.00	06.28.00
Batch ID	N3W44A	N3W44A	N3W44A	N3W44A
Prep Method	4500-NO3	4500-NO3	4500-NO3	4500-NO3
Analyst	WG	WG	WG	WG

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

Lance Larson, Project Manager

Final Page Of Report

Severn Trent Laboratories, Inc.
Pensacola, FL 32514
Tel: (850) 474-1001
Fax: (850) 478-2671

Committed to *Your* Success

Data Qualifiers for Final Report

STL-Pensacola Inorganic/Organic

J4	(For positive results)	Temperature limits exceeded (≤2°C or ≥ 6°C), non-reportable for NDPES compliance monitoring.
J6	(For positive results)	LCS or Surrogate %R is > upper control limit (UCL), results may be biased high
J9	(For positive results)	LCS or Surrogate %R is < lower control limit (LCL), results may be biased low
J7	The reported value is > the laboratory MDL and < lowest calibration standard; therefore, the quantitation is an estimation (this qualifier should only be used when the STL-PN RL is below the lowest calibration standard in the initial calibration).	
J (description)	The analyte was positively identified, the quantitation may be an estimation	
R1	(For nondetects)	Temperature limits exceeded (≤2°C or ≥ 6°C); non-reportable for NDPES compliance monitoring
R2	Improper preservation, no preservative present or insufficient amounts of preservative in sample upon receipt, non-reportable for NDPES compliance monitoring	
R3	Improper preservation, incorrect preservative present in sample upon receipt, non-reportable for NPDES compliance	
R4	Holding time exceeded, non-reportable for NDPES compliance monitoring.	
R5	Collection requirements not met, improper container used for sample	
R6	LCS or surrogate %R is < LCL and analyte is not detected or surrogate %R is < 10% for detects/nondetects.	
R7	Internal standard area outside –50% to +100% of calibration verification standard.	
R8	Initial calibration or any calibration verification exceeds acceptance criteria.	
R10	Headspace >1/4" in diameter in volatile vials, non-reportable for NPDES compliance monitoring	
R12	Analysis performed outside the 12-hour tune or not within tune criteria.	
R (description)	The data may be unusable due to deficiencies in the ability to analyze the sample and meet QC criteria	
F	The reported value is < STL-Pensacola RL and > the STL-Pensacola MDL; therefore, the quantitation is estimation (assume the STL-PN RL is at or above lowest calibration standard in the initial calibration curve).	
U	The reported value is ≤ Laboratory MDL (value for result will be the MDL, never below the MDL)	
B3	The analyte was found in the associated blank as well as in the associated sample(s) (qualifier is applied to the sample, not to the blank).	
B1	The analyte was detected in the associated method blank (sample itself is flagged even though sample is ND).	
B2	The analyte was detected in the sample(s) and in the associated method blank analyzed on the day samples were extruded; however, this analyte was not detected in the blank analyzed with the samples.	
J4	Sample results were corrected due to contaminants in Fractionation Blank (a certification statement is required to be submitted with the final report for MA EPH and NC-Modified MA EPH)	
@	Adjusted reporting limit due to sample composition, not due to overcal (dilution prior to digestion and/or analysis).	
#	Elevated reporting limit due to insufficient sample size	
M	A matrix effect was present ([1]sample, MS or MSD was analyzed twice to confirm surrogate/spike failure, [2]sample and/or MS/MSD chromatogram(s) had interfering peaks, [3]sample result was > 4 X spike added, [4]metals serial dilution was performed, or [5]metals post spike is < 40% R)	
NoMS	Not enough sample provided to prepare and/or analyze a method-required matrix spike (MS) and/or duplicate (MSD)	
N/C*	Not Calculable; Sample spiked is > 4X spike concentration (may also use this flag in place of negative numbers)	
D	Diluted out (surrogate or spike due to sample dilution)	
T	Second-column or detector confirmation exceeded the SW-846 criteria of 40% RPD for this compound.	
TIC	The compound is not within the initial calibration curve. It is searched for qualitatively or as a Tentatively Identified Compound.	
1 pt	The compound has been quantitated against a one point calibration.	
E	Compound concentration exceeds the upper calibration range of the instrument.	
S2	Incorrect sample amount was submitted to the laboratory for analysis	

Normally used for Inorganics Only

S3 (Flashpoint)	This method is not designed for solids and the results may not be accepted by any regulator for such purposes.
R9	Not filtered and preserved at time of collection.
R11	Samples were filtered and preserved within 4 hours of collection.
* (Metals & Wet Chem)	Elevated reporting limit due to matrix interference (dilution prior to digestion and/or analysis)
W	Post-digestion spike for Furnace AA is out of control limits (85-115%), while sample absorbance is less than 50% spike absorbance.
G	Sample and/or duplicate result is at or below 5 X (times) the STL Reporting Limit and the absolute difference between the sample and duplicate result is at or below the STL reporting limit; therefore, the results are "in control".
Q	The analytical (post digestion) spike is reported due to the percent recovery being outside limits on the matrix (pre-digestion) spike.
H1	Sample and/or duplicate is below 5 X (times) the STL Reporting Limit and the absolute difference between the results exceeds the STL Reporting Limit; therefore, the results are "out of control"
H2	Sample and duplicate (or MS and MSD) RPD is above control limit.
NH	Sample and duplicate results are "out of control". The sample is nonhomogeneous.
I8	Matrix spike and post spike recoveries are outside control limits. See out of Control Events/Corrective Action Form.
J1	The Method of Standard Additions (MSA) has been performed on this sample.

SEVERN TRENT LABORATORIES, INC. - PENSACOLA, FLORIDA
STATE CERTIFICATIONS

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, (No Laboratory ID No. assigned by state) (Environmental)

State of California, Department of Health Services, Laboratory ID No. 2338 (Hazardous Waste and Wastewater)

State of Connecticut, Department of Health Services, Connecticut Lab Approval No. PH-0697 (Drinking Water, Hazardous Waste and Wastewater)

Delaware Health & Social Services, Division of Public Health, Laboratory ID No. FL094 (Drinking Water by Reciprocity with FL)

Florida DOH Laboratory ID No. 81142 (Drinking Water), Laboratory ID No. E81010 (Hazardous Waste and Wastewater)

Florida, Radioactive Materials License No. G0733-1

Foreign Soil Permit, Permit No. S-37599

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

Commonwealth of Kentucky, Natural Resources and Environmental Protection Cabinet, Laboratory ID No. 90043 (Drinking Water)

State of Louisiana, DHH, Office of Public Health Division of Laboratories, Laboratory ID No. LA000017 (Drinking Water)

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

mmonwealth of Massachusetts, DEP, Laboratory ID No. M-FL094 (Hazardous Waste and Wastewater)

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

New Hampshire DES ELAP, Laboratory ID No. 250599A (Wastewater)

State of New Jersey, Department of Environmental Protection & Energy, Laboratory ID No. 49006 (Wastewate and Hazardous Waster)

