3R - 194

REPORTS

DATE: 3/1999

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

Annual Report for Soil and Groundwater Remediation

March 1999

Prepared For

EL PASO FIELD SERVICES COMPANY, FARMINGTON, NEW MEXICO

Project 17444



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1. INTRODUCTION

At the request of El Paso Field Services Company (EPFS), Philip Services Corporation (Philip) has prepared the following annual report and recommendations for soil and groundwater remediation at the Jaquez Com. C #1 and Jaquez Com. E #1 meter sites.

The Jaquez Com. C #1 and Jaquez Com. E #1 meter sites are currently owned and operated by EPFS. The meter sites are located in Section 6, Township 29N, Range 9W, in San Juan County, New Mexico, near Blanco, New Mexico. The two meter stations are located within 40 feet of one another on the same site location. Past practices included discharge of pipeline liquids into earthen pit(s) at the site. Listed below is a brief description of activities at the site:

- Late 1992 Landowner expressed concern regarding potential hydrocarbon contamination in a garden area near the meter site location.
- March 1993 Comprehensive soil and groundwater investigation performed on meter site location and nearby garden area.
- June 1993 EPNG submits a remedial plan to NMOCD.
- July 1993 NMOCD approves the remedial plan.
- August 1993 Remediation actives initiated.
- September 1993 Remediation activities completed.
- September 1993 Monitoring wells R-1 through R-5 and M-1 through M-5 were installed north and south of Citizen's Ditch. Initial sampling for benzene, toluene, ethylbenzene, and xylene (BTEX) indicated monitoring wells R-1, R-2, R-4, M-3, and M-4 were above New Mexico Water Quality Control Commission (NMWQCC) standards. Monitoring wells at the site were initially sampled monthly and are now sampled quarterly.
- October 1993 to October 1996 Free phase hydrocarbons were observed in monitor wells R-1 and R-2 during the months of seasonally low groundwater levels (i.e., January through May). Passive skimmer systems were installed to remove the free phase hydrocarbons during periods of free phase hydrocarbon accumulation.
- November 1996 A pumping test was initiated to determine if light non-aqueous phase liquids (LNAPL) could be removed during high seasonal groundwater by depressing the water table in and around R-1 and R-2.



December 1996 - Philip injected approximately 500 gallons of urea nitrate in water into the passive vent system and installed magnesium peroxide socks in monitoring wells M-3 and M-4 to supply oxygen to enhance natural biodegradation of hydrocarbons in groundwater.

- January, 1997 Philip installed a belt skimmer in R-2 to remove free phase hydrocarbons.
- February, 1997 Philip installed a belt skimmer in R-1 to remove free phase hydrocarbons.
- November, 1997 Philip installed two temporary monitoring wells inside the excavated area north of R-1 to determine if free phase hydrocarbons could be recovered during high groundwater season.
- June, 1997 Belt skimmer free phase hydrocarbon recovery system shut down due to seasonal reduction of product thickness related to local irrigation.
- January, 1998 Philip restarts belt skimmer in R-1 and R-2.
- April, 1998 Belt skimmer free phase hydrocarbon recovery system shut down due to seasonal reduction of product thickness related to local irrigation.
- July, 1998 Philip injected approximately 500 gallons of urea nitrate in water into the passive vent system and installed magnesium peroxide socks in monitoring wells M-3, M-4, R-3 and R-4 to supply oxygen to enhance natural biodegradation of hydrocarbons in groundwater.
- November, 1998 EPFS conducts investigation of possible hydrocarbon seep of groundwater into the surface water of an arroyo to the south of the property. No hydrocarbons are found during this investigation.

2. 1998 ACTIVITIES

In 1998 activities included the following:

- Belt skimming systems were installed in recovery wells R-1 and R-2, and product recovery was initiated.
- Quarterly groundwater sampling of the following monitor wells was conducted during the first two quarters of 1998: R-3; R-4; R-5; M-1; M-2; M-3; M-4; and, M-5.
- Quarterly groundwater samples were collected during the last two quarters of 1998 from monitor wells M-3 and M-4.
- Oxygen was added to the groundwater through the use of ORC[®] magnesium peroxide socks in monitoring wells MW-3, MW-4, R-3 and R-4.



• EPFS conducts an investigation of a potential hydrocarbon seep at the request of the OCD and a local landowner. The landowner found a substance floating on surface water in a nearby arroyo and requested that EPFS investigate. No hydrocarbon odor was present at the site and a surface water sample was collected for laboratory analysis of BTEX and TPH. The sample results indicated all hydrocarbon constituents in the surface water were below detection limits (Appendix C).

2.1 Belt Skimmer Operation and Product Removal

The belt skimming system operating in R-1 and R-2 is housed in a standard lockable meter house and consists of an intrinsically safe electric motor which turns a 7/8-inch hydrophobic urethane belt suspended in the well by a weighted pulley. With each revolution, hydrocarbons are collected on the belt, brought to the surface, and then removed by specially designed wiper blades. The hydrocarbons are then deposited into the unit's collection box, where they drain by gravity into a 55-gallon drum. The drum is fitted with a high-level control switch designed to shut the system off when the drum is full. The drum and control switch are housed in a secondary containment system to contain any potential spills. Once a week, Philip or EPFS personnel visits the site and checks each system for proper operation, product, and water levels in the recovery wells and surrounding monitoring wells. This information is documented in a project-specific field notebook. The locations of recovery wells R-1 and R-2 as well as other site features are presented in Figure 1.

On February 14, 1997, the belt skimming system in R-2 was installed and product removal initiated. Product removal continued sporadically until May 28, 1997 when the skimmer was shut down for the season. From February 14, 1997 to May 28, 1997, approximately 11.48 gallons of free phase hydrocarbons were removed from R-2.

On January 14, 1998, 1.91 feet of free phase hydrocarbons had returned to recovery well R-2 and product removal was again initiated. Again product removal continued intermittently until April 15, 1998 when the skimmer was shut down for the season. Approximately 15.39 gallons of free phase hydrocarbons have been recovered from R-2 since the belt skimming system was installed. No free phase hydrocarbons have been recovered from R-2 in 1999.

On April 4, 1997, free phase hydrocarbon removal was initiated in recovery well R-1 using the belt skimming system. Product removal continued until June 27, 1997, when product disappeared from the well for the season. From April 4, 1997 to June 27, 1997, approximately 99.92 gallons of free phase hydrocarbons were recovered from recovery well R-1.

On January 14, 1998, 2.08 feet of free phase hydrocarbons had returned to R-1 and product removal was reinitiated. From January 14, 1998 to March 4, 1998, approximately



99.04 gallons of free phase hydrocarbons were recovered from R-1. Approximately 264.03 gallons of free phase hydrocarbons have been recovered from R-1 since the belt skimming system was installed. No free phase hydrocarbons have been recovered from R-1 in 1999.

All weekly product thickness, free phase hydrocarbon recovery information and groundwater elevations are presented in Table 1. Graphic displays for the thickness of free phase hydrocarbons vs. time for R-1 and R-2 is presented in Appendix A. Graphic displays of free phase hydrocarbon elevations and groundwater elevations vs. time are presented in Appendix B.

As in previous years, product accumulation decreased dramatically in the spring. Also as in previous years, free phase hydrocarbons returned to R-1 and R-2 in significant volumes in the month of January. Groundwater elevation maps, showing quarterly changes in groundwater elevation, are included in Figures 1, 2, 3 and 4.

2.2 Quarterly Sampling

Groundwater samples are not collected from wells when LNAPL are present, which is the case for recovery wells R-1 and R-2. Groundwater samples were collected from eight monitor wells, R-3 through R-5 and M-1 through M-5, and analyzed for BTEX during the first two quarters of 1998. Currently, all eight monitoring wells are sampled annually for polynuclear aromatic hydrocarbons (PAH's) BTEX and nitrate. Monitor wells M-3 and M-4 are also sampled quarterly for BTEX and nitrates.

Nitrate sampling has been performed on the monitor wells to help determine the effect of nutrients injected into the passive venting system on the south side of Citizen's Ditch (see Oxygenate Socks Below). The laboratory reports are included in Appendix C and a summary of all BTEX, nitrate and PAH analysis is included in Table 2.

2.3 Oxygenate Socks and Nutrient Injection

On December 19, 1996, Philip injected approximately 500 gallons of urea nitrate-water solution into the passive vent system on the south side of Citizen's Ditch. The nutrient solution consisted of seven parts potable water to one part urea nitrate. The solution was mixed thoroughly in a 500-gallon poly tank and pumped directly into the vent stacks of the passive vent system. ORC[®] magnesium peroxide socks were then installed in monitoring wells M-3 and M-4 to supply oxygen to enhance natural biodegradation of hydrocarbons in groundwater.

On July 8, 1998, Philip injected approximately 500 gallons of urea nitrate-water solution into the passive vent system and installed magnesium peroxide socks in monitoring wells



M-3, M-4, R-3 and R-4 to supply oxygen to enhance natural biodegradation of hydrocarbons in groundwater.

The socks continue to be used in monitoring wells M-3, M-4, R-3 and R-4. The socks are removed 30 days prior to sample collection and are reinstalled after sampling is complete. Following nutrient injection, nitrate monitoring was initiated on a quarterly basis as discussed above. Nitrate analysis showed elevated nitrate levels in M-3 and M-4 for three quarters after injection. Nitrate levels have declined steadily and are now below detection limits in both M-3 and M-4.

3. CONCLUSIONS

Garden Area South of Citizen's Ditch

BTEX concentrations remain below NMWQCC groundwater standards in monitor wells M-1, M-2, M-3 and M-5. Monitor well M-4 shows fluctuating benzene levels that remain above NMWQCC groundwater standards, although the levels often decrease significantly when the water table is high. Toluene, ethyl-benzene and total xylenes concentrations remain below NMWQCC groundwater standards. Since the installation of the oxygenate socks and the injection of nutrients into the passive venting system, monitoring well M-3 has been below NMWQCC standards for BTEX in groundwater for four out of the last five quarters sampled.

Meter Site Location North of Citizen's Ditch

Free phase hydrocarbons continue to accumulate in R-1 and R-2 during periods of low groundwater. As in previous years, product accumulation decreases rapidly with the beginning of the irrigation season and increased flow in Citizen's Ditch. Approximately 264.03 gallons of free phase hydrocarbons have been removed from recovery well R-1 since the belt skimming system has been in place. Significant amounts of free phase hydrocarbons are decreasing in R-3.

Approximately 15.39 gallons of free phase hydrocarbons have been removed from recovery well R-2 since the belt skimming system has been in place. Small amounts of free phase hydrocarbons continue to be removed from R-2. In 1998, only 3.91 gallons of free phase hydrocarbons have been recovered from R-2, indicating a significant reduction in free phase hydrocarbons in the area of R-2.

4. **RECOMMENDATIONS**

Based on the current site activities, Philip recommends the following:



- Continue removing free phase hydrocarbons from R-1 and R-2 whenever present.
- Re-inject the passive venting system south of Citizen's Ditch with urea nitrate and replace the existing ORC[®] magnesium peroxide socks with new socks in M-3, M-4, R-3 and R-4 to stimulate biodegradation.
- Sample monitor wells R-3 and R-4 annually. Quarterly sampling in R-4 should resume when BTEX values are below NMWQCC groundwater standards.
- Sample wells M-1, M-2, M-5, and R-5 annually, since BTEX levels in these wells have remained below standards since sampling was initiated.
- Continue sampling monitoring wells M-3 and M-4 quarterly for BTEX and nitrates.
- Recovery wells R-1 and R-2 will not be sampled until free phase hydrocarbons have been removed.
- At the conclusion of the low groundwater season, evaluate the feasibility of using vent sparge technology to continue groundwater remediation throughout the year.
- Collect monthly groundwater elevation data at each well.



 Table 1 - Product Recovery Data

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WELL NUMBER	DATE	WATER LEVEL (feet)	PRODUCT LEVEL (feet)	PRODUCT THICKNESS (feet)	PRODUCT RECOVERED (Total gallons)	TOR REF. ELEV.	WATER ELEV. (feet)	PRODUCT ELEV. (feet)	COMMENTS
R-1	02/07/97	19.97	17.55	2.42	0.00	99.07	77.24	79.66	Prior to Skimmer Installation
R-1	02/19/97	20.16	17.68	2.48	0.00	99.07	77.05	79.53	Prior to Skimmer Installation
R-1	02/26/97	20.17	17.64	2.53	0.00	99.07	77.04	79.57	Prior to Skimmer Installation
R-1	03/05/97	20.18	17.83	2.35	0.00	99.07	77.03	79.38	Prior to Skimmer Installation
R-1	03/12/97	20.28	17.81	2.47	0.00	99.07	76.93	79.40	Prior to Skimmer Installation
R-1	03/17/97	20.61	18.22	2.39	0.00	99.07	76.60	78.99	Prior to Skimmer Installation
R-1	04/03/97	20.85	18.43	2.42	0.00	99.07	76.36	78.78	Prior to Skimmer Installation
R-1	04/04/97	20.81	18.43	2.38	0.00	99.07	76.40	78.78	Start up of skimmer
R-1	04/09/97	20.40	18.23	2.17	13.01	99.07	76.81	78.98	Increased timer to 24 hrs. 4/10/97
R-1	04/16/97	20.49	18.81	1.68	38.99	99.07	76.72	78.40	Will leave skimmer set to run 24 hours per day
R-1	04/23/97	20.25	18.70	1.55	62.90	99.07	76.96	78.51	Running 24 hours per day
R-1	05/01/97	17.56	17.53	0.03	86.81	99.07	79.65	79.68	Set Skimmer to run 12 hours per day
R-1	05/07/97	16.26	16.15	0.11	90.74	99.07	80.95	81.06	Still running 12 hours per day
R-1	05/13/97	16.14	16.13	0.01	93.80	99.07	81.07	81.08	Skimmer running before measurements taken
R-1	05/21/97	16.48	16.41	0.07	96.29	99.07	80.73	80.80	Running 12 hours per day
R-1	05/28/97	16.68	16.63	0.05	99.54	99.07	80.53	80.58	Running 12 hours per day
R-1	06/04/97	16.55	16.55	0.00	99.54	99.07	80.66	80.66	Shut system down
R-1	06/11/97	16.44	16.24	0.00	N/A	99.07	80.77	80.97	Restart system
R-1	06/18/97	16.57	16.57	0.00	99.92	99.07	80.64	80.64	Shut system down
R-1	06/27/97	16.38	16.35	0.03	N/A	99.07	80.83	80.86	Leave system shut down
R-1	07/02/97	16.25	16.22	0.03	N/A	99.07	80.96	80.99	Leave system shut down
R-1	07/09/97	15.69	15.66	0.03	N/A	99.07	81.52	81.55	Leave system shut down for the season
R-1	10/30/97	17.49	17.39	0.10	N/A	99.07	79.72	79.82	Temporary well installation
R-1	11/04/97	17.64	17.56	0.08	N/A	99.07	79.57	79.65	Temporary well installation
R-1	11/14/97	16.33	16.23	0.10	N/A	99.07	80.88	80.98	Temporary well installation
R-1	11/21/97	16.63	16.55	0.08	N/A	99.07	80.58	80.66	Temporary well installation
R-1	11/25/97	16.92	16.86	0.06	N/A	99.07	80.29	80.35	Temporary well installation
R-1	12/16/97	17.81	17.71	0.10	N/A	99.07	79.40	79.50	
R-1	01/14/98	19.79	17.71	2.08	N/A	99.07	77.42	79.50	Skimmer startup, running 24 hrs/day
R-1	01/21/98	19.73	17.97	1.76	105.47	99.07	77.48	79.24	Running 24 hrs

WELL NUMBER	DATE	WATER LEVEL (feet)	PRODUCT LEVEL (feet)	PRODUCT THICKNESS (feet)	PRODUCT RECOVERED (Total gallons)	TOR REF. ELEV.	WATER ELEV. (feet)	PRODUCT	ĊOMMENTS
R-1	01/28/98	18 59	18 40	0 19	116 18	99.07	78.62	78.81	Adjust to run 12 brs / Day
R-1	02/05/98	19.51	18.58	0.93	126.86	99.07	77.70	78.63	Adjust to run 24 hrs/ Day
R-1	02/11/98	19.15	18.73	0.42	148.48	99.07	78.06	78.48	Adjust to run 12 hrs/ Day, Ditch empty
R-1	02/19/98	19.98	18.82	1.16	164.35	99.07	77.23	78.39	Adjust to run 24 hrs/ Day, Ditch empty
R-1	02/25/98	19.25	19.19	0.06	185.77	99.07	77.96	78.02	Adjust to run 12 hrs/ Day, Ditch empty
R-1	03/04/98	19.99	19.24	0.75	198.98	99.07	77.22	77.97	Adjust to run 24 hrs/ Day, Ditch empty
R-1	03/11/98	19.52	19.32	0.20	207.97	99.07	77.69	77.89	Adjust to run 12 hrs/ Day, Ditch empty
R-1	03/18/98	19.94	19.54	0.40	224.24	99.07	77.27	77.67	Adjust to run 24 hrs/ Day, Ditch empty
R-1	03/25/98	19.08	19.03	0.05	248.16	99.07	78.13	78.18	Adjust to run 12 hrs/ day, Ditch empty
R-1	04/02/98	17.31	17.31	0.00	258.30	99.07	79.90	79.90	Shut skimmer down, Ditch running again
R-1	04/08/98	16.77	16.61	0.16	258.30	99.07	80.44	80.60	Adjust to run 4 hrs/ Day, Ditch running full
R-1	04/15/98	16.42	16.42	0.00	264.03	99.07	80.79	80.79	Shut skimmer down, Ditch running full
R-1	04/23/98	16.02	15.87	0.15	264.03	99.07	81.19	81.34	Adjust to run 4 hrs/ Day, Ditch running full
R-1	04/29/98	16.04	16.04	0.00	264.03	99.07	81.17	81.17	Shut system down, ditch running full
R-1	05/08/98	15.42	15.32	0.10	264.03	99.07	81.79	81.89	Leave system shut down, Ditch still running
R-1	05/14/98	14.62	14.60	0.02	264.03	99.07	82.59	82.61	Leave system shut down, Ditch still running
R-1	05/20/98	14.82	14.76	0.06	264.03	99.07	82.39	82.45	Leave system shut down, Ditch still running
R-1	05/27/98	15.24	15.16	0.08	264.03	99.07	81.97	82.05	Leave system shut down, Ditch still running
R-1	06/29/98	14.92	14.84	0.08	264.03	99.07	82.29	82.37	Leave system shut down, Ditch still running
R-1	10/08/98	14.96	14.89	0.07	264.03	99.07	82.25	82.32	Leave system shut down, Ditch still running
R-1	11/11/98	15.00	15.00	0.00	264.03	99.07	82.21	82.21	Leave system shut down, Ditch still running
R-1	11/24/98	15.67	15.49	0.18	264.03	99.07	81.54	81.72	Leave system shut down, Ditch still running
R-1	12/01/98	15.78	15.58	0.20	264.03	99.07	81.43	81.63	Leave system shut down, Ditch still running
R-1	12/14/98	16.08	16.01	0.07	264.03	99.07	81.13	81.20	Leave system shut down, Ditch still running
R-1	12/20/98	16.61	16.45	0.16	264.03	99.07	80.60	80.76	Leave system shut down, Ditch still running
R-1	01/05/99	16.54	16.38	0.16	264.03	99.07	80.67	80.83	Leave system shut down, Ditch still running
R-1	01/11/99	16.52	16.42	0.10	264.03	99.07	80.69	80.79	Leave system shut down, Ditch still running
R-1	02/24/99	16.75	16.66	0.09	264.03	99.07	80.46	80.55	Took water level & product level
				0.00					
R-2	02/07/97	18.66	16.52	2.14	0.00	98.05	77.49	79.63	

		WATER	PRODUCT	PRODUCT	PRODUCT	TOR	WATER	PRODUCT	
NUMBER	DATE	(feet)	(feet)	(feet)	(Total gallons)	ELEV.	(feet)	ELEV. (feet)	COMMENTS
R-2	02/14/97	18.76	16.65	2.11	0.00	98.05	77.39	79.50	Start skimmer, running 12 hours/day
R-2	02/15/97	17.28	17.22	0.06	3.06	98.05	78.87	78.93	
R-2	02/18/97	17.33	17.14	0.19	4.78	98.05	78.82	79.01	Adjust to run 10 hours/day
R-2	02/26/97	17.31	17.20	0.11 /	7.46	98.05	78.84	78.95	
R-2	03/05/97	17.39	17.33	0.06	7.46	98.05	78.76	78.82	
R-2	03/12/97	17.35	17.34	0.01	9.95	98.05	78.80	78.81	
R-2	03/17/97	16.84	16.83	0.01	10.14	98.05	79.31	79.32	
R-2	04/03/97	18.00	18.00	0.00	10.71	98.05	78.15	78.15	No measurable product, shut down to recover
R-2	04/09/97	17.67	17.67	0.00	0.00	98.05	78.48	78.48	Will leave shut down until product returns
R-2	04/16/97	18.12	18.12	0.00	0.00	98.05	78.03	78.03	No measurable product
R-2	04/23/97	18.01	18.01	0.00	0.00	98.05	78.14	78.14	No measurable product
R-2	05/01/97	16.75	16.28	0.47	0.00	98.05	79.40	79.87	Reactivate Skimmer to run 10 hours/day
R-2	05/07/97	14.89	14.89	0.00	11.48	98.05	81.26	81.26	No measurable product. Shut system down
R-2	05/13/97	14.94	14.93	0.01	0.00	98.05	81.21	81.22	Will leave skimmer shut down
R-2	05/21/97	15.28	15.24	0.04	0.00	98.05	80.87	80.91	Reactivate skimmer to run 10 hours per day
R-2	05/28/97	15.48	15.48	0.00	39.57 (water)	98.05	80.67	80.67	No measurable product. Shut system down
R-2	06/04/97	15.37	15.37	0.00	N/A	98.05	80.78	80.78	Shut system down
R-2	06/11/97	15.12	15.11	0.01	N/A	98.05	81.03	81.04	Leave system shut down
R-2	06/18/97	15.41	15.37	0.04	N/A	98.05	80.74	80.78	Leave system shut down
R-2	06/27/97	15.18	15.18	0.00	N/A	98.05	80.97	80.97	Leave system shut down
R-2	07/02/97	15.08	15.06	0.02	N/A	98.05	81.07	81.09	Leave system shut down
R-2	07/09/97	14.45	14.45	0.00	N/A	98.05	81.70	81.70	Leave system shut down for the season
R-2	10/30/97	16.47	16.25	0.22	N/A	98.05	79.68	79.90	Temporary well installation
R-2	11/04/97	16.64	16.43	0.21	N/A	98.05	79.51	79.72	Temporary well installation
R-2	11/14/97	15.14	15.06	0.08	N/A	98.05	81.01	81.09	Temporary well installation
R-2	11/21/97	15.58	15.39	0.19	N/A	98.05	80.57	80.76	Temporary well installation
R-2	11/25/97	15.90	15.69	0.21	N/A	98.05	80.25	80.46	Temporary well installation
R-2	12/16/97	16.89	16.54	0.35	N/A	98.05	79.26	79.61	
R-2	01/14/98	18.58	16.67	1.91	N/A	98.05	77.57	79.48	Skimmer startup, running 12 hrs/day
R-2	01/21/98	17.30	17.30	0.00	14.92	98.05	78.85	78.85	No measurable product, shut down to recover