New York State, Department of Health, Laboratory ID No. 11503 (Wastewater and Solids/Hazardous Waste)

North Carolina Department of Environment & Natural Resources, Laboratory ID No. 314 (Hazardous Waste and Wastewater)

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

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

Commonwealth of Pennsylvania, Department of Environmental Resources, Laboratory ID No. 68-467 (Drinking Water)

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

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

Tennessee Division of Underground Storage Tanks Approved Laboratory

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

State of Washington, Department of Ecology, Laboratory ID No. C282 (Hazardous Waste and Wastewater)

t Virginia Division of Environmental Protection, Office of Water Resources, Laboratory ID No. 136 (Hazardous Waste and Wastewater by ciprocity with FL)

American Industrial Hygiene Association (AIHA) Accredited Laboratory, Laboratory ID No. 100704

Severn Trent Laboratories of Florida
PROJECT SAMPLE INSPECTION FORM

Lab Order #: C0016697 Date Received: 6-24-00

1.	Was there a Chain of Custody?	(Yes)	No*		
2.	Was Chain of Custody properly filled out and relinquished?	Yes	(No*)		
3.	Were samples received cold? (Criteria: 2° - 6°C: STL-SOP 1055)	(Yes)	No*	N/A	
4.	Were all samples properly labeled and identified?	(Yes)	No*		
5.	Did samples require splitting or compositing*? Req By: PM Client Other*	Yes*	(No)		
6.	Were samples received in proper containers for analysis requested?	(Yes)	No*		
7.	Were all sample containers received intact?	(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	
9.	Is there sufficient volume for analysis requested?	(Yes)	No*	N/A *(Can)*	
10.	Were samples received within Holding Time? (REFER TO STL-SOP 1040)	(Yes)	No*		
11.	Is Headspace visible > ¼" in diameter in VOA vials?* If any headspace is evident, comment in out-of-control section.	Yes*	No	(N/A)	
12.	If sent, were matrix spike bottles returned?	Yes	No*	(N/A)	
13.	Was Project Manager notified of problems? (initials:_____)	Yes	No*	(N/A)	

Airbill Number(s): 12 878 168 44 4402 8564 **Shipped By:** UPS

Cooler Number(s): CLIENT **Shipping Charges:**

Cooler Weight(s): 15# **Cooler Temp(s) (°C):** 6°C (CCK10)

(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

MULTIPLE PROJECT SHIPMENT

2. # OF CONTAINERS NOT FILLED OUT

(USE BACK OF PSIF FOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: JC **Date:** 6-24-00 **Logged By:** LLK **Date:** 24-Jun-00

\+ *Note all Out-of-Control and/or questionable events on Comment Section of this form.*

* *If Other, note who requested the splitting or compositing of samples on the Comment Section of this form. 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 preservatives for the State of North Carolina, the State of New York, and other requested samples are to be recorded on the sheet provided to record pH results (STL-SOP 938, section 2.2.9).*

* *According to EPA, ¼" of headspace is allowed in 40 ml vials requiring volatile analysis, however, STL makes it policy to record any headspace as out-of-control (STL-SOP 938, section 2.2.12).*

Pinnacle Laboratories, Inc. — **Interl[illegible]ain of Custody** — Date: 6/23 Page: 1 of [illegible]

Network Project Manager: Jacinta A. Tenorio

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

C006697

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	RCRA TCLP METALS	Metals-13 PP List	Metals-TAL (23 METALS)	NITRATE/NITRITE	TOX	TOC	Gen Chemistry		Oil and Grease	Volatile Organics GC/MS (8260)	BOD	COD	PESTICIDES/PCB (608/8082)	Herbicides (615/8151)	PNA (8310)	8240 (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
006089-05	6/22	13[23]	AQ						X																			
006089-06	6/22	14[13]	AQ						X																			

TCH HOLD TIMES

PROJECT INFORMATION	SAMPLE RECEIPT	SAMPLES SENT TO:	RELINQUISED BY: 1.	RELINQUISED BY: 2.
PROJECT #: 006089	Total Number of Containers	PENSACOLA - STL-FL X	Signature: [signature] Time: 14:15	Signature: Time:
PROJ. NAME:	Chain of Custody Seals	ESL - OR	Printed Name: [illegible] Date: 6/23	Printed Name: Date:
QC LEVEL: (STD.) IV	Received Intact?	STL - CT	Pinnacle Laboratories, Inc.	Company
QC REQUIRED: (MS) MSD (BLANK)	Received Good Cond./Cold	ATEL - AZ	RECEIVED BY: 1.	RECEIVED BY: 2
TAT: (STANDARD) RUSH!!	LAB NUMBER:	ATEL - MARION	Signature: [signature] Time: 0950	Signature: Time:
DUE DATE: 7/10	COMMENTS:	ATEL - MELMORE	Printed Name: F. Coburger Date: 6-24-00	Printed Name: Date:
RUSH SURCHARGE:		BARRINGER	Company: STL-PNS	Company
CLIENT DISCOUNT:		WCAS		
SPECIAL CERTIFICATION REQUIRED: YES NO		WOHL		

PL I ID # 16089

PHILIP ENVIRONMENTAL

Chain of Custody Record

4000 Monroe Road
Farmington, NM 87401
(505) 326-2262 Phone
(505) 326-2388 FAX

COC Serial No. C 2561

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107 Phase . Task 0301 .
Samplers J. WAGNON
Laboratory Name PINNACLE LABS
Laboratory Location ALBUQUERQUE, NM

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: BTEX 8021	NITRATES											Comments	
JAQ-0006-M6	6/22/00	1047	H2O	2	X												JAQUEZ M-6	-01
JAQ-0006-M1	6/22/00	1130	H2O	2	X												JAQUEZ M-1	-02
JAQ-0006-M2	6/22/00	1207	H2O	2	X												JAQUEZ M-2	-03
JAQ-0006-M5	6/22/00	1245	H2O	2	X												JAQUEZ M-5	-04
JAQ-0006-M4	6/22/00	1323	H2O	4	X	X											JAQUEZ M-4	-05
JAQ-0006-M3	6/22/00	1413	H2O	4	X	X											JAQUEZ M-3	-06

Relinquished by:

Signature	Date	Time
Jesse Wagnon	6/22/00	1619

Received By:

Signature	Date	Time
[signature]	6/23	9:40 AM

Samples Iced: ☒ Yes ☐ No

Carrier: GREYHOUND LINES Airbill No. 6LI1006918533

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☒ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☒ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Shipping and Lab Notes:

on ice 4.3°C

PE-176 4/95

PINNACLE LABORATORIES

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

Pinnacle Lab ID number **006098**
June 30, 2000

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELY STREET
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: ROBERT THOMPSON/LEAUDRA STANLEY

On 06/27/00 Pinnacle Laboratories, Inc. 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
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 006098
PROJECT #	: 62800107	DATE RECEIVED	: 06/27/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 06/30/00

PIN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	TRIP BLANK	AQUEOUS	06/26/00
02	JAQ-0006-R6	AQUEOUS	06/26/00
03	JAQ-0006-R5	AQUEOUS	06/26/00
04	JAQ-0006-R4	AQUEOUS	06/26/00
05	JAQ-0006-R3	AQUEOUS	06/26/00
06	JAQ-0006-R2	AQUEOUS	06/26/00
07	JAQ-0006-R1	AQUEOUS	06/26/00

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PINNACLE I.D.: 006098
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	TRIP BLANK	AQUEOUS	06/26/00	NA	06/28/00	1
02	JAQ-0006-R6	AQUEOUS	06/26/00	NA	06/28/00	1
03	JAQ-0006-R5	AQUEOUS	06/26/00	NA	06/28/00	1

PARAMETER	DET. LIMIT	UNITS	TRIP BLANK	JAQ-0006-R6	JAQ-0006-R5
BENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5	< 0.5	< 0.5
SURROGATE:					
BROMOFLUOROBENZENE (%)			101	105	105
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL PINNACLE I.D.: 006098
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	JAQ-0006-R4	AQUEOUS	06/26/00	NA	06/28/00	5
05	JAQ-0006-R3	AQUEOUS	06/26/00	NA	06/28/00	1
06	JAQ-0006-R2	AQUEOUS	06/26/00	NA	06/28/00	25

PARAMETER	DET. LIMIT	UNITS	*JAQ-0006-R4*	*JAQ-0006-R3*	*JAQ-0006-R2*
BENZENE	0.5	**UG/L**	**950**	< 0.5	**1300**
TOLUENE	0.5	**UG/L**	**1000**	< 0.5	**1300**
ETHYLBENZENE	0.5	**UG/L**	**43**	< 0.5	**79**
TOTAL XYLENES	0.5	**UG/L**	**2500**	< 0.5	**1100**
SURROGATE:					
BROMOFLUOROBENZENE (%)			117	102	113
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL PINNACLE I.D.: 006098
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
07	JAQ-0006-R1	AQUEOUS	06/26/00	NA	06/28/00	25

PARAMETER	DET. LIMIT	UNITS	JAQ-0006-R1
BENZENE	0.5	**UG/L**	**2400**
TOLUENE	0.5	**UG/L**	**690**
ETHYLBENZENE	0.5	**UG/L**	**150**
TOTAL XYLENES	0.5	**UG/L**	**2000**

S[illegible]ROGATE:
B[illegible]MOFLUOROBENZENE (%) 112
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/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 8021 MODIFIED	PINNACLE I.D.	: 006098
BLANK I. D.	: 062800	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 06/28/00
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5
SURROGATE:		
BROMOFLUOROBENZENE (%)		85
SURROGATE LIMITS:	(80 - 120)	

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED		
MSMSD #	: 006098-02	PINNACLE I.D.	: 006098
CLIENT	: PHILIP ENVIRONMENTAL	DATE EXTRACTED	: NA
PROJECT #	: 62800107	DATE ANALYZED	: 06/28/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	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	18.2	91	17.1	86	6	(80 - 120)	20
TOLUENE	<0.5	20.0	21.4	107	19.8	99	8	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.5	108	20.8	104	3	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	65.9	110	63.2	105	4	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

PHILIP ENVIRONMENTAL

Chain of Custody Record

4000 Monroe Road
Farmington, NM 87401
(505) 326-2262 Phone
(505) 326-2388 FAX

006088

COC Serial No. C 2592

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107 Phase . Task 0301 .
Samplers J. WAGNON
Laboratory Name PINNACLE LABS
Location ALBUQUERQUE, NM

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	BTEX 8021	Lab ID#	Comments
TRIP BLANK	6/26/00	1525	H2O	1	X	01	
JAQ-0006-R6	6/26/00	1046	H2O	2	X	02	JAQUEZ SVE R6
JAQ-0006-R5	6/26/00	1120	H2O	2	X	03	JAQUEZ SVE R5
JAQ-0006-R4	6/26/00	1256	H2O	2	X	04	JAQUEZ SVE R4
JAQ-0006-R3	6/26/00	1204	H2O	2	X	05	JAQUEZ SVE R3
JAQ-0006-R2	6/26/00	1345	H2O	2	X	06	JAQUEZ SVE R2
JAQ-0006-R1	6/26/00	1427	H2O	2	X	07	JAQUEZ SVE R1

Relinquished by:

Signature	Date	Time
Jennifer Wagnon	6/26/00	1600

Received By:

Signature	Date	Time
Francine Jaramillo	6/27/00	0920

Samples Iced: ☒ Yes ☐ No

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☒ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Carrier: GREYHOUND LINES
Airbill No. 6LI 160691 8599

Shipping and Lab Notes:

Rec'd @ 4.2°C

PE-176 4/95

PINNACLE LABORATORIES

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

Pinnacle Lab ID number **007079**
August 03, 2000

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELY STREET
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: ROBERT THOMPSON/LEAUDRA STANLEY

On 07/28/00 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
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 007079
PROJECT #	: 62800107	DATE RECEIVED	: 07/28/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 08/03/00

PIN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	JAQ-0007-MW03	NON-AQ	07/25/00
02	JAQ-0007-MW04	NON-AQ	07/25/00

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D.: 007079

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	JAQ-0007-MW03	AQUEOUS	07/25/00	NA	08/01/00	1
02	JAQ-0007-MW04	AQUEOUS	07/25/00	NA	08/01/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0007-MW03	JAQ-0007-MW04
BENZENE	0.5	**UG/L**	< 0.5	**51**
TOLUENE	0.5	**UG/L**	< 0.5	**0.6**
ETHYLBENZENE	0.5	UG/L	< 0.5	< 0.5
TOTAL XYLENES	0.5	**UG/L**	**1.1**	**13**
SURROGATE:				
BROMOFLUOROBENZENE (%)			97	107
SURROGATE LIMITS	(80 - 120)			

CHEMIST NOTES:
N/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 8021 MODIFIED	PINNACLE I.D.	: 007079
BLANK I. D.	: 080100	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 08/01/00
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5
SURROGATE:		
BROMOFLUOROBENZENE (%)		95
SURROGATE LIMITS:	(80 - 120)	

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED		
MSMSD #	: 007079-01	PINNACLE I.D.	: 007079
CLIENT	: PHILIP ENVIRONMENTAL	DATE EXTRACTED	: NA
PROJECT #	: 62800107	DATE ANALYZED	: 08/01/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	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	17.3	87	16.7	84	4	(80 - 120)	20
TOLUENE	<0.5	20.0	21.3	107	20.1	101	6	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	23.0	115	21.9	110	5	(80 - 120)	20
TOTAL XYLENES	**1.1**	60.0	70.4	116	66.9	110	5	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