WELL		WATER LEVEL		PRODUCT THICKNESS	PRODUCT RECOVERED	TOR REF.	WATER ELEV.	PRODUCT	
NUMBER	DATE	(feet)	(teet)	(teet)	(Total gallons)	ELEV.	(Teet)	ELEV. (reet)	COMMENIS
R-2	01/28/98	17.48	17.30	0.18	0.00	98.05	78.67	78.85	Leave system shut down
R-2	02/05/98	17.83	17.71	0.12	0.00	98.05	78.32	78.44	Leave system shut down
R-2	02/11/98	17.86	17.74	0.12	0.00	98.05	78.29	78.41	Leave system shut down, Ditch empty
R-2	02/19/98	18.13	18.02	0.11	0.00	98.05	78.02	78.13	Leave system shut down, Ditch empty
R-2	02/25/98	19.25	19.19	0.06	0.00	98.05	76.90	76.96	Leave system shut down, Ditch empty
R-2	03/04/98	18.48	18.31	0.17	0.00	98.05	77.67	77.84	Leave system shut down, Ditch empty
R-2	03/11/98	18.40	18.26	0.14	0.00	98.05	77.75	77.89	Leave system shut down, Ditch empty
R-2	03/18/98	18.07	17.99	0.08	0.00	98.05	78.08	78.16	Leave system shut down, Ditch empty
R-2	03/25/98	18.02	17.94	0.08	0.00	98.05	78.13	78.21	Leave system shut down, Ditch empty
R-2	04/02/98	16.28	15.92	0.36	0.00	98.05	79.87	80.23	Leave system shut down, Ditch running
R-2	04/08/98	15.64	15.30	0.34	0.00	98.05	80.51	80.85	Turn system on, running 4 hrs/ day, Ditch full
R-2	04/15/98	15.30	15.30	0.00	15.39	98.05	80.85	80.85	Shut system down, Ditch running full
R-2	04/23/98	14.70	14.70	0.00	15.39	98.05	81.45	81.45	Leave system shut down, Ditch running
R-2	04/29/98	14.83	14.83	0.00	15.39	98.05	81.32	81.32	Leave system shut down, Ditch running
R-2	05/08/98	14.13	14.13	0.00	15.39	98.05	82.02	82.02	Leave system shut down, Ditch running
R-2	05/14/98	13.40	13.40	0.00	15.39	98.05	82.75	82.75	Leave system shut down, Ditch running
R-2	05/20/98	13.58	13.58	0.00	15.39	98.05	82.57	82.57	Leave system shut down, Ditch running
R-2	05/27/98	14.00	14.00	0.00	15.39	98.05	82.15	82.15	Leave system shut down, Ditch running
R-2	06/29/98	13.67	13.67	0.00	15.39	98.05	82.48	82.48	Leave system shut down, Ditch running
R-2	10/08/98	13.79	13.79	0.00	15.39	98.05	82.36	82.36	Leave system shut down, Ditch running
R-2	11/11/98	13.79	13.79	0.00 7	15.39	98.05	82.36	82.36	Leave system shut down, Ditch running
R-2	11/24/98	14.01	14.01	0.00	15.39	98.05	82.14	82.14	Leave system shut down, Ditch running
R-2	12/01/98	14.51	14.51	0.00	15.39	98.05	81.64	81.64	Leave system shut down, Ditch running
R-2	12/14/98	14.98	14.93	0.05	15.39	98.05	81.17	81.22	Leave system shut down, Ditch running
R-2	12/20/98	15.42	15.35	0.07	15.39	98.05	80.73	80.80	Leave system shut down, Ditch running
R-2	01/05/99	15.35	15.29	0.06	15.39	98.05	80.80	80.86	Leave system shut down, Ditch running
R-2	01/11/99	15.38	15.35	0.03	15.39	98.05	80.77	80.80	Leave system shut down, Ditch running
R-2	02/24/99	15.61	15.54	0.07	15.39	98.05	80.54	80.61	Took water level & product level
			···						
R-3	02/19/97	16.29	N/A	N/A	N/A	99.29	83.00	N/A	

			PPODUCT	PPODUCT	PRODUCT	TOR	WATER		
WEI			LEVEL	THICKNESS	RECOVERED	REF.	ELEV.	PRODUCT	
NUMBER	DATE	(feet)	(feet)	(feet)	(Total gallons)	ELEV.	(feet)	ELEV. (feet)	COMMENTS
R-3	02/26/97	16.24	N/A	N/A	N/A	99.29	83.05	N/A	
R-3	03/05/97	16.36	N/A	N/A	N/A	99.29	82.93	N/A	
R-3	03/12/97	16.37	N/A	N/A	N/A	99.29	82.92	N/A	
R-3	03/17/97	16.81	N/A	N/A	N/A	99.29	82.48	N/A	
R-3	04/09/97	16.75	N/A	N/A	N/A	99.29	82.54	N/A	
R-3	04/16/97	17.22	N/A	N/A	N/A	99.29	82.07	N/A	
R-3	04/23/97	17.11	N/A	N/A	N/A	99.29	82.18	N/A	
R-3	05/01/97	15.43	N/A	N/A	N/A	99.29	83.86	N/A	
R-3	05/07/97	13.94	N/A	N/A	N/A	99.29	85.35	N/A	
R-3	05/13/97	13.96	N/A	N/A	N/A	99.29	85.33	N/A	
R-3	05/21/97	14.26	N/A	N/A	N/A	99.29	85.03	N/A	
R-3	05/28/97	14.48	N/A	N/A	N/A	99.29	84.81	N/A	
R-3	06/04/97	14.34	N/A	N/A	N/A	99.29	84.95	N/A	
R-3	06/11/97	14.13	N/A	N/A	N/A	99.29	85.16	N/A	
R-3	06/18/97	14.33	N/A	N/A	N/A	99.29	84.96	N/A	
R-3	06/27/97	14.17	N/A	N/A	N/A	99.29	85.12	N/A	
R-3	07/02/97	14.02	N/A	N/A	N/A	99.29	85.27	N/A	
R-3	07/09/97	14.02	N/A	N/A	N/A	99.29	85.27	N/A	
R-3	08/21/97	13.41	N/A	N/A	N/A	99.29	85.88	N/A	
R-3	11/10/97	14.87	N/A	N/A	N/A	99.29	84.42	N/A	
R-3	01/21/98	16.34	N/A	N/A	N/A	99.29	82.95	N/A	
R-3	01/28/98	16.38	N/A	N/A	N/A	99.29	82.91	N/A	
R-3	02/05/98	16.20	N/A	N/A	N/A	99.29	83.09	N/A	
R-3	02/11/98	16.84	N/A	N/A	N/A	99.29	82.45	N/A	Ditch empty
R-3	02/19/98	17.16	N/A	N/A	N/A	99.29	82.13	N/A	Ditch empty
R-3	02/25/98	17.26	N/A	N/A	N/A	99.29	82.03	N/A	Ditch empty
R-3	03/04/98	17.46	N/A	N/A	N/A	99.29	81.83	N/A	Ditch empty
R-3	03/11/98	17.38	N/A	N/A	N/A	99.29	81.91	N/A	Ditch empty
R-3	03/18/98	17.06	N/A	N/A	N/A	99.29	82.23	N/A	Ditch empty
R-3	03/25/98	17.02	N/A	N/A	N/A	99.29	82.27	N/A	Ditch empty



		WATER	PRODUCT	PRODUCT	PRODUCT	TOR	WATER		
WELL		LEVEL	LEVEL	THICKNESS	RECOVERED	REF.	ELEV.	PRODUCT	
NUMBER	DATE	(feet)	(feet)	(feet)	(Total gallons)	ELEV.	(feet)	ELEV. (feet)	COMMENTS
R-3	04/02/98	15.06	N/A	N/A	N/A	99.29	84.23	N/A	Ditch running
R-3	04/08/98	14.42	N/A	N/A	N/A	99.29	84.87	N/A	Ditch running
R-3	04/15/98	14.19	N/A	N/A	N/A	99.29	85.10	N/A	Ditch running
R-3	04/23/98	13.66	N/A	N/A	N/A	99.29	85.63	N/A	Ditch running
R-3	04/29/98	13.81	N/A	N/A	N/A	99.29	85.48	N/A	Ditch running
R-3	05/08/98	13.00	N/A	N/A	N/A	99.29	86.29	N/A	Ditch running
R-3	05/14/98	12.31	N/A	N/A	N/A	99.29	86.98	N/A	Ditch running
R-3	05/19/98	12.40	N/A	N/A	N/A	99.29	86.89	N/A	Ditch running
R-3	05/20/98	12.53	N/A	N/A	N/A	99.29	86.76	N/A	Ditch running
R-3	05/27/98	12.96	N/A	N/A	N/A	99.29	86.33	N/A	Ditch running
R-3	06/29/98	12.55	N/A	N/A	N/A	99.29	86.74	N/A	Ditch running
R-3	10/08/98	13.69	N/A	N/A	N/A	99.29	85.60	N/A	Ditch running
R-3	10/26/98	12.72	N/A	N/A	N/A	99.29	86.57	N/A	Ditch running
R-3	11/24/98	13.26	N/A	N/A	N/A	99.29	86.03	N/A	Ditch running
R-3	12/01/98	13.53	N/A	N/A	N/A	99.29	85.76	N/A	Ditch running
R-3	12/14/98	13.92	N/A	N/A	N/A	99.29	85.37	N/A	Ditch running
R-3	01/05/99	14.27	N/A	N/A	N/A	99.29	85.02	N/A	Ditch running
R-3	01/11/99	14.32	N/A	N/A	N/A	99.29	84.97	N/A	Ditch running
R-3	02/24/99	14.59	N/A	N/A	N/A	99.29	84.70	N/Ā	Took water level & product level
R-4	02/19/97	15.81	N/A	N/A	N/A	98.29	82.48	N/A	
R-4	02/26/97	15.75	N/A	N/A	N/A	98.29	82.54	N/A	
R-4	03/05/97	15.90	N/A	N/A	N/A	98.29	82.39	N/A	
R-4	03/12/97	15.89	N/A	N/A	N/A	98.29	82.40	N/A	
R-4	03/17/97	16.03	N/A	N/A	N/A	98.29	82.26	N/A	
R-4	04/09/97	16.24	N/A	N/A	N/A	98.29	82.05	N/A	
R-4	04/16/97	16.69	N/A	N/A	N/A	98.29	81.60	N/A	
R-4	04/23/97	16.56	N/A	N/Ā	N/A	98.29	81.73	N/A	
R-4	05/01/97	15.04	N/A	N/A	N/A	98.29	83.25	N/A	
R-4	05/13/97	13.63	N/A	N/A	N/A	98.29	84.66	N/A	



		WATER	PRODUCT	PRODUCT	PRODUCT	TOR	WATER		
WELL NUMBER	DATE	LEVEL (feet)	LEVEL (feet)	THICKNESS (feet)	(Total gallons)	REF. ELEV.	ELEV. (feet)	ELEV. (feet)	COMMENTS
R-4	05/21/97	13.89	N/A	N/A	N/A	98.29	84.40	N/A	
R-4	05/28/97	14.09	N/A	N/A	N/A	98.29	84.20	N/A	
R-4	06/04/97	13.99	N/A	N/A	N/A	98.29	84.30	N/A	
R-4	06/11/97	13.73	N/A	N/A	N/A	98.29	84.56	N/A	
R-4	06/18/97	13.95	N/A	N/A	N/A	98.29	84.34	N/A	
R-4	06/27/97	13.85	N/A	N/A	N/A	98.29	84.44	N/A	
R-4	07/02/97	13.68	N/A	N/A	N/A	98.29	84.61	N/A	
R-4	07/09/97	13.16	N/A	N/A	N/A	98.29	85.13	N/A	
R-4	08/21/97	13.12	N/A	N/A	N/A	98.29	85.17	N/A	
R-4	11/10/97	14.55	N/A	N/A	N/A	98.29	83.74	N/A	
R-4	01/21/98	15.84	N/A	N/A	N/A	98.29	82.45	N/A	
R-4	01/28/98	15.83	N/A	N/A	N/A	98.29	82.46	N/A	
R-4	02/05/98	16.24	N/A	N/A	N/A	98.29	82.05	N/A	
R-4	02/11/98	16.28	N/A	N/A	N/A	98.29	82.01	N/A	Ditch empty
R-4	02/19/98	16.58	N/Ā	N/A	N/A	98.29	81.71	N/A	Ditch empty
R-4	02/25/98	16.68	N/A	N/A	N/A	98.29	81.61	N/A	Ditch empty
R-4	03/04/98	16.88	N/A	N/A	N/A	98.29	81.41	N/A	Ditch empty
R-4	03/11/98	16.86	N/A	N/A	N/A	98.29	81.43	N/A	Ditch empty
R-4	03/18/98	16.59	N/A	N/A	N/A	98.29	81.70	N/A	Ditch empty
R-4	03/25/98	16.52	N/A	N/A	N/A	98.29	81.77	N/A	Ditch empty
R-4	04/02/98	14.80	N/A	N/A	N/A	98.29	83.49	N/A	Ditch running
R-4	04/08/98	14.19	N/A	N/A	N/A	98.29	84.10	N/A	Ditch running
R-4	04/15/98	13.94	N/A	N/A	N/A	98.29	84.35	N/A	Ditch running
R-4	04/23/98	13.45	N/A	N/A	N/A	98.29	84.84	N/A	Ditch running
R-4	04/29/98	13.53	N/A	N/A	N/A	98.29	84.76	N/A	Ditch running
R-4	05/08/98	13.00	N/A	N/A	N/A	98.29	85.29	N/A	Ditch running
R-4	05/14/98	12.31	N/A	N/A	N/A	98.29	85.98	N/A	Ditch running
R-4	05/19/98	12.21	N/A	N/A	N/A	98.29	86.08	N/A	Ditch running
R-4	05/20/98	12.36	N/A	N/Ã	N/A	98.29	85.93	N/A	Ditch running
R-4	05/27/98	12.68	N/A	N/A	N/A	98.29	85.61	N/A	Ditch running

44. WELL		WATER	PRODUCT	PRODUCT	PRODUCT	TOR	WATER	PRODUCT	
NUMBER	DATE	(feet)	(feet)	(feet)	(Total gallons)	ELEV.	(feet)	ELEV. (feet)	COMMENTS
R-4	06/29/98	12.36	N/A	N/A	N/A	98.29	85.93	N/A	Ditch running
R-4	10/08/98	14.19	N/A	N/A	N/A	98.29	84.10	N/A	Ditch running
R-4	10/26/98	12.29	N/A	N/A	N/A	98.29	86.00	N/A	Ditch running
R-4	11/11/98	12.04	N/A	N/A	N/A	98.29	86.25	N/A	Ditch running
R-4	11/24/98	12.99	N/A	N/A	N/A	98.29	85.30	N/A	Ditch running
R-4	12/01/98	13.13	N/A	N/A	N/A	98.29	85.16	N/A	Ditch running
R-4	12/14/98	13.50	N/A	N/A	N/A	98.29	84.79	N/A	Ditch running
R-4	12/20/98	15.32	N/A	N/A	N/A	98.29	82.97	N/A	Ditch running
R-4	01/05/99	13.87	N/A	N/A	N/A	98.29	84.42	N/A	Ditch running
R-4	01/11/99	13.92	N/A	N/A	N/A	98.29	84.37	N/A	Ditch running
R-4	02/24/99	14.37	N/A	N/A	N/A	98.29	83.92	N/A	Took water level & product level
R-5	02/19/97	18.48	N/A	N/A	N/A	101.50	83.02	N/A	
R-5	02/26/97	18.33	N/A	N/A	N/A	101.50	83.17	N/A	
R-5	03/05/97	18.71	N/A	N/A	N/A	101.50	82.79	N/A	
R-5	03/12/97	18.50	N/A	N/A	N/A	101.50	83.00	N/A	
R-5	03/17/97	19.02	N/A	N/A	N/A	101.50	82.48	N/A	
R-5	04/09/97	18.92	N/A	N/A	N/A	101.50	82.58	N/A	
R-5	04/16/97	19.40	N/A	N/A	N/A	101.50	82.10	N/A	
R-5	04/23/97	19.20	N/A	N/A	N/A	101.50	82.30	N/A	
R-5	05/01/97	18.28	N/A	N/A	N/A	101.50	83.22	N/A	
R-5	05/07/97	17.46	N/A	N/A	N/A	101.50	84.04	N/A	
R-5	05/13/97	17.18	N/A	N/A	N/A	101.50	84.32	N/A	
R-5	05/20/97	17.25	N/A	N/A	N/A	101.50	84.25	N/A	
R-5	05/28/97	17.35	N/A	N/A	N/A	101.50	84.15	N/A	
R-5	06/04/97	17.26	N/A	N/A	N/A	101.50	84.24	N/A	
R-5	06/11/97	17.01	N/A	N/A	N/A	101.50	84.49	N/A	
R-5	06/18/97	17.09	N/A	N/A	N/A	101.50	84.41	N/A	
R-5	06/27/97	17.13	N/A	N/A	N/A	101.50	84.37	N/A	
R-5	07/02/97	16.87	N/A	N/A	N/A	101.50	84.63	N/A	

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TABLE 1

WELL NUMBER	DATE	WATER LEVEL (feet)	PRODUCT LEVEL (feet)	PRODUCT THICKNESS (feet)	PRODUCT RECOVERED (Total gallons)	TOR REF, ELEV.	WATER ELEV. (feet)	PRODUCT ELEV. (feet)		COMMENTS
R-5	07/09/97	16.64	N/A	N/A	N/A	101.50	84.86	N/A		
R-5	08/21/97	16.50	N/A	N/A	N/A	101.50	85.00	N/A		
R-5	11/10/97	17.48	N/A	N/A	N/A	101.50	84.02	N/A		
R-5	01/21/98	18.46	N/A	N/A	N/A	101.50	83.04	N/A		
R-5	01/28/98	18.48	N/A	N/A	N/A	101.50	83.02	N/A		
R-5	02/05/98	18.92	N/A	N/A	N/A	101.50	82.58	N/A		
R-5	02/11/98	18.91	N/A	N/A	N/A	101.50	82.59	N/A	Ditch empty	
R-5	02/19/98	19.31	N/A	N/A	N/A	101.50	82.19	N/A	Ditch empty	
R-5	02/25/98	19.31	N/A	N/A	N/A	101.50	82.19	N/A	Ditch empty	
R-5	03/04/98	19.51	N/A	N/A	N/A	101.50	81.99	N/A	Ditch empty	
R-5	03/11/98	19.46	N/A	N/A	N/A	101.50	82.04	N/A	Ditch empty	
R-5	03/18/98	19.21	N/A	N/A	N/A	101.50	82.29	N/A	Ditch empty	
R-5	03/25/98	19.11	N/A	N/A	N/A	101.50	82.39	N/A	Ditch empty	
R-5	04/02/98	18.28	N/A	N/A	N/A	101.50	83.22	N/A	Ditch running	
R-5	04/08/98	17.80	N/A	N/A	N/A	101.50	83.70	N/A	Ditch running	
R-5	04/15/98	17.42	N/A	N/A	N/A	101.50	84.08	N/A	Ditch running	
R-5	04/23/98	16.95	N/A	N/A	N/A	101.50	84.55	N/A	Ditch running	
R-5	04/29/98	16.94	N/A	N/A	N/A	101.50	84.56	N/A	Ditch running	
R-5	05/08/98	12.87	N/A	N/A	N/A	101.50	88.63	N/A	Ditch running	
R-5	05/14/98	15.92	N/A	N/A	N/A	101.50	85.58	N/A	Ditch running	
R-5	05/19/98	15.90	N/A	N/A	N/A	101.50	85.60	N/A	Ditch running	
R-5	05/20/98	15.81	N/A	N/A	N/A	101.50	85.69	N/A	Ditch running	
R-5	05/27/98	15.99	N/A	N/A	N/Ā	101.50	85.51	N/A	Ditch running	
R-5	06/29/98	15.57	N/A	N/A	N/A	101.50	85.93	N/A	Ditch running	
R-5	10/08/98	15.49	N/A	N/A	N/A	101.50	86.01	N/A	Ditch running	
R-5	10/26/98	15.36	N/A	N/A	N/A	101.50	86.14	N/A	Ditch running	
R-5	11/11/98	15.52	N/A	N/A	N/A	101.50	85.98	N/A	Ditch running	
R-5	11/24/98	15.79	N/A	N/A	N/A	101.50	85.71	N/A	Ditch running	
R-5	12/01/98	15.96	N/A	N/A	N/A	101.50	85.54	N/A	Ditch running	
R-5	12/14/98	16.17	N/A	N/A	N/A	101.50	85.33	N/A	Ditch running	

		WATER	PRODUCT	PRODUCT	PRODUCT	TOR	WATER		
WELL		LEVEL	LEVEL	THICKNESS	RECOVERED	REF.	ELEV.	PRODUCT	
NUMBER	DATE	(feet)	(feet)	(feet)	(Total gallons)	ELEV.	(feet)	ELEV. (feet)	COMMENTS
R-5	12/20/98	16.71	N/A	N/A	N/A	101.50	84.79	N/A	Ditch running
R-5	01/05/99	16.59	N/A	N/A	N/A	101.50	84.91	N/A	Ditch running
R-5	01/11/99	16.53	N/A	N/A	N/A	101.50	84.97	N/A	Ditch running
R-5	02/24/99	16.89	N/A	N/A	N/A	101.50	84.61	N/A	Took water level & product level
M-1	02/19/97	6.23	N/A	N/A	N/A	84.84	78.61	N/A	
M-1	02/26/97	6.19	N/A	N/A	N/A	84.84	78.65	N/A	
M-1	03/05/97	6.12	N/A	N/A	N/A	84.84	78.72	N/A	
M-1	03/12/97	6.37	N/A	N/A	N/A	84.84	78.47	N/A	
M-1	03/17/97	6.59	N/A	N/A	N/A	84.84	78.25	N/A	
M-1	04/09/97	6.47	N/A	N/A	N/A	84.84	78.37	N/A	
M-1	04/16/97	6.83	N/A	N/A	N/A	84.84	78.01	N/A	
M-1	04/23/97	7.61	N/A	N/A	N/A	84.84	77.23	N/A	
M-1	05/01/97	5.79	N/A	N/A	N/A	84.84	79.05	N/A	
M-1	05/07/97	5.10	N/A	N/A	N/A	84.84	79.74	N/A	
M-1	05/13/97	4.59	N/A	N/A	N/A	84.84	80.25	N/A	
M-1	05/23/97	4.80	N/A	N/A	N/A	84.84	80.04	N/A	
M-1	05/28/97	5.05	N/A	N/A	N/A	84.84	79.79	N/A	
M-1	06/04/97	4.90	N/A	N/A	N/A	84.84	79.94	N/A	
M-1	06/11/97	4.47	N/A	N/A	N/A	84.84	80.37	N/A	
M-1	06/18/97	4.93	N/A	N/A	N/A	84.84	79.91	N/A	
M-1	06/27/97	5.01	N/A	N/A	N/A	84.84	79.83	N/A	
M-1	07/02/97	4.86	N/A	N/A	N/A	84.84	79.98	N/A	
M-1	07/09/97	4.29	N/A	N/A	N/A	84.84	80.55	N/A	
M-1	08/21/97	3.54	N/A	N/A	N/A	84.84	81.30	N/A	
M-1	11/10/97	5.41	N/A	N/A	N/A	84.84	79.43	N/A	
M-1	01/21/98	6.40	N/A	N/A	N/A	84.84	78.44	N/A	
M-1	01/28/98	6.48	N/A	N/A	Ñ/A	84.84	78.36	N/A	
M-1	02/05/98	6.66	N/A	N/A	N/A	84.84	78.18	N/A	
M-1	02/11/98	6.50	N/A	N/A	N/A	84.84	78.34	N/A	Ditch empty

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		WATER	PRODUCT	PRODUCT	PRODUCT	TOR	WATER		
NUMBER	DATE	LEVEL (feet)	(feet)	(feet)	(Total gallons)	ELEV.	ELEV. (feet)	ELEV. (feet)	COMMENTS
M-1	02/19/98	6.75	N/A	N/A	N/A	84.84	78.09	N/A	Ditch empty
M-1	02/25/98	6.83	N/A	N/A	N/A	84.84	78.01	N/A	Ditch empty
M-1	03/04/98	7.01	N/A	N/A	N/A	84.84	77.83	N/A	Ditch empty
M-1	03/11/98	7.15	N/A	N/A	N/A	84.84	77.69	N/A	Ditch empty
M-1	03/18/98	7.03	N/A	N/A	N/A	84.84	77.81	N/A	Ditch empty
M-1	03/25/98	6.97	N/A	N/A	N/A	84.84	77.87	N/A	Ditch empty
M-1	04/02/98	6.16	N/A	N/A	N/A	84.84	78.68	N/A	Ditch running
M-1	04/08/98	5.70	N/A	N/A	N/A	84.84	79.14	N/A	Ditch running
M-1	04/15/98	5.26	N/A	N/A	N/A	84.84	79.58	N/A	Ditch running
M-1	04/23/98	4.96	N/A	N/A	N/A	84.84	79.88	N/A	Ditch running
M-1	04/29/98	4.97	N/A	N/A	N/A	84.84	79.87	N/A	Ditch running
M-1	05/08/98	4.85	N/A	N/A	N/A	84.84	79.99	N/A	Ditch running
M-1	05/14/98	3.90	N/A	N/A	N/A	84.84	80.94	N/A	Ditch running
M-1	05/19/98	3.98	N/A	N/A	N/A	84.84	80.86	N/A	Ditch running
M-1	05/20/98	4.09	N/A	N/A	N/A	84.84	80.75	N/A	Ditch running
M-1	05/27/98	4.23	N/A	N/A	N/A	84.84	80.61	N/A	Ditch running
M-1	06/29/98	4.38	N/A	N/A	N/A	84.84	80.46	N/A	Ditch running
M-1	10/08/98	3.81	N/A	N/A	N/A	84.84	81.03	N/A	Ditch running
M-1	10/26/98	3.46	N/A	N/A	N/A	84.84	81.38	N/A	Ditch running
M-1	11/11/98	3.66	N/A	N/A	N/A	84.84	81.18	N/A	Ditch running
M-1	11/24/98	4.28	N/A	N/A	N/A	84.84	80.56	N/A	Ditch running
M-1	12/01/98	4.37	N/A	N/A	N/A	84.84	80.47	N/A	Ditch running
M-1	12/14/98	4.75	N/A	N/A	N/A	84.84	80.09	N/A	Ditch running
M-1	12/20/98	5.01	N/A	N/A	N/A	84.84	79.83	N/A	Ditch running
M-1	01/05/99	5.13	N/A	N/A,	N/A	84.84	79.71	N/A	Ditch running
M-1	01/11/99	5.19	N/A	N/A /	N/A	84.84	79.65	N/A	Ditch running
M-1	02/24/99	5.44	N/A	N/A	N/A	84.84	79.40	N/A	Took water level & product level
M-2	02/19/97	6.00	N/A	N/A	N/A	85.89	79.89	N/A	
M-2	02/26/97	6.02	N/A	N/A	N/A	85.89	79.87	N/A	

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				PRODUCT	DODUCT	TOD			
				THICKNESS	RECOVERED	REF		PRODUCT	
NUMBER	DATE	(feet)	(feet)	(feet)	(Total gallons)	ELEV.	(feet)	ELEV. (feet)	COMMENTS
M-2	03/05/97	6 12	N/A	N/A	N/A	85.89	79.77	N/A	
M-2	03/12/97	6.19	N/A	N/A	N/A	85.89	79.70	N/A	
M-2	03/17/97	6.32	N/A	N/A	N/A	85.89	79.57	N/A	
M-2	04/09/97	6.31	N/A	N/A	N/A	85.89	79.58	N/A	
M-2	04/16/97	6.62	N/A	N/A	N/A	85.89	79.27	N/A	
M-2	04/23/97	6.70	N/Ā	N/A	N/A	85.89	79.19	N/A	
M-2	05/01/97	4.23	N/A	N/A	N/A	85.89	81.66	N/A	
M-2	05/07/97	3.25	N/A	N/A	N/A	85.89	82.64	N/A	
M-2	05/13/97	3.67	N/A	N/A	N/A	85.89	82.22	N/A	
M-2	05/21/97	4.24	N/A	N/A	N/A	85.89	81.65	N/A	
M-2	05/28/97	4.79	N/Ā	N/A	N/A	85.89	81.10	N/A	
M-2	06/04/97	3.89	N/Ā	N/A	N/A	85.89	82.00	N/A	
M-2	06/11/97	3.86	N/A	N/A	N/A	85.89	82.03	N/A	
M-2	06/18/97	4.61	N/A	N/A	N/A	85.89	81.28	N/A	
M-2	06/27/97	4.27	N/A	N/A	N/A	85.89	81.62	N/A	
M-2	07/02/97	4.34	N/A	N/A	N/A	85.89	81.55	N/A	
M-2	07/09/97	3.43	N/A	N/A	N/A	85.89	82.46	N/A	
M-2	08/21/97	2.91	N/A	N/A	N/A	85.89	82.98	N/A	
M-2	11/10/97	4.76	N/A	N/A	N/A	85.89	81.13	N/A	
M-2	01/21/98	6.36	N/A	N/A	N/A	85.89	79.53	N/A	
M-2	01/28/98	6.48	N/A	N/A	N/A	85.89	79.41	N/A	
M-2	02/05/98	6.62	N/A	N/A	N/A	85.89	79.27	N/A	
M-2	02/11/98	6.50	N/A	N/A	N/A	85.89	79.39	N/A	Ditch empty
M-2	02/19/98	6.70	N/A	N/A	N/A	85.89	79.19	N/A	Ditch empty
M-2	02/25/98	6.78	N/A	N/A	N/A	85.89	79.11	N/A	Ditch empty
M-2	03/04/98	6.92	N/A	N/A	N/A	85.89	78.97	N/A	Ditch empty
M-2	03/11/98	7.05	N/A	N/A	N/A	85.89	78.84	N/A	Ditch empty
M-2	03/18/98	6.95	N/A	N/A	N/A	85.89	78.94	N/A	Ditch empty
M-2	03/25/98	6.90	N/A	N/A	N/A	85.89	78.99	N/A	Ditch empty
M-2	04/02/98	4.94	N/A	N/A	N/A	85.89	80.95	N/A	Ditch running

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WELL		WATER	PRODUCT	PRODUCT THICKNESS	PRODUCT RECOVERED	TOR REF.	WATER ELEV.	PRODUCT	
NUMBER	DATE	(feet)	(feet)	(feet)	(Total gallons)	ELEV.	(feet)	ELEV. (feet)	COMMENTS
M-2	04/08/98	3.90	N/A	N/A	N/A	85.89	81.99	N/A	Ditch running
M-2	04/15/98	3.72	N/A	N/A	N/A	85.89	82.17	N/A	Ditch running
M-2	04/23/98	3.91	N/A	N/A	N/A	85.89	81.98	N/A	Ditch running
M-2	04/29/98	4.27	N/A	N/A	N/A	85.89	81.62	N/A	Ditch running
M-2	05/08/98	4.52	N/A	N/A	N/A	85.89	81.37	N/A	Ditch running
M-2	05/14/98	3.08	N/A	N/A	N/A	85.89	82.81	N/A	Ditch running
M-2	05/19/98	3.50	N/A	N/A	N/A	85.89	82.39	N/A	Ditch running
M-2	05/20/98	3.64	N/A	N/A	N/A	85.89	82.25	N/A	Ditch running
M-2	05/27/98	4.26	N/A	N/A	N/A	85.89	81.63	N/A	Ditch running
M-2	06/29/98	4.08	N/A	N/A	N/A	85.89	81.81	N/A	Ditch running
M-2	10/08/98	3.12	N/A	N/A	N/A	85.89	82.77	N/A	Ditch running
M-2	10/26/98	2.75	N/A	N/A	N/A	85.89	83.14	N/A	Ditch running
M-2	11/11/98	3.00	N/A	N/A	N/A	85.89	82.89	N/A	Ditch running
M-2	11/24/98	3.82	N/A	N/A	N/A	85.89	82.07	N/A	Ditch running
M-2	12/01/98	3.97	N/A	N/A	N/A	85.89	81.92	N/A	Ditch running
M-2	12/14/98	4.51	N/A	N/A	N/A	85.89	81.38	N/A	Ditch running
M-2	12/20/98	4.43	N/A	N/A	N/A	85.89	81.46	N/A	Ditch running
M-2	01/05/99	4.84	N/A	N/A	N/A	85.89	81.05	N/A	Ditch running
M-2	01/11/99	4.93	N/A	N/A	N/A	85.89	80.96	N/A	Ditch running
M-2	02/24/99	5.16	N/A	N/A	N/A	85.89	80.73	N/A	Took water level & product level
M-3	02/19/97	6.90	N/A	N/A	N/A	87.79	80.89	N/A	
M-3	02/26/97	6.86	N/A	N/A	N/A	87.79	80.93	N/A	
M-3	03/05/97	6.94	N/A	N/A	N/A	87.79	80.85	N/A	
M-3	03/12/97	6.99	N/A	N/A	N/A	87.79	80.80	N/A	
M-3	03/17/97	8.41	N/A	N/A	N/A	87.79	79.38	N/A	
M-3	04/09/97	7.41	N/A	N/A	N/A	87.79	80.38	N/A	
M-3	04/16/97	5.78	N/A	N/A	N/A	87.79	82.01	N/A	
M-3	04/23/97	7.61	N/A	N/A	N/A	87.79	80.18	N/A	
M-3	05/01/97	6.51	N/A	N/A	N/A	87.79	81.28	N/A	

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		WATER	PRODUCT	PRODUCT	PRODUCT	TOR	WATER		
WELL		LEVEL	LEVEL	THICKNESS	RECOVERED	REF.	ELEV.	PRODUCT	
NUMBER	DATE	(feet)	(feet)	(feet)	(Total gallons)	ELEV.	(feet)	ELEV. (feet)	COMMENTS
M-3	05/07/97	5.62	N/A	N/A	N/A	87.79	82.17	N/A	
M-3	05/13/97	5.04	N/A	N/A	N/A	87.79	82.75	N/A	
M-3	05/21/97	5.18	N/A	N/A	N/A	87.79	82.61	N/A	
M-3	05/28/97	5.41	N/A	N/A	N/A	87.79	82.38	N/A	
M-3	06/04/97	5.50	N/A	N/A	N/A	87.79	82.29	N/A	
M-3	06/11/97	5.08	N/A	N/A	N/A	87.79	82.71	N/A	
M-3	06/18/97	5.35	N/A	N/A	N/A	87.79	82.44	N/A	
M-3	06/27/97	5.50	N/A	N/A	N/A	87.79	82.29	N/A	
M-3	07/02/97	5.28	N/A	N/A	N/A	87.79	82.51	N/A	
M-3	07/09/97	4.96	N/A	N/A	N/A	87.79	82.83	N/A	
M-3	08/21/97	4.81	N/A	N/A	N/A	87.79	82.98	N/A	
M-3	11/10/97	6.07	N/A	N/A	N/A	87.79	81.72	N/A	
M-3	01/21/98	6.92	N/A	N/A	N/A	87.79	80.87	N/A	
M-3	01/28/98	6.86	N/A	N/A	N/A	87.79	80.93	N/A	
M-3	02/05/98	7.26	N/A	N/Ã	N/A	87.79	80.53	N/A	
M-3	02/11/98	7.30	N/A	N/A	N/A	87.79	80.49	N/A	Ditch empty
M-3	02/19/98	7.56	N/A	N/A	N/A	87.79	80.23	N/A	Ditch empty
M-3	02/25/98	7.69	N/A	N/A	N/A	87.79	80.10	N/A	Ditch empty
M-3	03/04/98	7.95	N/A	N/A	N/A	87.79	79.84	N/A	Ditch empty
M-3	03/11/98	8.09	N/A	N/A	N/A	87.79	79.70	N/A	Ditch empty
M-3	03/18/98	7.85	N/A	N/A ,	N/A	87.79	79.94	N/A	Ditch empty
M-3	03/25/98	7.74	N/A	N/A /	N/A	87.79	80.05	N/A	Ditch empty
M-3	04/02/98	6.77	N/A	N/A	N/A	87.79	81.02	N/A	Ditch running
M-3	04/08/98	6.20	N/A	N/A	N/A	87.79	81.59	N/A	Ditch running
M-3	04/15/98	5.80	N/A	N/A	N/A	87.79	81.99	N/A	Ditch running
M-3	04/23/98	5.25	N/A	N/A	N/A	87.79	82.54	N/A	Ditch running
M-3	04/29/98	5.07	N/A	N/A	N/A	87.79	82.72	N/A	Ditch running
M-3	05/08/98	4.67	N/A	N/A	N/A	87.79	83.12	N/A	Ditch running
M-3	05/14/98	3.66	N/A	N/A	N/A	87.79	84.13	N/A	Ditch running
M-3	05/19/98	3.75	N/A	N/A	N/A	87.79	84.04	N/A	Ditch running

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		WATER	PRODUCT	PRODUCT	PRODUCT	TOR	WATER		
WELL NUMBER	DATE	LEVEL (feet)	LEVEL (feet)	THICKNESS (feet)	(Total gallons)	ELEV.	ELEV. (feet)	ELEV. (feet)	COMMENTS
M-3	05/20/98	3.83	N/A	N/A	N/A	87.79	83.96	N/A	Ditch running
M-3	05/27/98	4.08	N/A	N/A	N/A	87.79	83.71	N/A	Ditch running
M-3	06/29/98	4.24	N/A	N/A	N/A	87.79	83.55	N/A	Ditch running
M-3	08/26/98	4.53	N/A	N/A	N/A	87.79	83.26	N/A	Ditch running
M-3	10/08/98	3.84	N/A	N/A	N/A	87.79	83.95	N/A	Ditch running
M-3	10/26/98	3.54	N/A	N/A	N/A	87.79	84.25	N/A	Ditch running
M-3	11/11/98	3.66	N/A	N/A	N/A	87.79	84.13	N/A	Ditch running
M-3	11/24/98	4.34	N/A	N/A	N/A	87.79	83.45	N/A	Ditch running
M-3	12/01/98	4.43	N/A	N/A	N/A	87.79	83.36	N/A	Ditch running
M-3	12/14/98	4.65	N/A	N/A	N/A	87.79	83.14	N/A	Ditch running
M-3	02/24/99	5.63	N/A	N/A	N/A	87.79	82.16	N/A	Took water level & product level
 M-4	02/19/97	5.36	N/A	N/A	N/A	88.01	82.65	N/A	
M-4	02/26/97	6.96	N/A	N/A	N/A	88.01	81.05	N/A	
M-4	03/05/97	6.87	N/A	N/A	N/A	88.01	81.14	N/A	
M-4	03/12/97	4.79	N/A	N/A	N/A	88.01	83.22	N/A	
M-4	03/17/97	7.43	N/A	N/A	N/A	88.01	80.58	N/A	
M-4	04/09/97	6.65	N/A	N/A	N/A	88.01	81.36	N/A	
M-4	04/16/97	5.78	N/A	N/A	N/A	88.01	82.23	N/A	
M-4	04/23/97	6.10	N/A	N/A	N/A	88.01	81.91	N/A	
M-4	05/01/97	4.65	N/A	N/A	N/A	88.01	83.36	N/A	
M-4	05/07/97	3.45	N/A	N/A	N/A	88.01	84.56	N/A	
M-4	05/13/97	3.33	N/A	N/A	N/A	88.01	84.68	N/A	
M-4	05/21/97	3.64	N/A	N/A	N/A	88.01	84.37	N/A	
M-4	05/28/97	3.92	N/A	N/A	N/A	88.01	84.09	N/A	
M-4	06/04/97	3.78	N/A	N/A	N/A	88.01	84.23	N/A	
M-4	06/11/97	3.45	N/A	N/A	N/A	88.01	84.56	N/A	
M-4	06/18/97	3.79	N/A	N/A	N/A	88.01	84.22	N/A	
M-4	06/27/97	3.79	N/A	N/A	N/A	88.01	84.22	N/A	
M-4	07/02/97	3.69	N/A	N/A	N/A	88.01	84.32	N/A	

WEIL		WATER		PRODUCT	PRODUCT	TOR	WATER	PPODUCT	
NUMBER	DATE	(feet)	(feet)	(feet)	(Total gallons)	ELEV.	(feet)	ELEV. (feet)	COMMENTS
M-4	07/09/97	3.07	N/A	N/A	N/A	88.01	84.94	N/A	
M-4	08/21/97	2.86	N/A	N/A	N/A	88.01	85.15	N/A	
M-4	11/10/97	4.41	N/A	N/A	N/A	88.01	83.60	N/A	
M-4	01/21/98	5.48	N/A	N/A	N/A	88.01	82.53	N/A	
M-4	01/28/98	5.59	N/A	N/A	N/A	88.01	82.42	N/A	
M-4	02/05/98	5.76	N/A	N/A	N/A	88.01	82.25	N/A	
M-4	02/11/98	5.86	N/A	N/A	N/A	88.01	82.15	N/A	Ditch empty
M-4	02/19/98	6.08	N/A	N/A	N/A	88.01	81.93	N/A	Ditch empty
M-4	02/25/98	6.17	N/A	N/A	N/A	88.01	81.84	N/A	Ditch empty
M-4	03/04/98	6.37	N/A	N/A	N/A	88.01	81.64	N/A	Ditch empty
M-4	03/11/98	6.42	N/A	N/A	N/A	88.01	81.59	N/A	Ditch empty
M-4	03/18/98	6.21	N/A	N/A	N/A	88.01	81.80	N/A	Ditch empty
M-4	03/25/98	6.12	N/A	N/A	N/A	88.01	81.89	N/A	Ditch empty
M-4	04/02/98	4.54	N/A	N/A	N/A	88.01	83.47	N/A	Ditch running
M-4	04/08/98	3.97	N/A	N/A	N/A	88.01	84.04	N/A	Ditch running
M-4	04/15/98	3.73	N/A	N/A	N/A	88.01	84.28	N/A	Ditch running
M-4	04/23/98	3.34	N/A	N/A	N/A	88.01	84.67	N/A	Ditch running
M-4	04/29/98	3.42	N/A	N/A	N/A	88.01	84.59	N/A	Ditch running
M-4	05/08/98	2.98	N/A	N/A	N/A	88.01	85.03	N/A	Ditch running
M-4	05/14/98	2.12	N/A	N/A	N/A	88.01	85.89	N/A	Ditch running
M-4	05/19/98	2.26	N/A	N/A	N/A	88.01	85.75	N/A	Ditch running
M-4	05/20/98	2.31	N/A	N/A	N/A	88.01	85.70	N/A	Ditch running
M-4	05/27/98	2.66	N/A	N/A	N/A	88.01	85.35	N/A	Ditch running
M-4	06/29/98	2.54	N/A	N/A	N/A	88.01	85.47	N/A	Ditch running
M-4	08/26/98	3.02	N/A	N/A	N/A	88.01	84.99	N/A	Ditch running
M-4	10/08/98	2.33	N/A	N/A	N/A	88.01	85.68	N/A	Ditch running
M-4	10/26/98	2.13	N/A	N/A	N/A	88.01	85.88	N/A	Ditch running
M-4	11/11/98	2.24	N/A	N/A	N/A	88.01	85.77	N/A	Ditch running
M-4	11/24/98	2.87	N/A	N/A	N/A	88.01	85.14	N/A	Ditch running
M-4	12/01/98	2.97	N/A	N/A	N/A	88.01	85.04	N/A	Ditch running

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WELL		WATER	PRODUČT LEVEL	PRODUCT THICKNESS	PRODUCT RECOVERED	TOR REF.	WATER ELEV.	PRODUCT	
NUMBER	DATE	(feet)	(feet)	(feet)	(Total gallons)	ELEV.	(feet)	ELEV. (feet)	COMMENTS
M-4	12/14/98	3.37	N/A	N/A	N/A	88.01	84.64	N/A	Ditch running
M-4	01/05/99	3.73	N/A	N/A	N/A	88.01	84.28	N/A	Ditch running
M-4	01/11/99	3.79	N/A	N/A	N/A	88.01	84.22	N/A	Ditch running
M-4	02/24/99	8.38	N/A	N/A	N/A	88.01	79.63	N/A	Took water level & product level
M-5	02/19/97	8.49	N/A	N/A	Ñ/A	86.82	78.33	N/A	
M-5	02/26/97	6.59	N/A	N/A	N/A	86.82	80.23	N/A	· · · · · · · · · · · · · · · · · · ·
M-5	03/05/97	6.69	N/A	N/A	N/Ă	86.82	80.13	N/A	
M-5	03/12/97	6.74	N/A	N/A	N/A	86.82	80.08	N/A	
M-5	03/17/97	6.99	N/A	N/A	N/A	86.82	79.83	N/A	
M-5	04/09/97	6.92	N/A	N/A	N/A	86.82	79.90	N/A	
M-5	04/16/97	7.32	N/A	N/A	N/A	86.82	79.50	N/A	
M-5	04/23/97	7.32	N/A	N/A	N/A	86.82	79.50	N/A	
M-5	05/01/97	5.50	N/A	N/A	N/A	86.82	81.32	N/A	
M-5	05/07/97	3.88	N/A	N/A	N/A	86.82	82.94	N/A	
M-5	05/13/97	4.30	N/A	N/A ,	N/A	86.82	82.52	N/A	
M-5	05/21/97	4.76	N/A	N/A /	N/A	86.82	82.06	N/A	
M-5	05/28/97	5.10	N/A	N/A	N/A	86.82	81.72	N/A	
M-5	06/04/97	4.79	N/A	N/A	N/A	86.82	82.03	N/A	
M-5	06/11/97	4.55	N/A	N/A	N/A	86.82	82.27	N/A	
M-5	06/18/97	5.00	N/A	N/A	N/A	86.82	81.82	N/A	
M-5	06/27/97	4.89	N/A	N/A	N/A	86.82	81.93	N/A	
M-5	07/02/97	4.81	N/A	N/A	N/A	86.82	82.01	N/A	
M-5	07/09/97	4.06	N/A	N/A	N/A	86.82	82.76	N/A	
M-5	08/21/97	3.40	N/A	N/A	N/A	86.82	83.42	N/A	
M-5	11/10/97	5.32	N/A	N/A	N/A	86.82	81.50	N/A	
M-5	01/21/98	6.75	N/A	N/A	N/A	86.82	80.07	N/A	
M-5	01/28/98	6.81	N/A	N/A	N/A	86.82	80.01	N/A	
M-5	02/05/98	7.60	N/A	N/A	N/A	86.82	79.22	N/A	
M-5	02/11/98	7.12	N/A	N/A	N/A	86.82	79.70	N/Ā	Ditch empty