007079

PHILIP ENVIRONMENTAL

Chain of Custody Record

4000 Monroe Road
Farmington, NM 87401
(505) 326-2262 Phone
(505) 326-2388 FAX

COC Serial No. C 2598

Project Name EPFS QUARTERLY SAMPLING
Project Number 628001.07 Phase . Task 0301
Samplers J. WAGNON
Laboratory Name PINNACLE LABS
Location ALBUQUERQUE, NM

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: BTEX 8021	Lab ID	Comments
JAQ-0001-MW03	7/25/00	1445	H_2O	2	X	01	JAQUEZ MW03
JAQ-0001-MW04	7/25/00	1343	H_2O	2	X	02	JAQUEZ MW04

Relinquished by:

Signature	Date	Time
Jenne Wagnon	7/28/00	1027

Received By:

Signature	Date	Time
[illegible]	7/28/00	1040

Samples Iced: ☑ Yes ☐ No

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☑ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Carrier: GREYHOUND LINES
Airbill No. 6L7160665110 1

Shipping and Lab Notes:

Rec'd @ 1.1°C

PINNACLE LABORATORIES

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

Pinnacle Lab ID number **007078**
August 03, 2000

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELY STREET
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: ROBERT THOMPSON/LEAUDRA STANLEY

On 07/28/00 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
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 007078
PROJECT #	: 62800107	DATE RECEIVED	: 07/28/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 08/03/00

PIN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	JAQ-0007-R2	AQUEOUS	07/26/00
02	JAQ-0007-R3	AQUEOUS	07/26/00
03	JAQ-0007-R4	AQUEOUS	07/26/00
04	JAQ-0007-R1	AQUEOUS	07/26/00
05	TRIP BLANK	AQUEOUS	07/26/00

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PINNACLE I.D.: 007078
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	JAQ-0007-R2	AQUEOUS	07/26/00	NA	07/31/00	50
02	JAQ-0007-R3	AQUEOUS	07/26/00	NA	07/31/00	1
03	JAQ-0007-R4	AQUEOUS	07/26/00	NA	07/31/00	20

PARAMETER	DET. LIMIT	UNITS	JAQ-0007-R2	JAQ-0007-R3	JAQ-0007-R4
BENZENE	0.5	**UG/L**	**3600**	< 0.5	**520**
TOLUENE	0.5	**UG/L**	**3200**	< 0.5	**400**
ETHYLBENZENE	0.5	**UG/L**	**150**	< 0.5	**50**
TOTAL XYLENES	0.5	**UG/L**	**2300**	< 0.5	**1600**
SURROGATE:					
BROMOFLUOROBENZENE (%)			104	88	102
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D.: 007078

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	JAQ-0007-R1	AQUEOUS	07/26/00	NA	07/31/00	50
05	TRIP BLANK	AQUEOUS	07/26/00	NA	07/31/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0007-R1	TRIP BLANK
BENZENE	0.5	**UG/L**	**4900**	< 0.5
TOLUENE	0.5	**UG/L**	**2900**	< 0.5
ETHYLBENZENE	0.5	**UG/L**	**150**	< 0.5
TC L XYLENES	0.5	**UG/L**	**3100**	< 0.5
SURROGATE:				
BROMOFLUOROBENZENE (%)			105	96
SURROGATE LIMITS	(80 - 120)			

CHEMIST NOTES:
N/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 8021 MODIFIED	PINNACLE I.D.	: 007078
BLANK I. D.	: 073100	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 07/31/00
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5
SURROGATE:		
BROMOFLUOROBENZENE (%)		101
SURROGATE LIMITS:	(80 - 120)	

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED		
MSMSD #	: 007071-10	PINNACLE I.D.	: 007078
CLIENT	: PHILIP ENVIRONMENTAL	DATE EXTRACTED	: NA
PROJECT #	: 62800107	DATE ANALYZED	: 07/31/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	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	16.9	85	16.6	83	2	(80 - 120)	20
TOLUENE	<0.5	20.0	20.1	101	19.8	99	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.6	108	20.6	103	5	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	66.2	110	63.2	105	5	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

PHILIP ENVIRONMENTAL

Chain of Custody Record

4000 Monroe Road
Farmington, NM 87401
(505) 326-2262 Phone
(505) 326-2388 FAX

307078

COC Serial No. C 2608

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107 Phase . Task 03601 .
Samplers J. WAGNON
Laboratory Name PINNACLE LABS
Location ALBUQUERQUE, NM

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	BTEX 8021	Lab ID#	Comments
JAQ-0007-R2	7/26/00	1149	H2O	2	X	01	JAQUEZ R2
JAQ-0007-R3	7/26/00	1235	H2O	2	X	02	JAQUEZ R3
JAQ-0007-R4	7/26/00	1015	H2O	2	X	03	JAQUEZ R4
JAQ-0007-R1	7/26/00	1107	H2O	2	X	04	JAQUEZ R1
TRIP BLANK	7/26/00	1240	H2O	2	X	05	

Relinquished by:

Signature	Date	Time
Jennifer Wagnon	7/28/00	1024

Received By:

Signature	Date	Time
Francine Trino	1640	7/28/00

Samples Iced: ☑ Yes ☐ No

Carrier: GREYHOUND LINES Airbill No. 6LE160066066511

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☑ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Shipping and Lab Notes:

Rec'd @ 4.1°C

PE-176 4/95

PINNACLE LABORATORIES

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

SEP 2 8 2000

Pinnacle Lab ID number **008085**
September 26, 2000

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: ROBERT THOMPSON/LEAUDRA STANLEY

On 08/24/00 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.

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

All other analyses were performed by Environmental Services Laboratory, Inc., Portland, OR.

The samples were received with insufficient time to perform speciated nitrate in-hold time.

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

CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 008085
PROJECT #	: 62800107	DATE RECEIVED	: 08/24/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 09/26/00

PIN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	JAQ-0008-M1	AQUEOUS	08/22/00
02	JAQ-0008-M2	AQUEOUS	08/22/00
03	JAQ-0008-M3	AQUEOUS	08/22/00
04	JAQ-0008-M4	AQUEOUS	08/22/00
05	JAQ-0008-M5	AQUEOUS	08/22/00
06	JAQ-0008-M6	AQUEOUS	08/22/00
07	TRIP BLANK	AQUEOUS	08/22/00
08	JAQ-0008-M1D	AQUEOUS	08/22/00

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D.: 008085

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	JAQ-0008-M1	AQUEOUS	08/22/00	NA	08/25/00	1
02	JAQ-0008-M2	AQUEOUS	08/22/00	NA	08/25/00	1
03	JAQ-0008-M3	AQUEOUS	08/22/00	NA	08/25/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0008-M1	JAQ-0008-M2	JAQ-0008-M3
BENZENE	0.5	**UG/L**	< 0.5	< 0.5	**0.6**
TOLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
ET. .BENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
T L XYLENES	0.5	**UG/L**	< 0.5	< 0.5	**2.2**