WELL		WATER	PRODUCT LEVEL	PRODUCT THICKNESS	PRODUCT RECOVERED	TOR REF.	WATER ELEV.	PRODUCT	COMMENTS
		7.00				86.82	70.54		
	02/19/98	7.20	N/A	N/A	N/A	86.82	79.04		Ditch empty
IVI-5	02/25/90	7.51		N/A	Ν/Δ	86.82	79.43	N/A	Ditch empty
IVI-0	03/04/90	7.00				86.82	70.20		Ditch empty
NA 5	03/11/90	7.02			N/A	86.82	70.30	<u>Ν/Δ</u>	Ditch empty
M 5	03/10/90	7.45		N/A	Ν/Δ	86.82	79.46	N/A	Ditch empty
N_5	03/23/90	<u> </u>		Ν/Δ	Ν/Δ	86.82	81.82	<u>Ν/Α</u>	Ditch rupping
M 5	04/02/90	J.00	N/A	N/A	N/A	86.82	82 39	N/A	
M-5	04/00/90	4.43	Ν/Α	N/A	N/A	86.82	82.39	N/A	Ditch running
M-5	04/13/08	4 21	N/A	N/A	N/A	86.82	82.61	N/A	Ditch running
M-5	04/29/98	4.39	N/A	N/A	N/A	86.82	82.43	N/A	Ditch running
M-5	05/08/98	4 15	N/A	N/A	N/A	86.82	82.67	N/A	Ditch running
M-5	05/14/98	3.08	N/A	N/A	N/A	86.82	83.74	N/A	Ditch running
M-5	05/17/98	3.37	N/A	N/A	N/A	86.82	83.45	N/A	Ditch running
M-5	05/20/98	3.40	N/A	N/A	N/A	86.82	83.42	N/A	Ditch running
M-5	05/27/98	3.96	N/A	N/A	N/A	86.82	82.86	N/A	Ditch running
M-5	06/29/98	3.83	N/A	N/A	N/A	86.82	82.99	N/A	Ditch running
M-5	10/08/98	3.45	N/A	N/A	N/A	86.82	83.37	N/A	Ditch running
M-5	10/26/98	3.15	N/A	N/A	N/A	86.82	83.67	N/A	Ditch running
M-5	11/11/98	3.28	N/A	N/A	N/A	86.82	83.54	N/A	Ditch running
M-5	11/24/98	4.00	N/A	N/A	N/A	86.82	82.82	N/A	Ditch running
M-5	12/01/98	4.12	N/A	N/A	N/A	86.82	82.70	N/A	Ditch running
M-5	12/14/98	4.62	N/A	N/A	N/A	86.82	82.20	N/A	Ditch running
M-5	12/20/98	4.84	N/A	N/A	N/A	86.82	81.98	N/A	Ditch running
M-5	01/05/99	4.93	N/A	N/A	N/A	86.82	81.89	N/A	Ditch running
M-5	01/11/99	5.01	N/A	N/A	N/A	86.82	81.81	N/A	Ditch running
M-5	02/24/99	5.26	N/A	N/A	N/Ă	86.82	81.56	N/A	Took water level & product level

 Table 2 - Summary of Analytical Results

TABLE 2 JAQUEZ COM. C #1 & JAQUEZ COM. E #1 SUMMARY OF ANALYTICAL RESULTS

		Date			Ethyl-	Total	Total	PAH	Floating	
Well	Sample	of	Benzene	Toluene	Benzene	Xylene	BTEX	Analysis	Product	Nitrates
Number	Number	Sample	ug/L	ug/L	ug/L	ug/L	ug/L	Performed	Inches	PPM
R-1	N30969	9/7/93	991	164	113	1111	2379	No	ND	NA
R-1	N31056	10/4/93	1280	1328	74	799	3481	No	1"	NA
R-1	N31240	11/10/93	242	322	15.0	93.9	673	No	ND	NA
R-1	N31384	12/15/93	328	411	26.6	196	962	No	ND	NA
R-1	940026	1/12/94	1830	1965	90.3	1053	4938	No	17"	NA
R-1	940233	2/9/94	1255	1504	42.3	730	3531	No	32"	NA
R-1	940491	3/7/94	760,0	8500	280	2700	19080	Yes	4"	NA
R-1	N/A	5/17/94	No Test	No	10"	NA				
R-1	941003	6/13/94	1450	1930	70.0	944	4394	No	11"	NA
R-1	N/A	9/7/94	No Test	No	2"	NA				
R-1	941619	12/15/94	1890	2130	105.0	990	5115	No	TR	NA
R-1	N/A	8/25/95	No Test	No	TR	NA				
R-1	951178	11/2/95	2330	2400	108	946	5784	No	ND	NA
R-1	N/A	2/5/96	No Test	Yes	0.24"	NA				
R-1	N/A	5/28/96	No Test	No	4.8"	NA				
R-1	960684	8/6/96	2970	3080	130	1200	7380	No	TR	NA
R-1	960900	10/28/96	1690	1970	60.8	800	4520	No	ND	NA
R-1	961007	11/20/96	1240	1540	61.9	600	3450	No	ND	NA
R-1	N/A	2/19/97	No Test	No	29.76"	NA				
R-2	N30970	9/7/93	278	651	59.0	538	1526	No	ND	NA
R-2	N31057	10/4/93	509	789	73.0	741	2112	No	ND	NA
R-2	N31241	11/10/93	284	470	38.0	401	1193	No	ND	NA
R-2	N31385	12/15/93	529	864	65.3	709	2167	No	1"	NA
R-2	940027	1/12/94	1722	2501	150	1702	6075	No	24"	NA
R-2	940234	2/9/94	2806	3667	89.5	1520	8083	No	26"	NA

BTEX SUMMARY

		Date			Ethyl-	Total	Total	PAH	Floating	
Weti	Sample	of	Benzene	Toluene	Benzene	Xylene	BTEX	Analysis	Product	Nitrates
Number	Number	Sample	ug/L	ug/L	ug/L	ug/L	ug/L	Performed	Inches	PPM
R-2	940492	3/7/94	5600	6800	290	2700	15390	Yes	4"	NA
R-2	N/A	5/17/94	No Test	No	7"	NA				
R-2	941004	6/13/94	3210	3790	139	1670	8809	No	7"	NA
R-2	N/A	9/7/94	No Test	No	ND	NA				
R-2	941620	12/15/94	1140	2200	148	1520	5008	No	0.6"	NA
R-2	N/A	8/25/95	No Test	No	TR	NA				
R-2	951179	11/2/95	1250	2030	116	1010	4406	No	TR	NA
R-2	N/A	2/5/96	No Test	Yes	2.52	NA				
R-2	N/A	5/28/96	No Test	No	2.04"	NA				
R-2	960685	8/6/96	2610	3960	165	1540	8275	No	0.72"	NA
R-2	960901	10/28/96	1100	2300	85.4	1100	4585	No	0.96"	NA
R-2	961009	11/20/96	428	1340	87.3	821	2680	No	0.48"	NA
R-2	N/A	2/19/97	No Test	No	NA	NA				
R-3	N30971	9/7/93	<2.0	61.4	22.0	207	290	No	ND	NA
R-3	N31058	10/4/93	21	179	32.0	310	542	No	ND	NA
R-3	N31242	11/10/93	6.19	27.7	10.4	89.2	134	No	ND	NA
R-3	N31386	12/15/93	26	88.4	19.4	178	312	No	ND	NA
R-3	940028	1/12/94	4.4	2.9	2.7	18	28	No	ND	NA
R-3	940235	2/9/94	<2.0	10.9	8.3	59.6	79	No	ND	NA
R-3	940493	3/7/94	7.7	43	24	220	295	Yes	ND	NA
R-3	N/A	5/17/94	No Test	No	ND	NA				
R-3	941005	6/13/94	3.03	41.4	18.4	188	251	No	ND	NA
R-3	941259	9/7/94	<2.5	18	6.9	67.9	93	No	ND	NA
R-3	941621	12/15/94	11.7	12.2	12.4	114	150	No	ND	NA
R-3	950099	2/9/95	7.36	2.7	2.68	20.8	34	Yes	ND	NA
R-3	950562	5/8/95	16.6	11.7	13.9	126	168	No	ND	NA
R-3	950896	8/25/95	<2.5	15.2	13.6	101	130	No	ND	NA
R-3	951180	11/2/95	<2.5	14.0	9.3	82	105	No	ND	NA
R-3	960095	2/5/96	5.34	14.0	12.8	108	140	Yes	ND	NA
R-3	960479	5/28/96	1.05	18.7	22.9	203	246	No	ND	NA

BTEX SUMMARY

		Date			Ethyl-	Total	Total	PAH	Floating	
Well	Sample	of	Benzene	Toluene	Benzene	Xylene	BTEX	Analysis	Product	Nitrates
Number	Number	Sample	ug/L	ug/L	ug/L	ug/L	ug/L	Performed	Inches	PPM
R-3	960686	8/6/96	1.24	24.7	25.9	236	288	No	ND	NA
R-3	960902	10/28/96	<1.0	10.7	12.6	109	132	No	ND	NA
R-3	961010	11/20/96	<1.0	12.5	12.4	114	139	No	ND	NA
R-3	970124	2/19/97	2.12	1.9	2.29	12.6	19	Yes	ND	NA
R-3	970501	5/28/97	<1.0	15.3	13.5	130	159	No	ND	<1.2
R-3	970917	8/21/97	<1.0	20.8	18.6	176	215	No	ND	<1.2
R-3	971196	11/10/97	<1.0	13.6	17.2	149	180	No	ND	<1.2
R-3	980164	2/18/98	<1.0	<1.0	<1.0	<3	<6	Yes	ND	<1.2
R-3	980405	5/19/98	<1.0	11.9	12.5	125	150	No	ND	NA
										- · · · · · · · · · · · · · · · · · · ·
R-4	N30972	9/7/93	104	267	39.9	370	781	No	ND	NA
R-4	N31060	10/4/93	118	266	41	364	789	No	ND	NA
R-4	N31243	11/10/93	93.6	132	40.4	347	613	No	ND	NA
R-4	N31387	12/15/93	102	161	48.4	418	729	No	ND	NA
R-4	940030	1/12/94	124	101	38.5	353	617	No	ND	NA
R-4	940237	2/9/94	120	51.4	20.8	150	342	No	ND	NA
R-4	940494	3/7/94	150	63	20	190	423	Yes	ND	NA
R-4	N/A	5/17/94	No Test	No	ND	NA				
R-4	941007	6/13/94	179	60.6	17.2	176	433	No	ND	NA
R-4	941260	9/7/94	238	102	26	218	584	No	ND	NA
R-4	941622	12/15/94	222	63.3	26.9	213	525	No	ND	NA
R-4	950100	2/9/95	273	61	20.4	165	519	Yes	ND	NA
R-4	950564	5/8/95	278	251	23.1	220	772	No	ND	NA
R-4	950897	8/25/95	646	278	50.8	544	1519	No	ND	NA
R-4	951181	11/2/95	343	60.4	35.1	284	723	No	ND	NA
R-4	960097	2/5/96	218	43.3	23.1	200	484	Yes	ND	NA
R-4	960481	5/28/96	716	199.0	36.6	394	1346	No	ND	NA
R-4	960687	8/6/96	384	156.0	24	275	839	No	ND	NA
R-4	960904	10/28/96	320	53.4	20.1	237	631	No	ND	NA
R-4	9601011	11/20/96	289	31.2	19.3	220	560	No	ND	NA
R-4	970125	2/19/97	162	65.9	34.4	337	599	Yes	ND	NA

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BTEX SUMMARY

_		Date			Ethyl-	Total	Total	PAH	Floating	
Well	Sample	of	Benzene	Toluene	Benzene	Xylene	BTEX	Analysis	Product	Nitrates
Number	Number	Sample	ug/L	ug/L	ug/L	ug/L	ug/L	Performed	Inches	PPM
R-4	970503	5/28/97	189	92.5	13.3	144	439	No	ND	<1.2
R-4	970918	8/21/97	343	377.0	45.5	408	1174	No	ND	<1.2
R-4	971197	11/10/97	542	129.0	31.1	267	969	No	ND	<1.2
R-4	980166	2/18/98	98.0	15.9	10.0	79.3	203	Yes	ND	<1.2
R-4	980406	5/19/98	916.0	244.0	38.1	304	1502	No	ND	NA
										<u></u>
R-5	N30973	9/7/93	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
R-5	N31061	10/4/93	<2,0	<2.0	<2.0	<2.0	N/A	No	ND	NA
R-5	N31244	11/10/93	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
R-5	N31388	12/15/93	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
R-5	940031	1/12/94	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
R-5	940238	2/9/94	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
R-5	940496	3/7/94	<0.5	< 0.5	<0.5	<0.5	N/A	Yes	ND	NA
R-5	N/A	5/17/94	No Test	No	ND	NA				
R-5	941008	6/13/94	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
R-5	941261	9/7/94	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
R-5	941623	12/15/94	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
R-5	950102	2/9/95	<2.5	<2.5	<2.5	<2.5	N/A	Yes	ND	NA
R-5	950565	5/8/95	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
R-5	950898	8/25/95	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
R-5	951182	11/2/95	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
R-5	960098	2/5/96	<2.5	<2.5	<2.5	<2.5	N/A	Yes	ND	NA
R-5	960482	5/28/96	<1.0	<1.0	<1.0	<1.0	<u>N/A</u>	No	ND	NA
R-5	960689	8/6/96	<1.0	<1.0	<1.0	<1.0	N/A	No	ND	NA
R-5	960905	10/28/96	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	NA
R-5	961012	11/20/96	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	NA
R-5	970127	2/19/97	<1.0	<1.0	<1.0	<3.0	N/A	Yes	ND	NA
R-5	970504	5/28/97	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	<1.2
R-5	970919	8/21/97	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	<1.2
R-5	971199	11/10/97	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	<1.2
R-5	980167	2/18/98	<1.0	<1.0	<1.0	<3.0	N/A	Yes	ND	<1.2
R-5	980407	5/19/98	<1.0	<1.0	<1.0	<3.0	<6	No	ND	NA

BTEX SUMMARY

		Date			Ethyl-	Total	Total	PAH	Floating	
Well	Sample	of	Benzene	Toluene	Benzene	Xylene	BTEX	Analysis	Product	Nitrates
Number	Number	Sample	ug/L	ug/L	ug/L	ug/L	ug/L	Performed	Inches	РРМ
			1							
M-1	N30974	9/8/93	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-1	N31062	10/5/93	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-1	N31245	11/11/93	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-1	N31389	12/16/93	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-1	940032	1/13/94	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-1	940239	2/10/94	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-1	940497	3/7/94	<0.5	<0.5	<0.5	<0.5	N/A	Yes	ND	NA
M-1	N/A	5/17/94	No Test	No	ND	NA				
M-1	941009	6/13/94	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-1	941262	9/7/94	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-1	941624	12/15/94	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-1	950103	2/9/95	<2.5	<2.5	<2.5	<2.5	N/A	Yes	ND	NA
M-1	950566	5/8/95	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-1	950899	8/25/95	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-1	951183	11/2/95	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-1	960099	2/5/96	<2.5	<2.5	<2.5	<2.5	N/A	Yes	ND	NA
M-1	960483	5/28/96	<1.0	<1.0	<1.0	<1.0	N/A	No	ND	NA
M-1	960690	8/6/96	<1.0	<1.0	<1.0	<1.0	N/A	No	ND	NA
M-1	960906	10/28/96	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	NA
M-1	961013	11/20/96	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	NA
M-1	970128	2/19/97	<1.0	<1.0	<1.0	<3.0	N/A	Yes	ND	NA
M-1	970505	5/28/97	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	<1.2
M-1	970920	8/21/97	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	<1.2
M-1	971200	11/10/97	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	<1.2
M-1	980168	2/18/98	5.08	<1.0	<1.0	<3.0	N/A	Yes	ND	<1.2
M-1	980408	5/19/98	<1.0	<1.0	<1.0	<3.0	<6.0	No	ND	<0.1
M-2	N30975	9/8/93	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-2	N31063	10/5/93	2.0	2.0	<2.0	<2.0	4.0	No	ND	NA
M-2	N31246	11/11/93	2.3	2.0	<2.0	<2.0	4.3	No	ND	NA

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BTEX SUMMARY

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Page 5 of 9

		Date			Ethyl-	Total	Total	PAH	Floating	
Well	Sample	of	Benzene	Toluene	Benzene	Xylene	BTEX	Analysis	Product	Nitrates
Number	Number	Sample	ug/L	ug/L	ug/L	ug/L	ug/L	Performed	Inches	PPM
M-2	N31390	12/16/93	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-2	940033	1/13/94	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-2	940240	2/10/94	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-2	940498	3/7/94	<0.5	<0.5	<0.5	<0.5	N/A	Yes	ND	NA
M-2	N/A	5/17/94	No Test	No	ND	NA				
M-2	941010	6/13/94	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-2	941263	9/7/94	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-2	941625	12/15/94	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-2	950104	2/9/95	<2.5	<2.5	<2.5	<2.5	N/A	Yes	ND	NA
M-2	950567	5/5/95	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-2	950900	8/25/95	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-2	951184	11/2/95	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-2	960100	2/5/96	<2.5	<2.5	<2.5	<2.5	N/A	Yes	ND	NA
M-2	960484	5/28/96	<1.0	<1.0	<1.0	<1.0	N/A	No	ND	NA
M-2	960691	8/6/96	<1.0	<1.0	<1.0	<1.0	N/A	No	ND	NA
M-2	960907	10/28/96	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	NA
M-2	961014	11/20/96	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	NA
M-2	970129	2/19/97	<1.0	<1.0	<1.0	<3.0	N/A	Yes	ND	NA
M-2	970506	5/28/97	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	<1.2
M-2	970921	8/21/97	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	<1.2
M-2	971201	11/10/97	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	<1.2
M-2	980169	2/18/98	<1.0	<1.0	<1.0	<3.0	N/A	Yes	ND	<1.2
M-2	980409	5/19/98	<1.0	<1.0	<1.0	<3.0	<6	No	ND	<0.1
M-3	N30976	9/8/93	116	<2.0	3.0	37.6	157	No	ND	NA
M-3	N31064	10/5/93	306	<2.0	4.0	19	329	No	ND	NA
M-3	N31247	11/11/93	8.4	5.3	<2.0	2.6	16	No	ND	NA
M-3	N31391	12/16/93	42	<2.0	<2.0	<2.0	42	No	ND	NA
M-3	940034	1/13/94	19	2.1	<2.0	<2.0	21	No	ND	NA
M-3	940241	2/10/94	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-3	940499	3/7/94	<0.5	<0.5	<0.5	2.5	3	Yes	ND	NA

BTEX SUMMARY

		Date			Ethyl-	Total	Total	PAH	Floating	
Well	Sample	of	Benzene	Toluene	Benzene	Xylene	BTEX	Analysis	Product	Nitrates
Number	Number	Sample	ug/L	ug/L	ug/L	ug/L	ug/L	Performed	Inches	PPM
M-3	N/A	5/17/94	No Test	No	ND	NA				
M-3	941011	6/13/94	3.65	<2.0	<2.0	<2.0	4	No	ND	NA
M-3	941264	9/7/94	2.87	<2.5	<2.5	2.5	5	No	ND	NA
M-3	941626	12/15/94	<2.5	<2.5	<2.5	5.61	6	No	ND	NA
M-3	950105	2/9/95	11.4	<2.5	<2.5	<2.5	11	Yes	ND	NA
M-3	950568	5/8/95	180	67.2	<2.5	53.9	301	No	ND	NA
M-3	950901	8/25/95	11.8	<2.5	<2.5	16.8	29	No	ND	NA
M-3	951185	11/2/95	<2.5	<2.5	<2.5	5.03	5	No	ND	NA
M-3	960101	2/5/96	236	<2.5	5.77	22.2	264	Yes	ND	NA
M-3	960485	5/28/96	88.4	<1.0	5.93	20.3	115	No	ND	NA
M-3	960692	8/6/96	96.4	<1.0	2.5	3.27	102	No	ND	NA
M-3	960908	10/29/96	17.4	<1.0	1.55	2.23	21	No	ND	NA
M-3	961015	11/20/96	70.2	<1.0	1.89	<3	72	No	ND	NA
M-3	970130	2/19/97	2.44	<1.0	2.61	7.43	.12	Yes	ND	NA
M-3	970507	5/28/97	38	6.1	<1	13.5	58	No	ND	20.1
M-3	970922	8/21/97	<1	<1	<1	7.68	8	No	ND	<1.2
M-3	971202	11/10/97	<1	<1	<1	7.68	8	No	ND	<1.2
M-3	980170	2/18/98	<1	<1	<1	<3	<6	Yes	ND	<1.2
M-3	980410	5/19/98	26.7	<1	<1	2.52	29	No	ND	0.32
M-3	980589	8/26/98	<1	2.8	<1	<3	3	No	ND	0.30
M-3	980786	11/5/98	1.93	3.2	<1	<3	5	No	ND	NA
										_
M-4	N30977	9/8/93	213	13.3	58	519	803	No	ND	NA
M-4	N31065	10/5/93	302	2.0	55	395	754	No	ND	NA
M-4	N31248	11/11/93	234	2.0	56	383	675	No	ND	NA
M-4	N31392	12/16/93	171	<2.0	34.3	244	449	No	ND	NA
M-4	940035	1/13/94	175	2.5	38	288	504	No	ND	NA
M-4	940242	2/10/94	137	<2.0	29.8	192	359	No	ND	NA
M-4	940500	3/7/94	120	<2.5	27	220	367	Yes	ND	NA
M-4	N/A	5/17/94	No Test	No	ND	NA				
M-4	941012	6/13/94	151	<2.0	28.4	246	425	No	ND	NA