SURROGATE:				
BROMOFLUOROBENZENE (%)		98	93	103
SURROGATE LIMITS	(80 - 120)			

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D.: 008085

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	JAQ-0008-M4	AQUEOUS	08/22/00	NA	08/25/00	1
05	JAQ-0008-M5	AQUEOUS	08/22/00	NA	08/25/00	1
06	JAQ-0008-M6	AQUEOUS	08/22/00	NA	08/25/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0008-M4	JAQ-0008-M5	JAQ-0008-M6
BENZENE	0.5	**UG/L**	**87**	**43**	< 0.5
TOLUENE	0.5	**UG/L**	**0.5**	< 0.5	< 0.5
ETHYL BENZENE	0.5	**UG/L**	**1.2**	< 0.5	< 0.5
TOTAL XYLENES	0.5	**UG/L**	**32**	< 0.5	< 0.5
SURROGATE:					
BROMOFLUOROBENZENE (%)			108	100	103
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D.: 008085

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
07	TRIP BLANK	AQUEOUS	08/22/00	NA	08/25/00	1
08	JAQ-0008-M1D	AQUEOUS	08/22/00	NA	08/25/00	1

PARAMETER	DET. LIMIT	UNITS	TRIP BLANK	JAQ-0008-M1D
BENZENE	0.5	UG/L	< 0.5	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5
ETH[illegible] BENZENE	0.5	UG/L	< 0.5	< 0.5
TO[illegible] XYLENES	0.5	UG/L	< 0.5	< 0.5
SURROGATE:				
BROMOFLUOROBENZENE (%)			106	96
SURROGATE LIMITS	(80 - 120)			

CHEMIST NOTES:
N/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 8021 MODIFIED	PINNACLE I.D.	: 008085
BLANK I. D.	: 082500	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 08/25/00
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5
SURROGATE:		
BR(/FLUOROBENZENE (%)		101
SURROGATE LIMITS:	(80 - 120)	

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED		
MSMSD #	: 082500	PINNACLE I.D.	: 008085
CLIENT	: PHILIP ENVIRONMENTAL	DATE EXTRACTED	: NA
PROJECT #	: 62800107	DATE ANALYZED	: 08/25/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	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	18.6	93	18.7	94	1	(80 - 120)	20
TOLUENE	<0.5	20.0	20.2	101	19.2	96	5	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.7	104	20.3	102	2	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	61.9	103	61.1	102	1	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

Environmental Services Laboratory, Inc. E S L

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

September 01, 2000

Jacinta A. Tenorio
Pinnacle Laboratories
2709-D Pan American Fwy NE
Albuquerque, NM 87107
TEL: 505-344-3777
FAX (505) 344-4413

RE: 008085/PHIL Order No.: 0008142

Dear Jacinta A. Tenorio,

Environmental Services Laboratory received 2 samples on 8/25/00 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Nitrate (EPA 353.3)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety, without the written approval from the Laboratory.

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

Sincerely,

Nichole Karl

Nichole Karl
Project Manager

Keith Hunter

Technical Review

Environmental Services Laboratory

Date: *01-Sep-00*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	008085-03
Lab Order:	0008142	**Tag Number:**	
Project:	008085/PHIL	**Collection Date:**	8/22/00
Lab ID:	0008142-01A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NITRATE		**EPA 353.3**				Analyst: **gvs**
Nitrogen, Nitrate	ND	0.0500		mg/L	1	8/29/00

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: *01-Sep-00*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	008085-04
Lab Order:	0008142	**Tag Number:**	
Project:	008085/PHIL	**Collection Date:**	8/22/00
Lab ID:	0008142-02A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NITRATE		**EPA 353.3**				Analyst: **gvs**
Nitrogen, Nitrate	1.66	0.300		mg/L	6	8/29/00

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: *01-Sep-00*

CLIENT: Pinnacle Laboratories
Work Order: 0008142
Project: 008085/PHIL

QC SUMMARY REPORT
Method Blank

Sample ID: **MBlank** Batch ID: **01 NITRATE-** Test Code: **EPA 353.3** Units: **mg/L** Analysis Date **8/29/00** Prep Date:

Client ID: **0008142** Run ID: **HIT MAN_000829A** SeqNo: **50823**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate	ND	0.05									

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

Date: *01-Sep-00*

CLIENT: Pinnacle Laboratories
Work Order: 0008142
Project: 008085/PHIL

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: LCS	Batch ID: 01 NITRATE-	Test Code: EPA 353.3	Units: mg/L	Analysis Date 8/29/00	Prep Date:
Client ID:	0008142	Run ID: HIT MAN_000829A		SeqNo: 50824	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate	.288	0.05	0 3	0	96.0%	85	115	0			

Sample ID: LCSD	Batch ID: 01 NITRATE-	Test Code: EPA 353.3	Units: mg/L	Analysis Date 8/29/00	Prep Date:
Client ID:	0008142	Run ID: HIT MAN_000829A		SeqNo: 50825	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate	.295	0.05	0.3	0	98.3%	85	115	0.288	2.4%	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

Pinnacle Laboratories, Inc. **Interlab in of Custody** Date: 8/24 Page: 1 of

Network Project Manager: Jacinta A. Tenorio
Pinnacle Laboratories, Inc. 2709-D Pan American Freeway, NE Albuquerque, New Mexico 87107 (505) 344-3777 Fax (505) 344-4413

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	RCRA TCLP METALS	Metals-13 PP List	Metals-TAL (23 METALS)		TOX	TOC	Gen Chemistry	Total NO3	Oil and Grease	Volatile Organics GC/MS (8260)	BOD	COD	PESTICIDES/PCB (608/8082)	Herbicides (615/8151)	PNA (8310)	8240 (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
008085-03	8/22	1434	AQ	01									X															
-04	"	1402	"	02									X															

PROJECT INFORMATION	SAMPLE RECEIPT	SAMPLES SENT TO:	RELINQUISED BY: 1.	RELINQUISED BY: 2.
PROJECT #: 008085	Total Number of Containers	PENSACOLA - STL-FL	Signature: Time:	Signature: Time:
PROJ. NAME: PHIL	Chain of Custody Seals	ESL - OR X	Francine Torivio 1730	
QC LEVEL: (STD) IV	Received Intact?	STL - CT	Printed Name: Date:	Printed Name: Date:
QC REQUIRED: MS MSD BLANK	Received Good Cond./Cold	ATEL - AZ	Francine Torivio 8/24/00	
TAT: (STANDARD) RUSH!!	LAB NUMBER: 008142	ATEL - MARION	Pinnacle Laboratories, Inc.	Company
		ATEL - MELMORE	RECEIVED BY: 1.	RECEIVED BY: 2
DUE DATE: 9/7	COMMENTS:	BARRINGER	Signature: Time:	Signature: Time:
RUSH SURCHARGE: —		WCAS	Nichole Karl 9:30	
CLIENT DISCOUNT: —		WOHL	Printed Name: Date:	Printed Name: Date:
SPECIAL CERTIFICATION REQUIRED: YES (NO)			Nichole Karl 8/25	
			Company	Company