BTEX SUMMARY

Page 7 of 9
		Date			Ethyl-	Total	Total	PAH	Floating	
Well	Sample	of	Benzene	Toluene	Benzene	Xylene	BTEX	Analysis	Product	Nitrates
Number	Number	Sample	ug/L	ug/L	ug/L	ug/L	ug/L	Performed	Inches	PPM
M-4	941265	9/7/94	145	<2.5	24.1	231	400	No	ND	NA
M-4	941628	12/15/94	184	<2.5	22.3	215	421	No	ND	NA
M-4	950106	2/9/95	160	<2.5	19.6	186	366	Yes	ND	NA
M-4	950569	5/8/95	108	<2.5	11.7	119	239	No	ND	NA
M-4	950902	8/25/95	29.3	<2.5	13	116	158	No	ND	NA
M-4	951187	11/2/95	15.1	<2.5	12.9	136	164	No	ND	NA
M-4	960102	2/5/96	33.5	<2.5	19.3	209	262	Yes	ND	NA
M-4	960486	5/28/96	17	<1.0	8.93	93.6	120	No	ND	NA
M-4	960693	8/6/96	2.77	<1.0	3.5	38.5	45	No	ND	NA
M-4	960909	10/29/96	1.03	<1.0	3.66	55.5	60	No	ND	NA
M-4	961016	11/22/96	3.28	<1.0	7.77	90.3	101	No	ND	NA
M-4	970131	2/19/97	17.7	1.5	8.3	54	82	Yes	ND	NA
M-4	970508	5/28/97	53.6	11.6	43.4	366	475	No	ND	225
M-4	970923	8/2197	39.7	3.2	1.51	100	145	No	ND	20.8
M-4	971203	11/10/97	44.8	<1.0	<1.0	71	116	No	ND	1.31
M-4	980171	2/18/98	91.0	<1.0	1.1	74.9	167	Yes	ND	<1.2
M-4	980411	5/19/98	46.6	<1.0	2.81	83.1	133	No	ND	0.21
M-4	980590	8/26/98	51.0	2.6	2.08	45.1	101	No	ND	43.9
M-4	980787	11/5/98	69.0	<1.0	<1.0	33	102	No	ND	NA
			/							
<u>M-5</u>	N30979	9/8/93	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-5	N31066	10/5/93	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-5	N31250	11/11/93	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-5	N31393	12/16/93	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-5	940036	1/13/94	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-5	940243	2/10/94	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-5	940501	3/7/94	<0.5	<0.5	<0.5	<0.5	N/A	Yes	ND	NA
M-5	N/A	5/17/94	No Test	No	ND	NA				
M-5	941013	6/13/94	<2.0	<2.0	<2.0	<2.0	N/A	No	ND	NA
M-5	941267	9/7/94	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-5	941629	12/15/94	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA

BTEX SUMMARY

Page 8 of 9

		Date			Ethyl-	Total	Total	PAH	Floating	
Well	Sample	of	Benzene	Toluene	Benzene	Xylene	BTEX	Analysis	Product	Nitrates
Number	Number	Sample	ug/L	ug/L	ug/L	ug/L	ug/L	Performed	Inches	PPM
M-5	950107	2/9/95	<2.5	<2.5	<2.5	<2.5	N/A	Yes	ND	NA
M-5	950570	5/8/95	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-5	950904	8/25/95	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-5	951188	11/2/95	<2.5	<2.5	<2.5	<2.5	N/A	No	ND	NA
M-5	960103	2/5/96	<2.5	<2.5	<2.5	<2.5	N/A	Yes	ND	NA
M-5	960487	5/28/96	<1.0	<1.0	<1.0	<1.0	N/A	No	ND	NA
M-5	960694	8/6/96	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	NA
M-5	960910	10/29/96	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	NA
M-5	961017	11/21/96	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	NA
M-5	970132	2/19/97	<1.0	<1.0	<1.0	<3.0	N/A	Yes	ND	NA
M-5	970509	5/28/97	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	<1.2
M-5	970925	8/21/97	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	<1.2
M-5	971204	8/21/97	<1.0	<1.0	<1.0	<3.0	N/A	No	ND	<1.2
M-5	980172	2/18/98	<1.0	<1.0	<1.0	<3.0	N/A	Yes	ND	<1.2
M-5	980413	5/19/98	<1.0	<1.0	<1.0	<3.0	<6	No	ND	<0.1

Figure 1 - 1998 1st Quarter Groundwater Elevation Map



Figure 2 - 1998 2nd Quarter Groundwater Elevation Map



Figure 3 - 1998 3rd Quarter Groundwater Elevation Map





Figure 4 - 1998 4th Quarter Groundwater Elevation Map

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Appendix A - Product Thickness vs. Time

for R-1 and R-2







Appendix B - Groundwater Elevations vs. Time





Date



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Appendix C - BTEX and PAH Analytical Lab Reports for the Current Period

March 4, 1998

1st Quarter 1998 REPORT



Jaquez Corn Field Monitor Well Analytical Results Lab Sample #'s 980164 to 980172 Sampled February 18, 1998 Sampled by Dennis Bird

Report Distribution:

Sandra Miller Scott Pope - Philip Services Company Results File

Attachments

								e	Natur	S Cor	npan	ч				Α	2613
								CHAIN	OF CU	STODY	REC	ORD					
Project No	D .	Project N	ame	TA	QUEZ	,		¹⁹⁹⁴ ^م لي <u>ن جا</u> ري من معالم معالم معالم معالم الم	Type		7	4	/	Requested Analysis		,	
Samplers:	: (Signature Q	"Len	nia	v Ľ	Bird		Date: 2-/8-	98	No. of Sample	and	rechnique			Ў / .		·	Remarks
MATRIX	Date	Time	Comp.	GRAB		Sam	iple Number		ers		/?						
WATER	21898	1005	·	X		/2	P0164	<u> </u>	6-1	400	X	X		M	ONITOK	WEL	6 R-3
WATER	2-13-98	1805	-	X		198	90165		6-1	400	χ	X		M	ONITOR	WELL	C. R-3 FIELD DUP
WATER	2-1898	1118	ļ	X		-93	P0166		<u>G-1</u>	4°C	X	X		M	WITCR	WELL	<u>R-4</u>
WATER	2-18-18	1225	·	X		13	PO167		6-1	4°C	X	X		ML	WITOP	WEL	A-5
WATTER	2-1898	1415		X		-93	P0168	\leq	6-1	4°C	X	X		M	NTOR	WELL	- M-1
WATER	2-18-8	1438	2	X		- 90	P0169		6-1	400	<u>X</u>	X	_4	M	a.N.Tol	- well	CM-2
WATER	21298	1556	1	X		-93	P0170		6.1	400	X	X		Me	MITOR	WELL	<u>M-3</u>
WALK	2-1798	1738	2	X		193	P017/		<u>G-1</u>	4°C	X	X		M	aN/Tak	WELL	M-4
UNER	2-13-17	180	/	X			20172		6-1	400	X	X		M	oNITO	p wel	CM-5
WATER	2188	1	-	X					6-1	400	χ				RIP BO	1ANK	/
\sum																	
			1														
Relinguis	hed by: (Si	gnature)	- /	,	Date/	Time 	Received by: (S	ignature)		Relinqui	ished t	oy: (Signi	ature)		Date/	Time	Received by: (Signature)
Ver	mo	<u>BI</u>	ind _		2-12798	1935											
Relinquis	shed by: (S	ignature)			Date/	Time [Received by: (S	ignature)		Relinqu	ished t	oy: (Sign	ature)		Date/	Time	Received by: (Signature)
								h	0								
Helinquis	sned by: (S				Date/	1 IMB	Heceived for La	DOTBIOTY BY: (Signature)	2/20/0		1118 1071/	Hem	Brks:			
Carrier C) o:		·····	ł		J	· ·······	Carrier Ph	one No.		0		Date	Results Rep	ported / by: (Sig	gnature)	
Air Bill N	lo.:															. <u></u>	

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Jaquez Monitor Well R-3 600 500 400 -O-Benzene -X-Toluene PPB,VOC - Total Xylenes - Total BTEX 200 100 ٥ď 7-Sep-93 - 4-Oct-93 - 10-Nov-93 9-Feb-95 Sample Date 9-Feb-94 12-Jan-94 7-Mar-94 15-Dec-93 13-Jun-94 7-Sep-94 15-Dec-94 2-Nov-95 + 6-Aug-96 28-Oct-96 28-May-97 21-Aug-97 19-Feb-97 10-Nov-97 | 18-Feb-98 5-Feb-96 29-May-96

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 EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980164
MTR CODE SITE NAME:	N/A	Jaquez Cornfield
SAMPLE DATE TIME (Hrs):	2/18/98	1005
PROJECT:	Monita	or Well
DATE OF BTEX EXT. ANAL.:	2/20/98	2/20/98
TYPE DESCRIPTION:	R-3	Water

Field Remarks:

RESULTS								
PARAMETER	RESULT	UNITS	DF	QUALIFI Q	ERS			
BENZENE	<1	РРВ						
TOLUENE	- <1	РРВ						
ETHYL BENZENE	<1	PPB						
TOTAL XYLENES	<3	РРВ						
TOTAL BTEX	<6	РРВ						
he Surrogate Recovery was at F = Dilution Factor Used	88.5	BTEX is by EPA Method % for this sample	8020 All QA/QC	was accepta	ble.			
arrative:								
•		······						
pproved By:	<u>вол</u> 980164вте	 XJacquezCornfield,2/2	Date: 3/98	2/24/98				



Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	980164	
DATE SAMPLED:	02/18/98	
TIME SAMPLED (Hrs):	1005	
SAMPLED BY:	DB	
MATRIX:	Water	
METER CODE:	N/A	
SAMPLE SITE NAME:	Jaquez Cornfield	
SAMPLE POINT:	MW R-3	

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	< 0.1	PPM	02/19/98
Nitrite as N0 ₂ -N	< 0.1	PPM	02/19/98

ab Remarks:

eported By: <u>CV</u>

Approved By:

980164GCSSNitrate-Nitrite, 3/3/98

Date: <u>3/4/98</u>

FIELSERVICES	Well	Develop	nt and Purg	ging Data
Site Name_ <i>JAQUE2</i>	i	口 、 次	Development Purging	Well Number <u>R-3</u> Meter Code
Development Criteria				·
3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other Methods of Development	Water Volume Initial Depth of Well (fe- Initial Depth to Water (f Height of Water Colum	Calculation et) 72./0 eet) 7.07 n in Well (feet) 3	5.03	Instruments pH Meter DO Monitor Conductivity Meter
Pump Bailer Centrifugal 🔀 Bottom Valve	Item Cubi	er Volume in Well c Feet Gallons	Gallons to be Removed	Other <u>0,0, CHEMETS</u> KIT
Submersible Double Check Valve	Well Casing	3.3	10.0	Water Disposal
Peristaltic Stainless-steel Kemmerer	Gravel Pack			ON SITE BARRELS
_	Drilling Fluids			
Other	Total		<u> </u>	

Water Removal Data

		Develo	pment	Removal	Intake	Ending Water	Water V	/olume	Product	Volume	Temperature		Conductivity	Dissolved	
Date	Time	Meth	od	Rate	Depth	Depth	Remov	ed (gal)	Removed	(gallons)	°C	pН	µmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
2-18-98	0926										11.2	6.08	937		· · · · · · · · · · · · · · · · · · ·
218.98	093/						3.0	3.0			11.3	6.18	153		
2-18-98	0935						2.0	5.0			11.3	6.18	452		
2-18.98	0954						5.0	10.0			10.9	6.54	373	1,5	
											1				
								1							
						·									

____Date 2-18-98 Reviewer _____ Plu Labolin Date 2/24/98_

Comments

Developer's Signature Lennis Bird

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Fiel	ld ID		Lab iD		-
SAMPLE NUMBER:	N	/A		980165		
MTR CODE SITE NAME:	N	/A	Jac	quez Cornfiel	d	
SAMPLE DATE TIME (Hrs):	2/1	8/98		1005		
PROJECT:		Monit	or Well			
DATE OF BTEX EXT. ANAL.:	2/2	0/98		2/20/98		
TYPE DESCRIPTION:	R-3 Fi	eld Dup		Water		J
Field Remarks:		RESULTS				
PARAMETER	RESULT	UNITS	DE	QUALIFI	ERS	
BENZENE	<1	РРВ				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	РРВ				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	<6	PPB	<u> </u>			
The Surrogate Recovery was at DF = Dilution Factor Used	91.2	BTEX is by EPA Methon % for this sample	a 8020 e All QA/QC	was accepta	ıble.	
Varrative:						
Approved By: Jolu V	Jull	XJacquezCornfield,2/2	Date: 23/98	2/24/98		



эb Remarks:

eported By: CV

Approved By:

980165GCSSN/trate-Nitrite, 3/3/98

Date: 3/4/48



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EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Field	I ID		Lab ID	
SAMPLE NUMBER:	N/	/A		980166	
MTR CODE SITE NAME:	N/	'A	Jac	uez Cornfield	
SAMPLE DATE TIME (Hrs):	2/18	3/98		1118	
PROJECT:		Monito	or Well		
DATE OF BTEX EXT. ANAL.:	2/20)/98		2/20/98	
TYPE DESCRIPTION:	R-	-4		Water 📐	
Field Remarks:					
		RESULTS			
PARAMETER	RESULT	UNITS	DF	QUALIFIERS	
BENZENE	98.0	PPB	2	D	
				1 (
TOLUENE	15.9	PPB	2	D	
TOLUENE ETHYL BENZENE	15.9 10.0	PPB	2	D	
TOLUENE ETHYL BENZENE TOTAL XYLENES	15.9 10.0 79.3	PPB PPB PPB	2 2 2	D D D	
TOLUENE ETHYL BENZENE TOTAL XYLENES TOTAL BTEX	15.9 10.0 79.3 203	PPB PPB PPB PPB	2 2 2	D D D	
TOLUENE ETHYL BENZENE TOTAL XYLENES TOTAL BTEX TOTAL BTEX TOTAL BTEX TOTAL BTEX	15.9 10.0 79.3 203 86.7 analyte calculated	PPB PPB PPB PPB BTEX is by EPA Method % for this sample is based on a sec	2 2 2 8020 All QA/QC ondary dilutic	D D D was acceptable,	
TOLUENE ETHYL BENZENE TOTAL XYLENES TOTAL BTEX TOTAL BTEX TOTAL BTEX TOTAL BTEX TOTAL BTEX TOTAL BTEX	15.9 10.0 79.3 203 86.7 analyte calculated	PPB PPB PPB BTEX is by EPA Method % for this sample is based on a sec	2 2 2 8020 All QA/QC ondary dilutic	D D D was acceptable.	
Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	980166	
DATE SAMPLED:	02/18/98	
TIME SAMPLED (Hrs):	1118	
SAMPLED BY:	DB	
MATRIX:	Water	
METER CODE:	N/A	
SAMPLE SITE NAME:	Jaguez Cornfield	
SAMPLE POINT:	MW R-4	

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	< 0.1	PPM	02/19/98
Nitrite as N0 ₂ -N	< 0.1	PPM	02/19/98

b Remarks:



Approved By:

980166GCSSNitrate-Nitrite, 3/3/98

Date: <u>3/4/48</u>

	We	ell Develop	ging Data	
Site Name_JAQUE2			Development Purging	Well Number <u>P-4</u> Meter Code
Development Criteria				
 3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other 	Water Volum Initial Depth of Well Initial Depth to Water Height of Water Col	r (feet)	-59	Instruments
Methods of Development	Diameter (inches): \	Well 4 Gravel Pa	ack	Temperature Meter
Pump Bailer Centrifugal X Bottom Valve	Item C	Vater Volume in Well ubic Feet Gallons	Gallons to be Removed	Other <u>D. C. C.</u>
Submersible Double Check Valve	Well Casing	3.7	11.1	Water Disposal
Peristaltic Stainless-steel Kemmerer	Gravel Pack			ON SITE BARRELS
	Drilling Fluids			
Other	Total			

Water Removal Data

		Develo	pment	Removal	Intake	Ending Water	Water \	/olume	Product	Product Volume Temperature			Conductivity	Dissolved	
Date	Time	Metr	nod	Rate	Depth	Depth	Remov	ed (gal)	Removed	l (gallons)) °C	рН	µmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
2-18-98	1030										12.4	6.73	565		
21898	1036						5.0	5.0			12.7	7.10	609		
2-18-98	1059						5.0	10.0			113.6	7.47	1040		
2-18-98	1111						3.0	13.0			13.6	7.48	1015	15	
								1							
								1							
						T									

Date 2-18-98 Reviewer Adu Farth Date 2/24/98

Comments

Developer's Signature Dennis Bird

Jaquez Monitor Well R-5

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> FIELD SERVICES LABORATORY ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980167
MTR CODE SITE NAME:	N/A	Jaquez Cornfield
SAMPLE DATE TIME (Hrs):	2/18/98	1225
PROJECT:	Monito	or Well
DATE OF BTEX EXT. ANAL.:	2/20/98	2/20/98
TYPE DESCRIPTION:	R-5	Water

Field Remarks:

RESULTS PARAMETER RESULT UNITS QUALIFIERS DE BENZENE <1 PPB TOLUENE PPB <1 ETHYL BENZENE <1 PPB TOTAL XYLENES <3 PPB TOTAL BTEX <6 **PPB** --BTEX is by EPA Method 8020 --The Surrogate Recovery was at 88.8 % for this sample All QA/QC was acceptable. DF = Dilution Factor Used

Narrative:

Approved By:

John Labelin Dat 980167BTEXJacquezCornfield, 2/23/98

2/24/98

Date:



PPM

< 0.1

ab Remarks:

teported By: PV

Approved By:

980167GCSSNitrate-Nitrite, 3/3/98

Date: 3/4/45

02/19/98

FIEL SERVICES	Well Developent and Pu	rging Data
Site Name_ <i>JAQUE</i> 2	Development	Well Number Meter Code
Development Criteria		
3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other	Water Volume Calculation Initial Depth of Well (feet) 24,40 Initial Depth to Water (feet) 1923 Height of Water Column in Well (feet) 5.17	Instruments pH Meter DO Monitor Conductivity Meter
Methods of Development	Diameter (inches): Well Gravel Pack	Temperature Meter
Pump Bailer	Water Volume in Well Gallons to be Item Cubic Feet Gallons Removed	$\overset{\text{Other}}{\longrightarrow} \mathcal{O} \overset{\text{Other}}{\longrightarrow} \mathcal{O} \text{$
Submersible Double Check Valve	Well Casing 3.4 10.3	Water Disposal
Peristaltic Stainless-steel Kemmerer	Gravel Pack	ON SITE BARNELS
	Drilling Fluids	
Other	Total	

Water Removal Data

		Develo	pment	Removal	Intake	Ending Water	Water \	/olume	Product	Volume	Temperature		Conductivity	Dissolved	
Date	Time	Meth	lod	Rate	Depth	Depth	Remov	ed (gal)	Removed	(gallons)	°C	рН	µmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
2-18-98	1138										14.8	7.37	4850		
2-18-98	1142						3.0	3.0			14.8	7.30	4280		
2.18.28	1154						1.0	40			14.5	7.4/	4350	25	
								1							
						1									

Comments THE WELL BAILED DRY P40 SALLONS.

Developer's Signature Developer's Signature Date 2-18-98 Reviewer John Faltar: Date 2/24/98

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Jaquez Monitor Well M-1





FIELD SERVICES LABORATORY

ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Fiel	d ID					
SAMPLE NUMBER:	N	/A		980168			
MTR CODE SITE NAME:	N	/A	Ja	quez Cornfield			
SAMPLE DATE TIME (Hrs):	2/11	3/98	1415				
PROJECT:		Monito	r Well				
DATE OF BTEX EXT. ANAL.:	2/20	0/98		2/20/98			
TYPE DESCRIPTION:	мм	-1		Water			
Field Remarks:		RESULTS					
				N <u></u>			
PARAMETER	RESULT	UNITS	DE	OUALIFIERS			
BENZENE	5.08	РРВ					
TOLUENE	<1	PPB					
ETHYL BENZENE	<1	РРВ					
TOTAL XYLENES	<3	РРВ		<u></u>]		
TOTAL BTEX	5	PPB					
The Surrogate Recovery was at DF = Dilution Factor Used	86.5	BTEX is by EPA Method % for this sample	8020 All QA/QC	; was acceptable.			
Narrative:							
Approved By: John Fa	980168BTE	XJacquezCornfield,2/2	Date: 3/98	2/24/98			



Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	980168
DATE SAMPLED:	02/18/98
TIME SAMPLED (Hrs):	1415
SAMPLED BY:	DB
MATRIX:	Water
METER CODE:	N/A
SAMPLE SITE NAME:	Jaquez Cornfield
SAMPLE POINT:	MW M-1

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GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	< 0.1	PPM	02/19/98
Nitrite as N0 ₂ -N	< 0.1	PPM	02/19/98

ab Remarks:

leported By: _____

in Lotte Approved By:

980168GCSSNitrate-Nitrite, 3/3/98

Date: 3/4/48

FIEL SERVICES										
		weil Development and Purging Data								
				Development	Well Number <u>M - /</u>					
Site Name_ <i>JAQUEZ</i>		ı	X	Purging	Meter Code					
Development Criteria										
3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other	Water Vol Initial Depth of V Initial Depth to V	Iume Calcu Well (feet) /3 Water (feet)	ulation		Instruments PH Meter DO Monitor Conductivity Meter					
Methods of Development	Diameter (inche	es): Well	Gravel P	ack						
Pump Bailer Centrifugal X Bottom Valve	ltem	Water Volum Cubic Feet	e in Well Gallons	Gallons to be Removed	Other <u>D.D. CHCMCI</u> KIT					
Submersible Double Check Valve	Well Casing		5.7	17.2	Water Disposal					
Peristaltic Stainless-steel Kemmerer	Gravel Pack				ON SITE BARRELS					
	Drilling Fluids									
Other	Total									

Water Removal Data

		Develo	pment	Removal	Intake	Ending Water	Water V	Water Volume Product Volume		Temperature		Conductivity	Dissolved		
Date	Time	Meth	nod	Rate	Depth	Depth -	Remov	ed (gal)	Removed	(gallons)	°C	pН	µmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	· · · · · · · · · · · · · · · · · · ·
21898	13/4										13.0	6.90	274		
21898	13/9						5.0	50			10.8	7.09	278		
2-1,298	1329						2.0	7.0			16.0	7.27	300	3.5	
					_										
											/				
											Y				

Comments_<u>THE WELL BAILED ONY PIO GALLONS</u>. Developer's Signature <u>Jennis Bisc</u> Developer's Signature <u>Jennis Bisc</u> Date <u>2-19-98</u> Reviewer <u>Jennifubetus</u> Date <u>7/24/98</u>

Jaquez Monitor Well M-2



-O-Benzene -X-Toluene -H-Ethyl Benzene -A-Total Xylenes -O-Total BTEX

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION



Varrative:

Approved By:	John Laben. 980169BTEXJa	Date: cquezCornfield,2/23/98	2/24/98	·

FIELD SERVICES Field Services Laboratory

EL PASO

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	980169	
DATE SAMPLED:	02/18/98	
TIME SAMPLED (Hrs):	1438	
SAMPLED BY:	DB	
MATRIX:	Water	
METER CODE:	N/A	
SAMPLE SITE NAME:	Jaquez Cornfield	
SAMPLE POINT:	MW M-2	

FIELD REMARKS: 📐

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	<0.1	PPM	02/19/98
Nitrite as N0 ₂ -N	< 0.1	PPM	02/19/98

ib Remarks:

C/ sported By:___

-lan Approved By:

980169GCSSN/trate-Nitrite, 3/3/98

Date: 3/4/68



Well Developient and Purging Data

Puraina

8.48

X Development

Site Name JAQUEZ

Development Criteria

Water Volume Calculation Initial Depth of Well (feet) (5.10

Initial Depth to Water (feet) 6.63

Height of Water Column in Well (feet)

Stabilization of Indicator Parameters Other

3 to 5 Casing Volumes of Water Removel

Methods of Development

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

		\ /~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
Diameter (inch	es): Well_	Gravel P	ack
	Water Volur	ne in Well	Gallons to be
Item	Cubic Feet	Gallons	Removed
Well Casing		5.6	16.8
Gravel Pack			
Drilling Fluids			
Total			

Well Number <u>M-2</u>

Meter Code

Instruments

DH Meter DO Monitor

X Conductivity Meter

Temperature Meter Other <u>D. O. CHEMETS</u> KIT X

Water Disposal ON SITE BARRELS

Water Removal Data

Other

T		Develo	pment	Removal	Intake	Ending Water	Water V	olume	Product	Volume	Temperature		Conductivity	Dissolved	
Date	Time	Meth	nod	Rate	Depth	Depth	Remov	ed (gal)	Removed	(gallons)	°C	pН	µmho/cm	Öxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
2-15-98	1342										8.7	7.29	489		
2-18-98	1347						5.0	50			8.0	7.20	502		
2-18-98	1352						50	10.0			8.0	7.21	500		
2-18-98	1358						50	15.0			7.5	7.23	492		
21898	1403						5.0	20.0			7.5	7.27	497	3,5	
	i														
		1													

Comments

Developer's Signature Lennis Bind

Date 2-18.98 Reviewer John Harden Date 22498





FIELD SERVICES LABORATORY

ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980170
MTR CODE SITE NAME:	N/A	Jaquez Cornfield
SAMPLE DATE TIME (Hrs):	2/18/98	1556
PROJECT:	Monit	or Well
DATE OF BTEX EXT. ANAL.:	2/20/98	2/20/98
TYPE DESCRIPTION:	M-3	Water

Field Remarks:

RESULTS											
PARAMETER	RESULT	UNITS	DF	QUALIFI Q	RS						
BENZENE	<1	PPB									
TOLUENE	<1	PPB									
ETHYL BENZENE	<1	РРВ									
TOTAL XYLENES	<3	PPB									
TOTAL BTEX	< 6	PPB									
he Surrogate Recovery was at)F = Dilution Factor Used	84.0	BTEX is by EPA Method % for this sample	8020 All QA/QC	was accepta	ble.						
larrative:											
pproved By:	Farden [*] 980170BTE	XJacquezCornfield,2/2	Date: 3/98	2/24/48							

Field Services Laboratory

FIELD SERVICES

EL PASO

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	980170	
DATE SAMPLED:	02/18/98	
TIME SAMPLED (Hrs):	1556	
SAMPLED BY:	DB	
MATRIX:	Water	
METER CODE:	N/A	
SAMPLE SITE NAME:	Jaquez Cornfield	
SAMPLE POINT:	MW M-3	

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	0.1	РРМ	02/19/98
Nitrite as N0 ₂ -N	0.1	PPM	02/19/98

ib Remarks:

ported By:

Approved By:

980170GCSSNitrate-Nitrite, 3/3/98

Date: 3/4/48

FIEL SERVICES	Well Develop	ing Data	
Site Name	\	Development Purging	Well Number <u>M-3</u> Meter Code
Development Criteria			
 3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other 	Water Volume Calculation Initial Depth of Well (feet) <u>15-20</u> Initial Depth to Water (feet) <u>742</u> Height of Water Column in Well (feet) 7	78	Instruments pH Meter DO Monitor Conductivity Meter
Methods of Development	Diameter (inches): WellGravel P	ack	Temperature Meter
Pump Bailer Centrifugal X Bottom Valve	Water Volume in Well Item Cubic Feet Gallons	Gallons to be Removed	Other <u>M.O.</u> CACATON
Submersible Double Check Valve	Well Casing 5./	15,4	Water Disposal
Peristaltic Stainless-steel Kemmerer	Gravel Pack		ON SITE BARREUS
	Drilling Fluids		
Other	Total		

Water Removal Data

		Develo	pment	Removal	Intake	Ending Water	Water V	/olume	Product	Volume	Temperature		Conductivity	Dissolved	
Date	Time	Meth	nod	Rate	Depth	Depth	Remov	ed (gal)	Removed	(gallons)	°C	pН	μ mho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
2-18-98	151/										12.0	7.38	595		
2-18-98	1517						5.0	5.0			11.1	7.14	484		
2-18-98	1521						5.0	10.0			11.2	7.16	416		
2-18-98	1528						5.0	150			11.5	8.30	467		
2-298	1534						5.0	20.0			11.1	8.20	406	3.5	

Comments REMOVED THE OXYSEN RELEASE COMPOUND SOCKS 30 DAKS BEFORE SAMPLING. Developer's Signature Devenio Bird Date 2-18-98 Reviewer John Furbrai: Date 2/24/98





> FIELD SERVICES LABORATORY ANALYTICAL REPORT

> > JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

-	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980171
MTR CODE SITE NAME:	N/A	Jaquez Cornfield
SAMPLE DATE TIME (Hrs):	2/18/98	1738
PROJECT:	Monit	tor Weil
DATE OF BTEX EXT. ANAL.:	2/20/98	2/20/98
TYPE DESCRIPTION:	M-4	Water

Field Remarks:	<u>,</u>					
		RESULTS				
PARAMETER	RESULT	UNITS	DF	QUALI	FIERS	
BENZENE	91.0	РРВ				
TOLUENE	<1	РРВ				
ETHYL BENZENE	1.10	PPB				
TOTAL XYLENES	74.9	PPB				
TOTAL BTEX	167	РРВ				
he Surrogate Recovery was at F = Dilution Factor Used	86.9	BTEX is by EPA Method % for this sample	8020 All QA/QC	was accep	table.	
arrative:						
pproved By:	р сивери 980171ВТЕ:	XJacquezCornfield, 2/2	Date: 3/98	2/24/98	?	

Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	980171	
DATE SAMPLED:	02/18/98	
TIME SAMPLED (Hrs):	1738	
SAMPLED BY:	DB	
MATRIX:	Water	
METER CODE:	N/A	
SAMPLE SITE NAME:	Jaquez Cornfield	
SAMPLE POINT:	MW M-4	

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

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PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	0.1	PPM	02/19/98
Nitrite as N0 ₂ -N	0.1	PPM	02/19/98

ab Remarks:

eported By: _____

Approved By:

980171GCSSNitrate-Nitrite, 3/3/98

Date: <u>3/4/68</u>

FIEL	Well Dev	Well Developent and Purging Data								
77/02.57		Development	Well Number <u>M-4</u>							
Site Name_ <u>VAYQUE</u>			Meter Code							
Development Criteria										
3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other	Water Volume Calco Initial Depth of Well (feet)	ulation 5.30 5.9/ 1 (feet) <u>9.39</u>	Instruments pH Meter DO Monitor Conductivity Meter							
Pump Bailer	Diameter (inches): Well	Gravel Pack Gallons to be	Other D.D. CHEMETS KIT							
Centrifugal Sottom Valve	Item Cubic Feet	Gallons Removed								
Submersible Double Check Valve	Well Casing	62 18.6	Water Disposal							
Peristaltic Stainless-steel Kemmerer	Gravel Pack		ON SITE BARRELS							
	Drilling Fluids									
Other	Total									

Water Removal Data

Date	Time	Develo Meth	pment od Railer	Removal Rate	Intake Depth	Ending Water Depth	Water \ Remov	/olume ed (gal)	Product Removed	Product Volume		рН	Conductivity µmho/cm	Dissolved Oxygen	Comments
2-18.98	1622	<u>rump</u>	Dallet	(gavmin)		(ieei)	morement	Cumulative	increment	Cumulative	10,3	8.47	778	ing/L	
21898	1625				······		3.0	3.0			9.2	8.60	\$59		
2.13.98	1628						2.0	5.0			9.0	8.60	877		
2-18-88	1645						7.0	7.0			8.4	8.84	761	3.5	
								1							
										[

Comments THE WELL BAILED ORY PT.O GALLONS. REMOVED THE OXYGEN COMPOUND SOCK 30 DAKS BEFORE SAAPUING. Developer's Signature Developer's Signature Date 2/28/98 Date 2-18-98 Reviewer John Farton Date 2/28/98

Jaquez Monitor Well M-5

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FIELD SERVICES LABORATORY

ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

_	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980172
MTR CODE SITE NAME:	N/A	Jaquez Cornfield
SAMPLE DATE TIME (Hrs):	2/18/98	1801
PROJECT:	Monit	or Well
DATE OF BTEX EXT. ANAL.:	2/20/98	2/20/98
TYPE DESCRIPTION:	M-5	Water

Field Remarks:

RESULTS											
PARAMETER	RESULT	UNITS	DF	QUALIFIE	RS						
BENZENE	<1	PPB									
TOLUENE	<1	РРВ	· · · · ·								
ETHYL BENZENE	<1	РРВ									
TOTAL XYLENES	< 3	PPB									
TOTAL BTEX	<6	РРВ									
The Surrogate Recovery was at OF = Dilution Factor Used	87.2	BTEX is by EPA Method % for this sample	8020 All QA/QC	was acceptal	ble.						
larrative:					- <u></u>						
pproved By: John G	Part du	XJacquezCornfield,2/2	Date: 3/98	2/24/98							

Field Services Laboratory

FIELD SERVICES

EL PASO

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	980172	
DATE SAMPLED:	02/18/98	
TIME SAMPLED (Hrs):	1801	
SAMPLED BY:	DB	
MATRIX:	Water	
METER CODE:	N/A	
SAMPLE SITE NAME:	Jaquez Cornfield	
SAMPLE POINT:	MW M-5	

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	<0.1	PPM	02/19/98
Nitrite as N0 ₂ -N	<0.1	PPIM	02/19/98

ab Remarks:

sported By:

Approved By:

980172GC\$SNitrate-Nitrite, 3/3/98

Date: <u>3/4/48</u>



		Development		Removal	Intake	Ending Water	Water	Water Volume		Volume	Temperature		Conductivity	Dissolved	
Date	Time	Met	nod	Rate	Depth	Depth	Remov	/ed (gal)	Removed	l (gallons)	°C	рН	µmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative	1			mg/L	
2-18-98	1659							· ·			7.7	8.26	403		
2-18-98	1703						5.0	5.0			8./	7.84	403		
2-13-98	1713						5.0	10.0			7.8	7.63	400		
2-18-98	1729						5.0	15.0			7.4	7.64	404	35	
									1						
									1						

Comments

Developer's Signature Vennis Bird

Date 2-18-98 Reviewer Actu Narta Date 424 88



QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 980164 to 980172

QA/QC for 2/20/98 Sample Set

ABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE		EXPECTED	ANALYTICAL		AC	CEPTA	BLE
NUMBER	ТҮРЕ	RESULT	RESULT	%R			
ICV LA-52589		PPB	PPB			YES	NO
50 PPB					RANGE		
Benzene	Standard	50.0	49.4	98.8	75 - 125 %	Х	
Toluene	Standard	50.0	49.4	99	75 - 125 %	Х	
Ethylbenzene	Standard	50.0	49.6	99	75 - 125 %	Х	
m & p - Xylene	Standard	100	_ 99.5	99.5	75 - 125 %	Х	
o - Xylene	Standard	50.0	49.6	99	75 - 125 %	X	
SAMPLE		EXPECTED	ANALYTICAL		AC	CEPTAI	BLE
NUMBER	ТҮРЕ	RESULT	RESULT	%R			
LCS LA-45476		PPB	PPB			YES	NO
25 PPB					RANGE		
Benzene	Standard	25.0	23.9	95.7	39 - 150	х	
Toluene	Standard	25.0	24.1	97	46 - 148	х	
Ethylbenzene	Standard	25.0	24.0	96	32 - 160	х	
m & p - Xylene	Standard	50.0	48.1	96	Not Given	Х	
o - Xylene	Standard	25.0	23.9	96	Not Given	<u>X</u>	
SAMPLE		EXPECTED	ANALYTICAL		ACO	CEPTAB	LE
NUMBER	TYPE	RESULT	RESULT	%R			
CCV LA-52589		PPB	PPB			YES	NO
50 PPB					RANGE		
Benzene	Standard	50.0	50.1	100.3	75 - 125 %	х	
Toluene	Standard	50.0	49.6	99.3	75 - 125 %	Х	
Ethylenzene	Standard	50.0	49.5	99.0	75 - 125 %	х	
m & p - Xylene	Standard	100	98.7	98.7	75 - 125 %	х	
o - Xylene	Standard	50.0	49.6	99	<u>75 - 125 %</u>	_X	
SAMPLE		EXPECTED	ANALYTICAL		ACC	EPTABL	E
NUMBER	TYPE	RESULT	RESULT	%R			
CCV LA-52589		PPB	PPB			YES	NO
50 PPB					RANGE		
Benzene	Standard	50.0	49.2	98.5	75 - 125 %	Х	
Toluene	Standard	50.0	48.6	97.2	75 - 125 %	Х	1
Ethylbenzene	Standard	50.0	48.4	96.8	75 - 125 %	х	
p - Xylene	Standard	100	96.2	96.2	75 - 125 %	Х	
o - Xylene	Standard	50.0	48.6	97.1	75 - 125 %	Х	

rative: Acceptable.

ABORATORY DUPLICATES:

SAMPLE	ТҮРЕ	SAMPLE RESULT	DUPLICATE RESULT	RPD	AC	CEPTABLE	
ID 980164		PPB	PPB		RANGE	YES I	¥0
Benzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	Х	
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	Х	
Ethylbenzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	Х	
m & p - Xylene	Matrix Duplicate	<2	<2	0.00	+/- 20 %	Х	
o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	<u>X</u>	

arrative: Acceptable.

ABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED	SAMPLE RESULT	SPIKE SAMPLE	%R	AC	CEPTABLE	
2nd Analysis 980164	PPB	РРВ	RESULT PPB		RANGE	YES NO	
Benzene	50	<1	50.7	101.3	75 - 125 %	X	
Toluene	50	<1	50.3	101	75 - 125 %	х	
Ethylbenzene	50	<1	50.2	100	75 - 125 %	х	
m & p - Xylene	100	<2	101.0	101.0	75 - 125 %	Х	
o - Xylene	50	<1	50.4	101	<u>75 - 125 %</u>	<u>x</u>	

rrative: Acceptable

AUTO BLANK	SOURCE	PPB (2 analyzed with set)	STATUS
Benzene	Boiled Water	<1.0	ACCEPTABLE
Toluene	Boiled Water	<1.0	ACCEPTABLE
Sthylbenzene	Boiled Water	<1.0	ACCEPTABLE
al Xylenes	Boiled Water	<3.0	ACCEPTABLE

mative: Acceptable.

	SOURCE	PPB	STATUS
SOIL VIAL BLANK	Lot MB1461	(none analyzed with set)	
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

rative: Acceptable.

CONTAMINATION	SOURCE	PPB	STATUS
CARRYOVER CHECK		(none analyzed with this set)	
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

PPB

(1 analyzed with this set)

<1.0

<1.0 <1.0

<3.0

rative: Acceptable. TRIP BLANK Benzene Vial + Boiled Water

al Xylenes	Vial + Boiled Water	
Ethylbenzene	Vial + Boiled Water	
Toluene	Vial + Boiled Water	

SOURCE

a. Acceptable.

orted By: _____

John Fard. Approved By:

Date: 2 24/98

221980CWater

STATUS

ACCEPTABLE ACCEPTABLE

ACCEPTABLE

ACCEPTABLE

225 Commerce Drive + Fort Collins, CO 80524 + (800) 443-1511+ (970) 490-1511 + FAX (970) 490-1522

March 6, 1998

Mr. John Lambdin El Paso Field Services P.O. Box 4990 Farmington, NM 87499



RE: Paragon Workorder: 98-02-154 Client Project Name: Jaquez Monitor Wells Client Project Number: Not Submitted

PARAGON ANALYTICS, INC.

Dear Mr. Lambdin:

Eight water samples were received from El Paso Field Services on February 20. 1998. The samples were scheduled for PAHs by HPLC analysis. The results for this analysis are contained in the enclosed report pages 1-13.

Thank you for your confidence in Paragon Analytics, Inc. Should you have any questions, please call.

Sincerely,

advenine Mackym

Paragon Analytics, Inc. Adrienne Mackzum Project Manager

AM/asg Enclosure: Report



Paragon Analytics, Incorporated

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 9802154 Client Name: El Paso Field Services Client Project Name: Client Project Number: Jaquez Monitor Wells Client PO Number:

Client Sample	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
980164	9802154-1		Water	2/18/98	10:05
980166	9802154-2		Water	2/18/98	11:18
980167	9802154-3		Water	2/18/98	12:25
980168	9802154-4		Water	2/18/98	14:15
980169	9802154-5		Water	2/18/98	14:38
980170	9802154-6		Water	2/18/98	15:56
980171	9802154-7		Water	2/18/98	17:38
980172	9802154-8		Water	2/18/98	18:01





PARAGON ANALYTICS, INC.

λ	PARAGON /	ANALY	TICS, i	NC.	(800) 443	-1511	or (97	0) 49	0.15	11								CI	HA	IN	OF	: CI	JS	TO	DY	(DAI	те <u>2</u>	- <i>18</i>	-95	Pag	e_[01	F_/	
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SAMPLER: 555-	<u>Jem</u> 599-2244	te c	<u> 5</u> 25	l. -599-	226/	9070/9071/413	l Gasoline	Diesel	 Gasoline/BET) 	only	GC/MS VOC's	s SVOC's	ides/PCB's	oniy	PLC PNA's	ides	P Pesticides	10X - TX	*(specify in comn	fy parameters in c	Beta	_		num		1 (KPA)	877		/ 30	denyde					iners
P	HONE NO.			FAX NO)	Grease	TRP! Mod.	. pow	n/8020	BETX	8260 -	GC/M	Pesti	PCB's	610-H	Herbi	514.0	EDX	Metals	*(speci	Alpha	Gammi	adc e	c Plutt	c oran	Iraniur	1077 1	(EH) L	um 83	Forma	sture				if Conta
	SAMPLE ID	DATE	TIME	MATRIX	LAB ID	0il &	418.1 8015.1	8015	8015n	8020 -	8240/	8270-	8080	8080 -	8310/	8150 -	8141/1	- Xar	Total I	ICLP:	Gross	Gross	namm	Isotopi	Isotopi	Total (Kadiun	Tritiun	Stront	- 61 59	% MOIS				umber o
90	P0164	2-18-88	1005	WATER			The Real Production of Continuous								ঘ								1	1	\neg	-+					-		ITA		2
90	P0166	2128	1118	WATER	ØQ	2									X																	1	P		2
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75	20163	21898	1415	WAJER	O4	7									X.																		\uparrow		2
93	20169	2-18-78	1438	WATER	CE II										X						_										+		+		2
	20170	21878	1556	WATER	10G										X										\uparrow	+					\uparrow		1		2
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ROJECT INFO	DRMATION				SAMPLE AEC	IPT INTAI	FRS4						RELII	NOUI.	SHED	BY:			L	1	RELIA	auis	HED	BY:	Fe	ed	eil	2 /	ELIN	auis	HED I	 BY:			3
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P.O. NUMBER:	STANDARD	RU	SH DUE		SEALS INTACT REC'D GOOD CO	Y/N/ ND/CO	NA D?						Print	DF	UM.	s,	<i>811</i> :	2-0	/JR-7 Date	P	Print					D	ate	ļ	rint					Nate	
AMPLE DISPOSA	AL: H	AZ WASTE \$5.	00 ea		RAD CHEM \$15	.00 ea	ta da		L	RETU	URN		EC. Comi	P	250	FI	67.0	567	PWC	Ē	Comn	anv							'nmn						
OMMENTS	LOW LEVE	L BE	NZO	(A) al	VRENE		01	71	Ωľ	7			RECE	IVED	BY:	Ŧť	21	ÉX	2	,	RECE	IVED I	ar:			-	_		FCFI	VFD I	ηγ.				_
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Paragon Analytics, Inc. - Fort Collins, Colorado

CONDITION OF SAMPLE UPON RECEINED	PT R #:0	derle	$\frac{1}{\sqrt{2}}$
WORKORDER NO. 9802/54 INITIALS: 44	DAI	E: 720	198
 Does this project require special handling according to NEESA, Level 3, or CLP protocols? If yes, complete a. and b. a. Cooler Temperature b. Lot No's. 		Yes	X
c. Airbill Number			
2. Are custody seals on the cooler intact? If so, how many 2	N/A	Xes)	No
3. Are custody seals on sample containers intact?	XLA	Yes	No
4. Is there a Chain of Custody (COC) or other representative documents, letters or shipping memos?		(es)	No
5. Is the COC complete? Relinquished: Yes No Requested Analysis: Yes No	N/A	(es)	No
6. Is the COC in agreement with the samples received? No. of Samples: Yes <u>No</u> Sample ID's: Yes <u>No</u> Matrix: Yes No No. of Containers: Yes <u>No</u>		(Ves	No
7. Are the samples requiring chemical preservation preserved correctly?	N/A	Yes	No
8. Is there enough sample? If so, are they in the proper containers?		Yes	No
9. Are all samples within holding times for the requested analyses?		Yes	No
Were the sample(s) shipped on ice?	N/A	Xes 2	No
. Were all sample containers received intact? (not broken or leaking, etc.)		Ves	No
12. Are samples requiring no headspace, headspace free?	(N/A)	Yes	No
13. Do the samples require quarantine?		Yes	No
14. Do samples require Paragon disposal?		(Yes)	No
15. Did the client return any unused bottles?		Yes	NO
Describe "NO" items (except No's 1, 13, &14):			-
Group Leader's Signature: Date:			-
Coc	ler Tempe	erature:	2°C,

FRM 201FC7 (30/7/97)

Paragon Analytics, Inc.