Chain of Custody Record

008085

PHILIP ENVIRONMENTAL

4000 Monroe Road
Farmington, NM 87401

(505) 326-2262 Phone
(505) 326-2388 FAX

COC Serial No. C 2642

Project Name EPFS QUARTERLY SAMPLING
Project Number 02800107 Phase . Task 0301 .
Samplers J. WAGNON
Laboratory Name PINNACLE
Laboratory Location ALBUQUERQUE, NM

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: BTEX 8021	NITRATES	Lab ID #	Comments
JAQ-0008-M1	8/22/00	1207	H2O	2	X		01	JAQUEZ M WELLS
JAQ-0008-M2	8/22/00	1252	H2O	2	X		02	"
JAQ-0008-M3	8/22/00	1434	H2O	3	X	X	03	"
JAQ-0008-M4	8/22/00	1402	H2O	3	X	X	04	"
JAQ-0008-M5	8/22/00	1329	H2O	2	X		05	"
JAQ-0008-M6	8/22/00	1526	H2O	2	X		06	"
Trip Blank	8/22/00	1207	"	1	X		07	
JAQ-0008-MID	8/22/00	1207	"	1	X		08	"

Relinquished by:

Signature	Date	Time
Jon Wagnon	8/23/00	1530

Received By:

Signature	Date	Time
Francine Trujillo	8/24/00	0930

Samples Iced: ☑ Yes ☐ No

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☑ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☑ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Carrier: GREYHOUND LINES
Airbill No. GLI 60691857 7

Shipping and Lab Notes:

Rec'd @ 4°C

RE 176 4/95

PINNACLE LABORATORIES

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

Pinnacle Lab ID number **008084**
August 28, 2000

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELY STREET
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: ROBERT THOMPSON/LEAUDRA STANLEY

On 08/24/00 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
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 008084
PROJECT #	: 62800107	DATE RECEIVED	: 08/24/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 08/28/00

PIN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	JAQ-0008-R1	AQUEOUS	08/22/00
02	JAQ-0008-R2	AQUEOUS	08/22/00
03	JAQ-0008-R3	AQUEOUS	08/22/00
04	JAQ-0008-R4	AQUEOUS	08/22/00
05	JAQ-0008-R5	AQUEOUS	08/22/00
06	JAQ-0008-R6	AQUEOUS	08/22/00

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PINNACLE I.D.: 008084
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	JAQ-0008-R1	AQUEOUS	08/23/00	NA	08/25/00	20
02	JAQ-0008-R2	AQUEOUS	08/23/00	NA	08/25/00	20
03	JAQ-0008-R3	AQUEOUS	08/23/00	NA	08/25/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0008-R1	JAQ-0008-R2	JAQ-0008-R3
BENZENE	0.5	**UG/L**	**2500**	**1600**	< 0.5
TOLUENE	0.5	**UG/L**	**1400**	**1500**	< 0.5
E LBENZENE	0.5	**UG/L**	**180**	**82**	< 0.5
AL XYLENES	0.5	**UG/L**	**2200**	**1100**	< 0.5

SURROGATE:				
BROMOFLUOROBENZENE (%)		108	101	113
SURROGATE LIMITS	(80 - 120)			

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL PINNACLE I.D.: 008084
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	JAQ-0008-R4	AQUEOUS	08/23/00	NA	08/25/00	20
05	JAQ-0008-R5	AQUEOUS	08/23/00	NA	08/25/00	1
06	JAQ-0008-R6	AQUEOUS	08/23/00	NA	08/25/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0008-R4	JAQ-0008-R5	JAQ-0008-R6
BENZENE	0.5	**UG/L**	**1500**	< 0.5	< 0.5
TOLUENE	0.5	**UG/L**	**1800**	< 0.5	< 0.5
ETHYLBENZENE	0.5	**UG/L**	**110**	< 0.5	**2.6**
TOTAL XYLENES	0.5	**UG/L**	**1800**	< 0.5	**13**
SURROGATE:					
BROMOFLUOROBENZENE (%)			99	104	103
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/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 8021 MODIFIED	PINNACLE I.D.	: 008084
BLANK I. D.	: 082500	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 08/25/00
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5
SURROGATE:		
BROMOFLUOROBENZENE (%)		101
SURROGATE LIMITS:	(80 - 120)	

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED		
MSMSD #	: 082500	PINNACLE I.D.	: 008084
CLIENT	: PHILIP ENVIRONMENTAL	DATE EXTRACTED	: NA
PROJECT #	: 62800107	DATE ANALYZED	: 08/25/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	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	18.6	93	18.7	94	1	(80 - 120)	20
TOLUENE	<0.5	20.0	20.2	101	19.2	96	5	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.7	104	20.3	102	2	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	61.9	103	61.1	102	1	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

PHILIP ENVIRONMENTAL

Chain of Custody Record

008084

4000 Monroe Road
Farmington, NM 87401
(505) 326-2262 Phone
(505) 326-2388 FAX

COC Serial No. C 2641

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107 Phase . Task 0301 .
Samplers J. WAGNON
Laboratory Name PINNACLE
Location ALBUQUERQUE, NM

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: BTEX 8021	Lab ID #	Comments
JAQ-0008-R1	8/23/00	1435	H2O	2	X	01	JAQUEZ WELLS
JAQ-0008-R2	8/23/00	1300	H2O	2	X	02	"
JAQ-0008-R3	8/23/00	1220	H2O	2	X	03	"
JAQ-0008-R4	8/23/00	1336	H2O	2	X	04	"
JAQ-0008-R5	8/23/00	1140	H2O	2	X	05	"
JAQ-0008-R6	8/23/00	1115	H2O	2	X	06	"

Relinquished by:

Signature	Date	Time
Jennifer Wagnon	8/23/00	1530

Received By:

Signature	Date	Time
Jeanine Trujillo	8/24/00	0930

Samples Iced: ☑ Yes ☐ No

Carrier: GREYHOUND LINES Airbill No. 6LI160691857

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☑ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Shipping and Lab Notes:

Rec'd @ 4°c

PE-176 4/95

PINNACLE LABORATORIES

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

RECEIVED
DEC 11 2000

Pinnacle Lab ID number **011074**
December 08, 2000

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: ROBERT THOMPSON/SCOTT POPE

On 11/21/00 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.

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

In order to meet hold-time specifications samples were run as Total Nitrates .

All other analyses were performed by Enviromental Services Laboratory, Inc., Portland, OR.