000001

PAHs by HPLC Case Narrative

El Paso Field Services

EL PASO FS Order Number - 9802154

1. This report consists of 8 water samples received by Paragon on 2/20/98.

- 2. These samples were extracted and analyzed according to SW-846, 3rd Edition procedures. Specifically, the water samples were extracted using continuous liquid-liquid extractors, based on Method 3520.
- 3. The extracts were then analyzed using HPLC with UV and fluorescence detectors with a reverse phase C18 column according to protocols based on Method 8310. All compounds are analyzed using UV at 254 nm. Confirmation is performed for positive results using the fluorescence detector or confirmed by UV at 280 nm for those compounds that do not respond to the fluorescence detector. The quantitation of each analyte is usually taken from the detector that exhibits the fewest interferences. These quantitations minimize the chances of reporting elevated results based on interferences. If compounds do not confirm quantitatively (if the higher amount is greater than twice the lower amount the 2 amounts are considered <u>not</u> to confirm each other quantitatively), then the value is flagged with a "K" and noted on the report page.
- 4. All samples were extracted and analyzed within the established holding times.
- 5. The method blank associated with this project was below the reporting limits for all analytes.
- 6. All Laboratory Control Spike and Laboratory Control Spike Duplicate recoveries and RPDs were within the acceptance criteria.
- 7. Matrix Spikes and Matrix Spike Duplicates could not be performed because of insufficient sample volume. A Blank Spike and Blank Spike Duplicate were performed instead. See Item 6 for details on recoveries.
- 8. All surrogate recoveries were within acceptance criteria.

PARAGON ANALYTICS, INC.

9. All initial and continuing calibration criteria were within acceptance criteria with the following exceptions: Phenanthrene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Dibenzo(a,h)anthracene, and Benzo(g,h,i)pervlene exceeded the acceptance criteria on the fluorescence detector in the second continuing calibration verification run on 2/24/98-2/25/98. Phenanthrene was detected in sample 3, but the results reported were based on the quantitation from the detector that did meet the calibration criteria.

Phenanthrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Dibenzo(a,h)anthracene, and Benzo(g,h,i)perylene exceeded the acceptance criteria on the fluorescence detector in the third continuing calibration verification run on 2/24/98-2/25/98. Phenanthrene was detected in samples 2, 4, 6, & 8, Benzo(a)anthracene was detected in sample 6, & Chrysene was detected in sample 2, but the results reported were based on the quantitation from the detector that did meet the calibration criteria.

Phenanthrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Dibenzo(a,h)anthracene, and Benzo(g,h,i)perylene exceeded the acceptance criteria on the fluorescence detector in the fourth continuing calibration verification run on 2/24/98-2/25/98. Phenanthrene was detected in sample 7, but the results reported were based on the quantitation from the detector that did meet the calibration criteria.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, Paragon Analytics, Inc. certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Preston Mathiesen

HPLC Analyst

Reviewer's Initials

2/26/53 Date

3-5-98

000002

Paragon Analytics, Incorporated

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 9802154 Client Name: El Paso Field Services Client Project Name: Client Project Number: Jaquez Monitor Wells Client PO Number:

Client Sample	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
980164	9802154-1 -		Water	2/18/98	10:05
980166	9802154-2		Water	2/18/98	11:18
980167	9802154-3		Water	2/18/98	12:25
980168	9802154-4		Water	2/18/98	14:15
980169	9802154-5		Water	2/18/98	14:38
980170	9802154-6		Water	2/18/98	15:56
980171	9802154-7		Water	2/18/98	17:38
980172	9802154-3		Water	2/18/98	18:01

Page 1 of 1



POLYNUCLEAR AROMATIC HYDROCARBONS

Method 8310

Lab Name: Paragon Analytics, Inc. Client Name: El Paso Field Services Client Project ID: EL PASO FS

Lab Sample ID: WMB1 2/25/98

Sample Matrix: Water Cleanup: N/A Sample ID

Reagent Blank

Date Collected: N/A Date Extracted: 2/23/98 Date Analyzed: 2/24/98

Sample Volume: 1000 mL Final Volume: 1 mL Dilution Factor: 1

		Reporting
Analyte	Conc (ug/L)	Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	0.10
Phenanthrene	ND	0.050
Anthracene	ND	0.10
Fluoranthrene	ND	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.10
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	75	35 - 119

ND = Not Detected at or above client requested reporting limit.

m
Method 8310

Lab Name: Paragon Analytics, Inc. Client Name: El Paso Field Services Client Project ID: EL PASO FS

Lab Sample ID: 9802154-1

Sample Matrix: Water Cleanup: N/A

Sample ID

980164

Date Collected: 2/18/98 Date Extracted: 2/23/98 Date Analyzed: 2/25/98

Sample Volume: 1000 mL Final Volume: 1 mL Dilution Factor: 1

		Reporting
Analyte	Conc (ug/L)	Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	0.10
Phenanthrene	ND	0.050
Anthracene	ND	0.10
Fluoranthrene	ND	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.10
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	78	35 - 119

ND = Not Detected at or above client requested reporting limit.



000005

fm

Method 8310

Lab Name: Paragon Analytics, Inc. Client Name: El Paso Field Services Client Project ID: EL PASO FS

Lab Sample ID: 9802154-2

Sample Matrix: Water Cleanup: N/A

Sample ID

980166

Date Collected: 2/18/98 Date Extracted: 2/23/98 Date Analyzed: 2/25/98

Sample Volume: 1000 mL Final Volume: 1 mL Dilution Factor: 1

		Reporting
Analyte	Conc (ug/L)	Limit (ug/L)
Naphthalene	1.4	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	2.0 K	1.0
2-Methylnaphthalene	4.0	1.0
Acenaphthene	ND	1.0
Fluorene	0.49	0.10
Phenanthrene	0.80	0.050
Anthracene	0.13	0.10
Fluoranthrene	0.11 K	0.10
Pyrene	0.096 K	0.050
Benzo(a)anthracene	ND ·	0.050
Chrysene	0.059	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.10
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	85	35 - 119



lm

ND = Not Detected at or above client requested reporting limit.

K = Concentration confirmation does not agree within 50%.



Method 8310

Lab Name: Paragon Analytics, Inc. Client Name: El Paso Field Services Client Project ID: EL PASO FS

Lab Sample ID: 9802154-3

Sample Matrix: Water Cleanup: N/A

Sample ID

980167

Date Collected: 2/18/98 Date Extracted: 2/23/98 Date Analyzed: 2/25/98

Sample Volume: 1000 mL Final Volume: 1 mL Dilution Factor: 1

		Reporting
Analyte	Conc (ug/L)	Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	0.10
Phenanthrene	0.037 J	0.050
Anthracene	ND	0.10
Fluoranthrene	ND	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.10
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	77	35 - 119

ND = Not Detected at or above client requested reporting limit. J = Estimated value. Below reporting limits.



000007

m

Method 8310

Lab Name: Paragon Analytics, Inc. Client Name: El Paso Field Services Client Project ID: EL PASO FS

Lab Sample ID: 9802154-4

Sample Matrix: Water Cleanup: N/A

Sample ID

980168

Date Collected: 2/18/98 Date Extracted: 2/23/98 Date Analyzed: 2/25/98

Sample Volume: 1000 mL Final Volume: 1 mL Dilution Factor: 1

		Reporting
Analyte	Conc (ug/L)	Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	0.10
Phenanthrene	0.028 J	0.050
Anthracene	ND	0.10
Fluoranthrene	ND ·	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.10
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	72	35 - 119

ND = Not Detected at or above client requested reporting limit. J = Estimated value. Below reporting limits.



000008

fm

Method 8310

Lab Name: Paragon Analytics, Inc. Client Name: El Paso Field Services Client Project ID: EL PASO FS

Lab Sample ID: 9802154-5

Sample Matrix: Water Cleanup: N/A

Sample ID

980169

Date Collected: 2/18/98 Date Extracted: 2/23/98 Date Analyzed: 2/25/98

Sample Volume: 1000 mL Final Volume: 1 mL Dilution Factor: 1

		Reporting
Analyte	Conc (ug/L)	Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	0.10
Phenanthrene	ND	0.050
Anthracene	ND	0.10
Fluoranthrene	ND	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.10
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	76	35 - 119



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ND = Not Detected at or above client requested reporting limit.

Method 8310

Lab Name: Paragon Analytics, Inc. Client Name: El Paso Field Services Client Project ID: EL PASO FS

Lab Sample ID: 9802154-6

Sample Matrix: Water Cleanup: N/A

Sample ID

980170

Date Collected: 2/18/98 Date Extracted: 2/23/98 Date Analyzed: 2/25/98

Sample Volume: 1000 mL Final Volume: 1 mL Dilution Factor: 1

		Reporting
Analyte	Conc (ug/L)	Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	0.10
Phenanthrene	0.095	0.050
Anthracene	ND	0.10
Fluoranthrene	ND	0.10
Pyrene	0.036 J, K	0.050
Benzo(a)anthracene	0.030 J	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.10
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	82	35 - 119
ND - Not Detected at or above		

ND = Not Detected at or above client requested reporting limit.

J = Estimated value. Below reporting limits.

K = Concentration confirmation does not agree within 50%.



Method 8310

Lab Name: Paragon Analytics, Inc. Client Name: El Paso Field Services Client Project ID: EL PASO FS

Lab Sample ID: 9802154-7

Sample Matrix: Water Cleanup: N/A

Sample ID

980171

Date Collected: 2/18/98 Date Extracted: 2/23/98 Date Analyzed: 2/25/98

Sample Volume: 1000 mL Final Volume: 1 mL Dilution Factor: 1

		Reporting
Analyte	Conc (ug/L)	Limit (ug/L)
		······································
Naphthalene	3.4	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	2.6	1.0
2-Methylnaphthalene	3.1	1.0
Acenaphthene	ND	1.0
Fluorene	0.33	0.10
Phenanthrene	0.21	0.050
Anthracene	ND	0.10
Fluoranthrene	ND	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.10
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

% Recovery	% Rec Limits
77	35 - 119
	% Recovery

ND = Not Detected at or above client requested reporting limit.



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Method 8310

Lab Name: Paragon Analytics, Inc. Client Name: El Paso Field Services Client Project ID: EL PASO FS

Lab Sample ID: 9802154-8

Sample Matrix: Water Cleanup: N/A

Sample ID

980172

Date Collected: 2/18/98 Date Extracted: 2/23/98 Date Analyzed: 2/25/98

Sample Volume: 1000 mL Final Volume: 1 mL Dilution Factor: 1

		Reporting
Analyte	Conc (ug/L)	Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	0.10
Phenanthrene	0.027 J	0.050
Anthracene	ND	0.10
Fluoranthrene	ND	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.10
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	74	35 - 119

ND = Not Detected at or above client requested reporting limit. J = Estimated value. Below reporting limits.



PM

POLYNUCLEAR AROMATIC HYDROCARBONS BLANK SPIKE

Method 8310

Lab Name: Paragon Analytics, Inc. Client Name: El Paso Field Services Client Project ID: EL PASO FS

Lab Sample ID: WLCS1, 2/25/98

Sample Matrix: Water Cleanup: N/A Sample ID

Blank Spike

Date Extracted:2/23/98Date Analyzed:2/24/98

Sample Volume: 1,000 mL Final Volume: 1 mL

reft

	Spike	BS	BS	QC
	Added	Concentration	Percent	Limits
Analyte	(ug/L)	(ug/L)	Recovery	% Rec
Acenaphthylene	10.0	7.60	76	36 - 93
Phenanthrene	1.00	0.811	81	45 - 107
Pyrene	1.00	0.847	85	40 - 104
Benzo(k)fluoranthene	0.250	0.249	100	61 - 126
Dibenzo(a,h)anthracene	1.00	0.789	79	55 - 113

Lab Sample ID: WCLSD1, 2/25/98

	Spike	BSD	BSD		QC
	Added	Concentration	Percent		Limits
Analyte	(ug/L)	(ug/L)	Recovery	RPD	RPD
			· · · · · · · · · · · · · · · · · · ·		
Acenaphthylene	10.0	7.61	76	0.2	20
Phenanthrene	1.00	0.799	80	2	20
Pyrene	1.00	0.847	85	0	20
Benzo(k)fluoranthene	0.250	0.239	95	4	20
Dibenzo(a,h)anthracene	1.00	0.779	78	1	20

SURROGATE RECOVERY BS/BSD

Analyte	% Recovery BS	% Recovery BSD	% Rec Limits
2-Chloroanthracene	82	78	35 -119
			000013//

May 26, 1998

2nd Quarter 1998 REPORT

Jaquez Corn Field Monitor Well Analytical Results Lab Sample #'s 980405 to 980413 Sampled May 19, 1998 Sampled by Dennis Bird

Report Distribution:

Sandra Miller Scott Pope - Philip Services Company Results File

Attachments

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Project No) .	Project N	lame L	TH	205				Туре		7	 /	/	Requeste Analysis				
Samplers:	(Signature	N.J.	N.A.	ñ J	Eig.],	Date: 2/	19-77	_ and No. of Sample		Chine Control			\mathbf{Y}			Remarks	
1947 RUY	Date	Time	Comp.	. GRAB		Sa	mple Number		Contain- ers	/ *					/			
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UNTSP.	<u>ې چ</u> ر تر	1044	1	X		9	8040	50	51	400	X			Ma	MTOR	WELL	12-4	
175 R	5188	1152		X		9	8040	7	51	400	X			M	WITOR	Will	1 R-5	
WE TR	£/ % ??	1405	1	X			79040.	8	5-1	14ªr_	X	X		m	antok) WEC	1 M-1	
105 32	F/22	1423		\times			18040	7.	5-1	40	×	λ		M	0.11/2/	11152	1. M-2	
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J. M.	-17-3	1717	<u> </u>	X.			980411		61	40	X	X		M	NITER	Wel	12M-4	
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10 R	-19-93	1734	4	X			78041	3	6-1	420	X	X		Ma	NITO	Purch	1. M-5	/
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Jaquez Monitor Well R-3 600 500 400 -O-Benzene -X- Toluene PPB_VOC - Ethyl Benzene -A--- Total Xylenes -Total BTEX 200 4 100 0 6 7-Sep-93 4-Oct-93 - 10-Nov-93) 9-Feb-94 7-Mar-94) 7-Sep-94 - 8-May-95 Sample Date 2-Nov-95 - 5-Feb-96 + 6-Aug-96 28-Oct-96 21-Aug-97) 19-May-98 9-Feb-95 10-Nov-97 12-Jan-94 13-Jun-94 15-Dec-94 19-Feb-97 28-May-97 15-Dec-93 18-Feb-98 29-May-96

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FIELD SERVICES LABORATORY

ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Fiel	d iD										
SAMPLE NUMBER:	N	/A		980405								
MTR CODE SITE NAME:	N	/A	Jaq	uez Cornfiel	d]						
SAMPLE DATE TIME (Hrs):	5/19	9/98		0950								
PROJECT:		Monito	r Well									
DATE OF BTEX EXT. ANAL.:	5/2	1/98		5/21/98]						
TYPE DESCRIPTION:	R	-3		Water		- 						
Field Remarks:	Field Remarks:											
PARAMETER	RESULT	UNITS	DE	QUALIFI	ERS	-						
DUNIZENIE			le contra de la co	<u>e de la composita de la compo</u>								
	<1	PPD			<u> </u>							
TOLUENE	11.9	PPB										
ETHYL BENZENE	12.5	PPB										
TOTAL XYLENES	125	РРВ										
TOTAL BTEX	150	PPB										

--BTEX is by EPA Method 8020 --

% for this sample All QA/QC was acceptable.

The Surrogate Recovery was at DF = Dilution Factor Used

Narrative:

du Fabel 5/26/98 Approved By: Date: 980405BTEXJacquezCornfield,5/22/98

96.2

	Well Deve	lopment and Pur	ging Data				
Site Name_ <i>JAQUE</i> Z	t	 Development Purging 	Well Number Meter Code				
Development Criteria							
3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other Methods of Development Pump Bailer Centrifugal Motion Valve	Water Volume Calcul Initial Depth of Well (feet) 22 Initial Depth to Water (feet) 23 Height of Water Column in Well (f Diameter (inches): Well Water Volume Item Cubic Feet	ation 	Instruments DO Monitor Conductivity Meter Temperature Meter Other <u>D.O. CHEMETS</u> KIT				
Submersible Double Check Valve	Well Casing	6.4 19.2	Water Disposal				
Peristaltic Stainless-steel Kemmerer	Gravel Pack		ON SITE BANREUS				
	Drilling Fluids						
Other	Total						

Water Removal Data

		Develo	pment	Removal	Intake	Ending Water	Water V	/olume	Product	Volume	Temperature		Conductivity	Dissolved	Commente
Date	Time	Meth	nod	Rate	Depth	Depth	Remov	ed (gal)	Removed	(gallons)	°C ∣	рН	µmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
5-19-98	0912										14-1	5.33	884		
5-19-98	0918						5,0	5.0			14.1	5.77	916		
5-19-98	0924						50	10.0			14.3	6.06	780		
5-19-98	093/						5.0	15.0			14.4	6.42	570		
5-19-98	0937						50	20.0			15.3	6,39	471	0.5	
			1												
				1											
								<u> </u>							
												1			

Comments

Date 5-19-98 Reviewer John Hantal Developer's Signature Sennis Bied _Date____5/34/48___



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FIELD SERVICES LABORATORY

ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

· · · · · · · · · · · · · · · · · · ·	Field	1 ID		Lab ID			
SAMPLE NUMBER:	N/	Ά		980406			
MTR CODE SITE NAME:	N	/A	Jaq	uez Cornfield			
SAMPLE DATE TIME (Hrs):	5/19	9/98					
PROJECT:		Monito	or Well				
DATE OF BTEX EXT. ANAL.:	× 5/2'	1/98		5/21/98			
TYPE DESCRIPTION:	R	-4		Water			
Field Remarks:							
		RESULTS					
PARAMETER	RESULT	UNITS	DF	QUALIFIER	S		
BENZENE	916	PPB	5	D			
TOLUENE	244	PPB	2	D			
ETHYL BENZENE	38.1	PPB	2	D			
TOTAL XYLENES	304	РРВ	2	D			
TOTAL BTEX	1502	РРВ					
The Surrogate Recovery was at DF = Dilution Factor Used The "D" qualifier indiciates that the a	89.7 nalyte calculated	BTEX is by EPA Method % for this sample is based on a sec	8020 All QA/QC condary dilutic	was acceptabl on factor.	e.		
Narrative:							
Approved By:) stole.		Date:	5/24/98			

FIE SERVICES	Well Development and Purging Data							
Site Name_ <i>VIAQUE2</i>	Development Well Number R-4 Purging Meter Code							
Development Criteria	· · · · · · · · · · · · · · · · · · ·							
 3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other 	Water Volume Calculation Instruments Initial Depth of Well (feet) 22.10 Initial Depth to Water (feet) 22.10 Height of Water Column in Well (feet) 9799							
Methods of Development	Diameter (inches): Well 4 Gravel Pack	VIT						
Pump Bailer Centrifugal 🔀 Bottom Valve	Water Volume in Well Gallons to be Other D. C. HCMC/S Item Cubic Feet Gallons Removed	1/						
Submersible Double Check Valve	Well Casing 6.5 19.6 Water Disposal							
Peristaltic Stainless-steel Kemmerer	Gravel Pack ON SITC BARREUS							
	Drilling Fluids							
Other	Total							

Water Removal Data

		Develo	pment	Removal	Intake	Ending Water	Water V	Volume	Product	Volume	Temperature	[Conductivity	Dissolved	
Date	Time	Mett	hod	Rate	Depth	Depth	Remov	ed (gal)	Removed	l (gallons)	°C	pН	µmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
5-19-98	1007							1			17.8	6.82	658		
5-19-98	1013						5.0	5.0			167	6.68	648		
5-19-98	1019						5.0	10.0			16.1	6.90	682		
519.98	1026						50	150			17.0	7.15	73/		
5-19-98	1034						5.0	20.0			17.1	7.38	1021	10	
								1							
								1							

Comments

Developer's Signature Developer's Signature

Date 5-19-98 Reviewer_ John Jakan Date 5/26/48

Jaquez Monitor Well R-5



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION



FIE SERVICES	Well Development and Pu	rging Data
Site Name_ <i>JAPUE</i> Z	Development	Well Number $R-5$ Meter Code
Development Criteria		
3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other Methods of Development Pump Bailer Centrifugal X Bottom Valve	Water Volume Calculation Initial Depth of Well (feet) Initial Depth to Water (feet) Initial Depth to Water Column in Well (feet) Biameter (inches): Well Water Volume in Well Gallons Item Cubic Feet Gallons Removed	Instruments pH Meter DO Monitor Conductivity Meter Temperature Meter Other <u>D. O. CHEMETS</u> KIT
Submersible Submersible Stainless-steel Kemmerer	Well Casing 5.8 7.7 Gravel Back	ON SITE BARREUS
	Drilling Fluids	

		Develo	pment	Removal	Intake	Ending Water	Water V	olume	Product	Volume	Temperature		Conductivity	Dissolved	
Date	Time	Meth	nod	Rate	Depth	Depth	Remove	ed (gal)	Removed	(gallons)	°C	рН	µmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
5-19-98	1105										20.5	7.96	635		
5-19-98	110						3.0	30			18.7	7.84	653		
5-19-98	1113						20	50			18.5	7.75	636		
5-19-98	1119						3.0	8.0			19.0	7.78	817		
5-19-98	1125						2.0	10.0			192	7.72	1319		
5-19-28	1140						3.0	13.0			21./	7.9/	794	25	

Comments THE WELL BAILED ONY P13.0 GALLONS. Developer's Signature Dennis Bird Date 5-19-98 Reviewer John Farth Date 5/26/48

Jaquez Monitor Well M-1





FIELD SERVICES FIELD SERVICES LABORATORY

EL PASO

ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Field ID	Lab ID				
SAMPLE NUMBER:	N/A	980408				
MTR CODE SITE NAME:	N/A	Jaquez Cornfield				
SAMPLE DATE TIME (Hrs):	5/19/98	1405				
PROJECT:	Monito	r Well				
DATE OF BTEX EXT. ANAL.:	5/21/98	5/21/98				
TYPE DESCRIPTION:	M-1	Water				

Field Remarks:

RESULTS 1. A b PARAMETER RESULT UNITS **QUALIFIERS** DF 0 BENZENE <1 PPB TOLUENE <1 PPB ETHYL BENZENE <1 PPB TOTAL XYLENES <3 PPB TOTAL BTEX <6 PPB

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 86.1 % for this sample All QA/QC was acceptable. DF = Dilution Factor Used

Narrative:

Approved By: ______ ohn failed .