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

CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 011074
PROJECT #	: 62800107	DATE RECEIVED	: 11/21/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 12/08/00

PIN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
011074-01	JAQ-0011-M 01	AQUEOUS	11/17/00
011074-02	JAQ-0011-M 02	AQUEOUS	11/17/00
011074-03	JAQ-0011-M 03	AQUEOUS	11/17/00
011074-04	JAQ-0011-M 04	AQUEOUS	11/17/00
011074-05	JAQ-0011-M 05	AQUEOUS	11/17/00
011074-06	JAQ-0011-M 06	AQUEOUS	11/17/00

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PINNACLE I.D.: 011074
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	JAQ-0011-M 01	AQUEOUS	11/17/00	NA	11/21/00	1
02	JAQ-0011-M 02	AQUEOUS	11/17/00	NA	11/21/00	1
03	JAQ-0011-M 03	AQUEOUS	11/17/00	NA	11/21/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0011-M 01	JAQ-0011-M 02	JAQ-0011-M 03
BENZENE	0.5	**UG/L**	< 0.5	< 0.5	**1.1**
TOLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
ET .BENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOTAL XYLENES	0.5	**UG/L**	< 0.5	< 0.5	**3.4**
SURROGATE:					
BROMOFLUOROBENZENE (%)			117	117	120
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PINNACLE I.D.: 011074
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	JAQ-0011-M 04	AQUEOUS	11/17/00	NA	11/21/00	1
05	JAQ-0011-M 05	AQUEOUS	11/17/00	NA	11/21/00	1
06	JAQ-0011-M 06	AQUEOUS	11/17/00	NA	11/21/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0011-M 04	JAQ-0011-M 05	JAQ-0011-M 06
BENZENE	0.5	**UG/L**	**99**	**2.6**	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
ET .BENZENE	0.5	**UG/L**	**0.5**	< 0.5	< 0.5
T AL XYLENES	0.5	**UG/L**	**5.0**	< 0.5	< 0.5
SURROGATE:					
BROMOFLUOROBENZENE (%)			119	118	119
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/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 8021 MODIFIED	PINNACLE I.D.	: 011074
BLANK I. D.	: 112100	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 11/21/00
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5
SURROGATE:		
BROMOFLUOROBENZENE (%)		112
SURROGATE LIMITS:	(80 - 120)	

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED		
MSMSD #	: 011057-26	PINNACLE I.D.	: 011074
CLIENT	: PHILIP ENVIRONMENTAL	DATE EXTRACTED	: NA
PROJECT #	: 62800107	DATE ANALYZED	: 11/21/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	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	20.3	102	19.2	96	6	(80 - 120)	20
TOLUENE	<0.5	20.0	21.0	105	19.9	100	5	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	22.0	110	21.2	106	4	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	63.9	107	61.6	103	4	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

Environmental Services Laboratory, Inc. E S L

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

December 04, 2000

Jacinta A. Tenorio
Pinnacle Laboratories
2709-D Pan American Fwy NE
Albuquerque, NM 87107
TEL: 505-344-3777
FAX (505) 344-4413

RE: 011074/PHIL Order No.: 0011122

Dear Jacinta A. Tenorio,

Environmental Services Laboratory received 2 samples on 11/22/00 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Nitrate/Nitrite (EPA 353.3)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety, without the written approval from the Laboratory.

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

Sincerely,

Nichole Karl

Nichole Karl
Project Manager

Keith Hunter

Technical Review

Environmental Services Laboratory

Date: *04-Dec-00*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	011074-03
Lab Order:	0011122	**Tag Number:**	
Project:	011074/PHIL	**Collection Date:**	11/17/00
Lab ID:	0011122-01A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE		**EPA 353.3**				Analyst: **gvs**
Nitrogen, N+N	ND	0.0500		mg/L	1	12/1/00

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: *04-Dec-00*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	011074-04
Lab Order:	0011122	**Tag Number:**	
Project:	011074/PHIL	**Collection Date:**	11/17/00
Lab ID:	0011122-02A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE		**EPA 353.3**				Analyst: **gvs**
Nitrogen, N+N	2.66	0.375		mg/L	7.5	12/1/00

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: *04-Dec-00*

CLIENT: Pinnacle Laboratories
Work Order: 0011122
Project: 011074/PHIL

QC SUMMARY REPORT
Method Blank

Sample ID: **MBlank** Batch ID: **01 N+N-12/4/** Test Code: **EPA 353.3** Units: **mg/L** Analysis Date **12/1/00** Prep Date:

Client ID: **0011122** Run ID: **HIT MAN_001201B** SeqNo: **60279**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, N+N	ND	0.05									

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

Date: *04-Dec-00*

CLIENT: Pinnacle Laboratories
Work Order: 0011122
Project: 011074/PHIL

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS**	Batch ID: **01 N+N-12/4/**	Test Code: **EPA 353.3**	Units: **mg/L**	Analysis Date **12/1/00**	Prep Date:
Client ID:	**0011122**	Run ID: **HIT MAN_001201B**		SeqNo: **60280**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, N+N	.274	0.05	0.3	0	91.3%	85	115	0			

Sample ID: **LCSD**	Batch ID: **01 N+N-12/4/**	Test Code: **EPA 353.3**	Units: **mg/L**	Analysis Date **12/1/00**	Prep Date:
Client ID:	**0011122**	Run ID: **HIT MAN_001201B**		SeqNo: **60281**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, N+N	.293	0.05	0.3	0	97.7%	85	115	0.274	6.7%	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

Pinnacle Laboratories, Inc. — **Interl[illegible]ain of Custody** — Date: 11/21 — Page: 1 of [illegible]

Network Project Manager: Jacinta A. Tenorio

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

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	RCRA TCLP METALS	Metals-13 PP List	Metals-TAL (23 METALS)		TOX	TOC	Gen Chemistry:	Total NO3/NO2	Oil and Grease	Volatile Organics GC/MS (8260)	BOD	COD	PESTICIDES/PCB (608/8082)	Herbicides (615/8151)	PNA (8310)/8270 SIMS	8240 (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
011074-03	11/17	1231	AQ	01									X															
-04	"	1435	"	02									X															

PROJECT INFORMATION		SAMPLE RECEIPT		SAMPLES SENT TO:		RELINQUISED BY: 1.	RELINQUISED BY: 2.
PROJECT #:	011074	Total Number of Containers		PENSACOLA - STL-FL		Signature: Jacinta Tenorio Time: 1730	Signature: Time:
PROJ. NAME:	PHIL	Chain of Custody Seals		ESL - OR	X	Printed Name: Jacinta Tenorio Date: 11/21/00	Printed Name: Date:
QC LEVEL:	STD. IV	Received Intact?		STL - CT		Pinnacle Laboratories, Inc.	Company
QC REQUIRED?	MS MSD BLANK	Received Good Cond./Cold		ATEL - AZ		RECEIVED BY: 1.	RECEIVED BY: 2
TAT:	STANDARD RUSH!!	LAB NUMBER:	011122	ATEL - MARION		Signature: Nichole Karl Time: 10:00	Signature: Time:
DUE DATE:	12/8	COMMENTS:		ATEL - MELMORE		Printed Name: Nichole Karl Date: 11/22	Printed Name: Date:
RUSH SURCHARGE:	—			BARRINGER		Company	Company
CLIENT DISCOUNT:	—			ENVIRO TEST LABS			
SPECIAL CERTIFICATION REQUIRED:	YES NO			WCAS			
				WOHL			

Chain of Custody Record

011074

PHILIP ENVIRONMENTAL
4000 Monroe Road
Farmington, NM 87401
(505) 326-2262 Phone
(505) 326-2388 FAX

COC Serial No. C 2786

Project Name EpFS quarterly Sampling
Project Number 62800107 Phase . Task 0301
Samplers C. Maez
Laboratory Name PINNACLE
Location ALBQ N.M.

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: BTEX 8021	NITRATES	Lab ID#	Comments
JAQ-0011-M01	11-17-00	1227	H_2O	2	X		01	JAQUEZ G.C. # C1 (70995)
JAQ-0011-M02	11-17-00	1046	H_2O	2	X		02	" "
JAQ-0011-M03	11-17-00	1231	H_2O	4	X	X	03	" "
JAQ-0011-M04	11-17-00	1435	H_2O	4	X	X	04	" "
JAQ-0011-M05	11-17-00	1445	H_2O	2	X		05	" "
JAQ-0011-M06	11-17-00	1602	H_2O	2	X		06	" "

Relinquished by:

Signature	Date	Time
Chris A Maez	11-20-00	1630

Received By:

Signature	Date	Time
Jeanine Jaramillo	11/21/00	1015

Samples Iced: ☑ Yes ☐ No

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☐ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☑ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☑ Other (Specify) H_5Cl_2
- ☐ Other (Specify) _____

Carrier: Greyhound
Airbill No. GLI 60691 9996

Shipping and Lab Notes:

FAX Results on all JAQUEZ Samples

Rec'd @ 3.5°C

PE-176 4/95

PINNACLE LABORATORIES

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

RECEIVED
DEC - 4 2000

Pinnacle Lab ID number **011075**
November 28, 2000

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: ROBERT THOMPSON/SCOTT POPE

On 11/21/00 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: ft

Enclosure

PINNACLE LABORATORIES

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

CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 011075
PROJECT #	: 62800107	DATE RECEIVED	: 11/21/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 11/28/00

PIN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	JAQ-0011-R 01	AQUEOUS	11/20/00
02	JAQ-0011-R 02	AQUEOUS	11/20/00
03	JAQ-0011-R 03	AQUEOUS	11/20/00
04	JAQ-0011-R 04	AQUEOUS	11/20/00
05	JAQ-0011-R 05	AQUEOUS	11/20/00
06	JAQ-0011-R 06	AQUEOUS	11/20/00

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL PINNACLE I.D.: 011075
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	JAQ-0011-R 01	AQUEOUS	11/20/00	NA	11/21/00	50
02	JAQ-0011-R 02	AQUEOUS	11/20/00	NA	11/21/00	20
03	JAQ-0011-R 03	AQUEOUS	11/20/00	NA	11/21/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0011-R 01	JAQ-0011-R 02	JAQ-0011-R 03
BENZENE	0.5	**UG/L**	**3500**	**770**	< 0.5
TOLUENE	0.5	**UG/L**	**2700**	**1300**	< 0.5
ETHYL BENZENE	0.5	**UG/L**	**210**	**170**	< 0.5
TOTAL XYLENES	0.5	**UG/L**	**2900**	**1500**	< 0.5
SURROGATE:					
BROMOFLUOROBENZENE (%)			120	128*	117
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
* = High surrogate due to matrix interference.

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL PINNACLE I.D.: 011075
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	JAQ-0011-R 04	AQUEOUS	11/20/00	NA	11/21/00	25
05	JAQ-0011-R 05	AQUEOUS	11/20/00	NA	11/21/00	1
06	JAQ-0011-R 06	AQUEOUS	11/20/00	NA	11/21/00	1

PARAMETER	DET. LIMIT	UNITS	JAQ-0011-R 04	JAQ-0011-R 05	JAQ-0011-R 06
BENZENE	0.5	**UG/L**	**590**	< 0.5	< 0.5
TOLUENE	0.5	**UG/L**	**580**	< 0.5	< 0.5
ET' '.BENZENE	0.5	**UG/L**	**110**	< 0.5	< 0.5
T L XYLENES	0.5	**UG/L**	**1800**	**0.9**	**0.5**
SURROGATE:					
BROMOFLUOROBENZENE (%)			119	119	117
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/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 8021 MODIFIED	PINNACLE I.D.	: 011075
BLANK I. D.	: 112100	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 11/21/00
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5
SURROGATE:		
BROMOFLUOROBENZENE (%)		112
SURROGATE LIMITS:	(80 - 120)	

COMMENTS NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED		
MSMSD #	: 011057-26	PINNACLE I.D.	: 011075
CLIENT	: PHILIP ENVIRONMENTAL	DATE EXTRACTED	: NA
PROJECT #	: 62800107	DATE ANALYZED	: 11/21/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	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	20.3	102	19.2	96	6	(80 - 120)	20
TOLUENE	<0.5	20.0	21.0	105	19.9	100	5	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	22.0	110	21.2	106	4	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	63.9	107	61.6	103	4	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

PHILIP ENVIRONMENTAL

Chain of Custody Record

4000 Monroe Road
Farmington, NM 87401
(505) 326-2262 Phone
(505) 326-2388 FAX

011075

COC Serial No. C 2787

Project Name EpFS quarterly Sampling
Project Number 628 00107 Phase . Task 0301
Samplers C. Maez
Laboratory Name PENNACLE
Location ALBQ N.M.

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: BTEX 8021	Lab ID#	Comments
JAQ-0011-R01	11-20-00	1330	H_2O	2	X	01	JAQUEZ GC #C1 (78995)
JAQ-0011-R02	11-20-00	1207	H_2O	2	X	02	" "
JAQ-0011-R03	11-20-00	1059	H_2O	2	X	03	" "
JAQ-0011-R04	11-20-00	1483	H_2O	2	X	04	" "
JAQ-0011-R05	11-20-00	0930	H_2O	2	X	05	" "
JAQ-0011-R06	11-20-00	1030	H_2O	2	X	06	" "

Relinquished by:

Signature	Date	Time
Chris A. Maez	11-20-00	1630

Received By:

Signature	Date	Time
Francine Jaime	11/21/00	1015

Samples Iced: ☑ Yes ☐ No

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☐ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☑ Other (Specify) H_5C_{12}
- ☐ Other (Specify)

Carrier: Greyhound
Airbill No. GLI 60691996

Shipping and Lab Notes:

Fax Results on all JAquez Samples

Rec'd @ 3.5°C

PE-176 4/95