980408BTEXJacquezCornfield,5/22/98

Date: 5/26/45

Fi	eld Services Laboratory Analytical Report
SA	MPLE IDENTIFICATION
EPFS LAB ID:	980408
DATE SAMPLED:	05/19/98
TIME SAMPLED (Hrs):	1405
SAMPLED BY:	Dennis Bird
MATRIX:	Water
METER CODE:	N/A
SAMPLE SITE NAME:	Jaquez Cornfield
SAMPLE POINT:	M-1
ELEL D REMARKS	

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	< 0.1	РРМ	05/20/98
Nitrite as N0 ₂ -N	< 0.1	PPM	05/20/98

.ab Remarks:

Reported By: CV

Approved By: L

980408GC9SNitrate-Nitrite, 5/26/98

Date: 5/24/4C

FIE SERVICES	Well Development and Purging Data						
Site Name_JTAGUEZ			Development Purging	Well Number <u>M-1</u> Meter Code			
Development Criteria							
 3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other 	Water Volume Initial Depth of Well (feel Initial Depth to Water (fe Height of Water Column	Calculation	.33	Instruments pH Meter DO Monitor Conductivity Meter			
Methods of Development	Diameter (inches): Well	4 Gravel Pa	ack	Temperature Meter			
Pump Bailer Centrifugal 🔀 Bottom Valve	Item Cubic	r Volume in Well Feet Gallons	Gallons to be Removed	$\bigotimes \text{Other} \ \underline{D, D, C} H C M C I \mathcal{I} \mathcal{I} \mathcal{I}$			
Submersible Double Check Valve	Well Casing	7.5	32.4	Water Disposal			
Peristaltic Stainless-steel Kemmerer	Gravel Pack			ON STIE BARRELS			
	Drilling Fluids						
Other	Total						

Water Removal Data

		Develo	pment	Removal	Intake	Ending Water	Water \	/olume	Product	Volume	Temperature		Conductivity	Dissolved	
Date	Time	Meth	nod	Rate	Depth	Depth	Remov	ed (gal)	Removed	(gallons)	°C	рН	µmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
5-19-98	1253										18.8	7.64	286		
5-19-98	1258						5.0	5.0			15.4	7.39	296		
5-19.98	1305						3.0	8.0			16.	7.36	299		
5-19.98	13/8						7.0	10.0			17.3	7.48	294	3,5	
								[
	1	1	1										1		
			1								1				
								1				1			

Comments THE WOLL BAILLOO ONY PIRO GALLONS. Developer's Signature Demin Bind Date 5-19-98 Reviewer John Farlen Date 5/36/48

Jaquez Monitor Well M-2



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FIELD SERVICES LABORATORY ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980409
MTR CODE SITE NAME:	N/A	Jaquez Cornfield
SAMPLE DATE TIME (Hrs):	5/19/98	1423
PROJECT:	Monito	r Well
DATE OF BTEX EXT. ANAL.:	5/21/98	5/21/98
TYPE DESCRIPTION:	M-2	Water

Field Remarks:

RESULTS 医疗性 化磷酸酸 PARAMETER RESULT UNITS QUALIFIERS DF **0** BENZENE PPB <1 -TOLUENE <1 PPB ETHYL BENZENE <1 PPB TOTAL XYLENES PPB <3 TOTAL BTEX <6 PPB --BTEX is by EPA Method 8020 --The Surrogate Recovery was at 79.6 % for this sample All QA/QC was acceptable. **DF** = Dilution Factor Used Narrative: Approved By: John Falde 980409BTEXJacquezCornfield,5/22/98

EL PASO FIELD SERVICES **Field Services Laboratory Analytical Report** SAMPLE IDENTIFICATION 980409 EPFS LAB ID: 05/19/98 DATE SAMPLED: 1423 TIME SAMPLED (Hrs): **Dennis Bird** SAMPLED BY: Water MATRIX: N/A METER CODE: **Jaquez Cornfield** SAMPLE SITE NAME: M-2 SAMPLE POINT:

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	<0.1	РРМ	05/20/98
Nitrite as N0 ₂ -N	< 0.1	PPM	05/20/98

.ab Remarks:

Reported By: <u></u>

Approved By:

980409GCSSNitrate-Nitrite, 5/26/98

Date: 5/26/48

FIE SERVICES		Well Development and Purging Data						
				Development Burging	Well Number <u>M-3</u>			
Site Name_ TAGUEZ				i uiging	Meter Code			
Development Criteria								
3 to 5 Casing Volumes of Water Removel	Water Vo	olume Calc	ulation		Instruments			
Stabilization of Indicator Parameters	Initial Depth of	f Well (feet)	5.10		pH Meter			
Other	Initial Depth to	Water (feet)	150	17×	DO Monitor			
Mothede of Development	Height of Wate	er Column in We	II (feet)	1.80				
methods of Development	Diameter (inch	nes): Well	Gravel F	ack	Temperature Meter			
Pump Bailer		Water Volu	ne in Well	Gallons to be	\bigotimes Other <u>U_1U_1 U_1U_2</u> U_1U_1			
Centrifugal X Bottom Valve	Item	Cubic Feet	Gallons	Removed				
Submersible Double Check Valve	Well Casing		7.7	23.0	Water Disposal			
Peristaltic Stainless-steel Kemmerer	Gravel Pack				ON SITE BAIARES			
	Drilling Fluids							
Other	Total							

Water Removal Data

		Develo	pment	Removal	Intake	Ending Water	Water \	Volume	Produc	Volume	Temperature		Conductivity	Dissolved	_
Date	Time	Meth	nod	Rate	Depth	Depth	Remov	ed (gal)	Removed	l (gallons)	°C	рΗ	μmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative]			mg/L	
5-19-98	1327										165	7,20	479		
5-19-98	1332						5,0	50			14.5	7.03	549		
5-19-98	1336						50	10.0			13.5	7.02	543		
5-19.98	1343						5.0	150			13.5	7.04	549		
5-19-98	1348						5.0	20.0			13.0	7.00	539		· · ·
519.98	1355						5.0	25.0			13.1	7.03	528	1.5	·
									[
											1				

_Date 5-19-98 Reviewer John Farbch: Date 5/26/48

Comments

Developer's Signature Fernic Bied

Jaquez Monitor Well M-3

4





> FIELD SERVICES LABORATORY ANALYTICAL REPORT

> > JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980410
MTR CODE SITE NAME:	N/A	Jaquez Cornfield
SAMPLE DATE TIME (Hrs):	5/19/98	1528
PROJECT:	Monite	or Well
DATE OF BTEX EXT. ANAL.:	5/21/98	5/21/98
TYPE DESCRIPTION:	M-3	Water

Field Remarks:

	RESULTS								
PARAMETER	RESULT	UNITS	OUALIFI DF O	RS					
BENZENE	26.7	РРВ							
TOLUENE	<1	РРВ							
ETHYL BENZENE	<1	РРВ							
TOTAL XYLENES	2.52	РРВ							
TOTAL BTEX	29	. РРВ							

87.8

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at DF = Dilution Factor Used

% for this sample All QA/QC was acceptable.

Narrative:

John Fartch Date: 5/26/98 Approved By: . 980410BTEXJacquezCornfield, 5/22/98

Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	980410	
DATE SAMPLED:	05/19/98	
TIME SAMPLED (Hrs):	1528	
SAMPLED BY:	Dennis Bird	
MATRIX:	Water	
METER CODE:	N/A	
SAMPLE SITE NAME:	Jaquez Cornfield	
SAMPLE POINT:	M-3	

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	0.32	PPM	05/20/98
Nitrite as N0 ₂ -N	< 0.1	PPM	05/20/98

ab Remarks:



Approved By:

980410GCSSNitrate-Nitrite, 5/26/98

Date: <u>5/26/48</u>

FIE SERVICES		Well Dev	velo	ent and Purg	ging Data
Site Name_JAQUE2			, M	Development Purging	Well Number <u>M-3</u> Meter Code
Development Criteria					
 3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other 	Water Vo Initial Depth of Initial Depth to Height of Wate	Well (feet)	ulation 5.20 3.75	145	Instruments
Methods of Development	Diameter (inch	es): Well <u>4</u>	Gravel P	ack	Temperature Meter
Pump Bailer Centrifugal 🔀 Bottom Valve	Item	Water Volur Cubic Feet	me in Well Gallons	Gallons to be Removed	Other <u>D. C. CH</u> CVICIS [[]]
Submersible Double Check Valve	Well Casing		7.6	22.7	Water Disposal
Peristaltic Stainless-steel Kemmerer	Gravel Pack				ON SITE BARRELS
	Drilling Fluids				
Other	Total		l		

Water Removal Data

		Develo	pment	Removal	Intake	Ending Water	Water V	/olume	Product	Volume	Temperature		Conductivity	Dissolved	
Date	Time	Meth	od	Rate	Depth	Depth	Remov	ed (gal)	Removed	(gallons)	°C	pН	µmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative]			mg/L	
5-19-98	1445										19.7	6.90	948		
5-19-98	1450						5.0	5,0			18.2	6.67	1011		
5-19-98	1455						5.0	10.0			165	6.68	856		-
5-19-98	1502						5.0	15.0			17.0	6.80	7.51		
5-19-98	1508						5.0	200			17.0	683	655		
5-19-98	1515						5.0	25.0			17.5	6.93	656	25	
							¥ <u>************************************</u>								
											/				

comments REMOVED THE OXYGEN RELEASE COMPOUND SOEKS 32 DAYS BEFORESAMPLING Developer's Signature Dennie Bird Date 5-19-98 Reviewer John Fundu Date 5/24

Jaquez Monitor Well M-4



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Fie	id ID		Lab ID	
SAMPLE NUMBER:	N	I/A		980411	
MTR CODE SITE NAME:	N	I/A	Jaq	uez Cornfield	
SAMPLE DATE TIME (Hrs):	5/1	9/98		1717	
PROJECT:		Monitor	Weil		
DATE OF BTEX EXT. ANAL.:	5/2	1/98		5/21/98	
TYPE DESCRIPTION:	IV	1-4		Water	5-e
Field Remarks:					
-		RESULTS			
PARAMETER	RESULT	UNITS	DF	QUALIFIERS	
BENZENE	46.6	РРВ			
TOLUENE	<1	РРВ			
ETHYL BENZENE	2.81	РРВ			
TOTAL XYLENES	83.1	РРВ			
TOTAL BTEX	133	PPB			
The Surrogate Recovery was at	65.4	BTEX is by EPA Method 8 _% for this sample	3020 All QA/QC	was acceptable).
Narrative:					
Approved By: olm Ja	beln		Date:	5/24/98	

980411BTEXJacquezCornfield, 5/22/98



GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	0.21	PPM	05/20/98
Nitrite as N0 ₂ -N	0.24	PPM	05/20/98

ab Remarks:

eported By: <u>Cv</u>

Approved By:

980411GCSSNitrate-Nitrite, 5/26/98

Date: 5/2/48_

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Fiel	d ID		Lab ID			
SAMPLE NUMBER:	N						
MTR CODE SITE NAME:	N	/A	Jac	Jaquez Cornfield			
SAMPLE DATE TIME (Hrs):	5/1	9/98		1717]	
PROJECT:	-	Monito	or Well		_		
DATE OF BTEX EXT. ANAL.:	5/2	1/98		5/21/98		1	
TYPE DESCRIPTION:	M-4 Fi	eld Dup		Water		-	
PARAMETER	BESULT	RESULTS		OIMUE	IFRS		
			DF	0			
BENZENE	46.1	PPB					
TOLUENE	<1	PPB					
ETHYL BENZENE	2.76	PPB					
TOTAL XYLENES	83.2	PPB					
TOTAL BTEX	132	РРВ					
he Surrogate Recovery was at	86.9	BTEX is by EPA Method % for this sample	8020 All QA/QC	was accept	able.		

Narrative:

John Latch Approved By:

98042BTEXJacquezCornfield,5/26/98

Date:

5/26/18
EL PASO FIELD SERVICES Field Services Laboratory Analytical Report SAMPLE IDENTIFICATION

EPFS LAB ID:	980412	
DATE SAMPLED:	05/19/98	· · · ·
TIME SAMPLED (Hrs):	1717	-
SAMPLED BY:	Dennis Bird	
MATRIX:	Water	
METER CODE:	N/A	
SAMPLE SITE NAME:	Jaquez Cornfield	
SAMPLE POINT:	M-4 Field Dup	
FIELD REMARKS:		

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	0.21	РРМ	05/20/98
Nitrite as N0 ₂ -N	0.24	PPM	05/20/98

ab Remarks:

eported By:

Approved By:

980412GCSSMitrate-Nitrite, 5/26/98

Date: 5/24/48



Water Removal Data

Date	Time	Develo Meth	pment nod	Removal Rate	Intake Depth	Ending Water Depth	Water V Remov	/olume ed (gal)	Product Removed	Product Volume 7 Removed (gallons)		рН	Conductivity µmho/cm	Dissolved Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
5-19-98	1548										20.6	7.58	605		
5-1998	1553						5.0	50			17.0	8.22	652		
51278	1559						3.0	8.0			155	8.36	659		
5-19.98	1605						20	120			15.2	8.48	614		
5-19-98	1615						1.0	11.0			15.5	8.35	577	2.5	

Comments THE WELL BAILED DAY P11.0 SALLONS . KEMD	USD THE OXYSEN COMPOUND	50CK5 32 DAVS	BEFORE STAMPLINE
Developer's Signature Lennis Bird	Date 5-19-98 Reviewer	I den Faitch	Date 5/26/98
	(7	

Jaquez Monitor Well M-5





FIELD SERVICES LABORATORY

ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980413
MTR CODE SITE NAME:	N/A	Jaquez Cornfield
SAMPLE DATE TIME (Hrs):	5/19/98	1734
PROJECT:	Monito	or Well
DATE OF BTEX EXT. ANAL.:	5/21/98	5/21/98
TYPE DESCRIPTION:	M-5	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS		OUALIFI	ERS	
		國家建設的政策的容易。	DF	0		der e
BENZENE	<1	РРВ				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	<6	РРВ				

87.3

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at DF = Dilution Factor Used

% for this sample All QA/QC was acceptable.

5/24/98

Narrative:

Hen Forth. Approved By:

Date: 980413BTEXJacquezCornfield,5/26/98

Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	980413	
DATE SAMPLED:	05/19/98	
TIME SAMPLED (Hrs):	1734	
SAMPLED BY:	Dennis Bird	
MATRIX:	Water	
METER CODE:	N/A	
SAMPLE SITE NAME:	Jaquez Cornfield	
SAMPLE POINT:	M-5	

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	< 0.1	PPM	05/20/98
Nitrite as N0 ₂ -N	< 0.1	PPM	05/20/98

ab Remarks:

eported By: 1/ Approved By:

980413GCSSNitrate-Nitrite, 5/26/98

Date: 5/48



Site Name_JAAVEZ

Well Development and Purging Data

DevelopmentPurging

Well Number <u>M-5</u>

Meter Code

Development Criteria

Methods of Development

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

Initial Depth of Well (feet) <u>7.70</u> Initial Depth to Water (feet) <u>7.37</u> Height of Water Colump in Well (feet) <u>7.73</u>										
Diameter (inches): WellGravel Pack										
	Water Volur	Water Volume in Well Ga								
ltem	Cubic Feet	Gallons	Removed							
Well Casing		7.8	23.3							
Gravel Pack										
Drilling Fluids										
Total										

Water Volume Calculation

Instruments



- DO Monitor
- Conductivity Meter

Temperature Meter Other <u>D.O. CH</u>EMETS KIT

Water Disposal

ON SITE BARRELS

Water Removal Data

Comments

Date	Time	Develo Met	pment hod	Removal Rate	Intake Denth	Ending Water	Water \ Remov	/olume ed (gal)	Product	t Volume	Temperature °C	лH	Conductivity	Dissolved	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative		P	panalo/om	mg/L	
5-19-98	1633										17.5	7.63	525		
5-19-98	1637						5.0	5.0			15.0	7.19	597		
5-19.98	1643						5.0	10.0			13.7	7.10	569		
5.19.98	1650						5.0	15.0			13.5	7.04	57/		
5-19.98	1656						5.0	20,0			135	7.05	589		
5-19.98	1706						5.0	25.0			138	717	53P	3,5	
							· · · · · · · · · · · · · · · · · · ·	1				1			
											/				
L <u></u>	1	•	•	F		-		. .	4		<i>y</i>			A	<u></u>

Developer's Signature Drnnis Bird/ Date 5-19-98 Reviewer and fall Date 5/26/98 by J. Lambdin Date 5/26/98

September 1, 1998

3rd Quarter 1998 REPORT

Jaquez Corn Field Monitor Well Analytical Results Lab Sample #'s 980589 to 980591 Sampled August 26, 1998 Sampled by Dennis Bird

Report Distribution:

Sandra Miller Scott Pope - Philip Services Company Results File

Attachments

					,			CHAIN	E P Natura		npan BEC	4 :080						2384	
Project N	0.	Project Na	ame	$\overline{\mathcal{O}}_{I}$	AQ V d	52			Type and	s. f			k.	Requi	ested ysis	/			
	Dennis Bird						-98	of Sample	nple								Remarks		
MATRIK	Date	Time	Comp.	GRAB		San	nple Number		ers		A								
WATER	8-26-18	110		X		- 78	20589	\swarrow	6-1	4°C	X	X			MON	1/70	ip 4	IEU M-3	
WATER	8-26.98	1226		X		- 98	80590		6-1	4°C	X	x			MONI	TOK	WC	Cl M-4	
OFTER	8-26.8	1226		X		_ 70	80591	<u> </u>	G-/	4°C	X	X			MAN	1701	e we	21 M-4 FICCO	DUP
WETER	826.98			X					G-/	4°C	X				TRIP	P BL	ANK		
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Air Bill N	lo.:																		

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FIELD SERVICES LABORATORY ANALYTICAL REPORT JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Field ID	Lab ID	
SAMPLE NUMBER:	N/A	980589	
MTR CODE SITE NAME:	N/A	Jaquez Cornfield	
SAMPLE DATE TIME (Hrs):	8/26/98	1101	
PROJECT:	Mon	nitor Well	
DATE OF BTEX EXT. ANAL.:	8/27/98	8/27/98	
TYPE DESCRIPTION:	M-3	Water	

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	DF	QUALIFII Q	RS	
BENZENE	<1	РРВ				
TOLUENE	2.76	РРВ				
ETHYL BENZENE	< 1	PPB				
TOTAL XYLENES	<3	РРВ				
TOTAL BTEX	3	РРВ				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 94.3 % for this sample All QA/QC was acceptable. DF = Dilution Factor Used

Narrative:

John Fard de 9/1/48 Approved By: Date: 980589BTEXJacquezCornfield, 8/28/98

Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

980589

08/26/98

1101

Dennis Bird

Water

N/A

Jaquez

M-3

EPFS LAB ID: DATE SAMPLED: TIME SAMPLED (Hrs): SAMPLED BY: MATRIX: METER CODE: SAMPLE SITE NAME: SAMPLE POINT:

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	0.3	PPM	08/27/98
Nitrite as N0 ₂ -N	< 0.1	РРМ	08/27/98

Lab Remarks:

Reported By: CRV

Approved By:

980589GCSSNitrate-Nitrite, 8/31/98

Date: 9-1-8



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1



Well Development and Purging Data

Site Name TRAVEZ

Development X Purging

Well Number <u>M</u>-3 Meter Code NIA

Development Criteria



Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 15, 20 Initial Depth to Water (feet) 4.53 Height of Water Column in Well (feet) 10.67

Diameter (inch	es): Well <u></u>	Gravel P	ack
	Water Volun	ne in Well	Gallons to be
Item	Cubic Feet	Gallons	Removed
Nell Casing		7,/	2/2
Gravel Pack			
Drilling Fluids			
Fotal			

Instruments

DH Meter DO Monitor

X Conductivity Meter

XX Temperature Meter Other <u>D. D. CHEMETS</u> KIT

Date_____9/1/48

Water Disposal KUTZ SEP.

Water Removal Data

Other

		Develo	pment	Removal	Intake	Ending Water	Water V	/olume	Product Volume 7		Temperature		Conductivity	Dissolved	
Date	Time	Meti	nod	Rate	Depth	Depth	Remov	ed (gal)	Removed	Removed (gallons)		pН	μmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
8-26-98	1012										2/2	6.06	783		
8-26-98	1017						5,0	5.0			19.8	6.24	763		
8-26-98	1023						5.0	10.0			19.3	6.42	568		
8-26-98	1033						5.0	15.0			19.3	6.72	518		
8-26-98	1038						5.0	20.0			19.9	6.72	459		
8-26-98	1048						5.0	25.0			20.6	6.87	472	2.5	

Date_8-26-98_Reviewer_John Farth

Comments REMOVED THE OXYGEN RELEASE	COMPOUND SOCKS 37DAYS BEFORE SAMPLING.
r = r = r	
Developer's Signature	DateDateReviewerClutchtluDate///

FIELD SERVICES LABORATORY ANALYTICAL REPORT JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

_	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980590
MTR CODE SITE NAME:	N/A	Jaquez Cornfield
SAMPLE DATE TIME (Hrs):	8/26/98	_ 1226
PROJECT:	Moni	tor Well
DATE OF BTEX EXT. ANAL.:	8/27/98	8/27/98
TYPE DESCRIPTION:	M-4	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	DF	QUALIFIER	S
BENZENE	51.0	РРВ			
TOLUENE	2.56	PPB			
ETHYL BENZENE	2.08	PPB			
TOTAL XYLENES	45.1	РРВ			
TOTAL BTEX	101	РРВ			

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at ______% for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: John Farch 9/1/98 Date: 980589BTEXJacquezCornfield, 8/28/98

Field Services Laboratory

FIELD SERVICES

980590

08/26/98

1226

Dennis Bird

Water

N/A

Jaquez

M-4

EL PASO

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID: DATE SAMPLED: TIME SAMPLED (Hrs): SAMPLED BY: MATRIX: METER CODE: SAMPLE SITE NAME: SAMPLE POINT:

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS.	DATE ANALYZED
Nitrate as N0 ₃ -N	43.9	PPM	08/27/98
Nitrite as N0 ₂ -N	0.6	PPM	08/27/98

Lab Remarks:

Reported By: CFV

Approved By:

Date: <u>9-1-98</u>

980590GCSSNitrate-Nitrite, 8/31/98



.....

Sample Date

--O--- Benzene

	EL PASO FIEI SERVICES	Well Development and Pu	rging Data
L 	Site Name] Development X Purging	Well Number_ <u>M-4</u> Meter Code_ <u>NA</u>
	A 3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other Methods of Development Pump Bailer Centrifugal Bottom Valve Submersible Double Check Valve Peristaltic Stainless-steel Kemmerer	Water Volume Calculation Initial Depth of Well (feet) 15.30 Initial Depth to Water (feet) 202 Height of Water Column in Well (feet) 12.28 Diameter (inches): Well 4 Gravel Pack Water Volume in Well Item Cubic Feet Gallons Removed Well Casing \$./ Gravel Pack Initial Cubic Feet Drilling Fluids Initial Cubic Feet	Instruments PH Meter DO Monitor Conductivity Meter Temperature Meter Other <u>DO. CH</u> CMOTS KIT Water Disposal KUTZ SEPARATOR

Water Removal Data

		Develo	pment	Removal	Intake	Ending Water	Water V	/olume	Produc	Volume	Temperature		Conductivity	Dissolved	
Date	Time	Meth	nod	Rate	Depth	Depth	Remove	ed (gal)	Removed	Removed (gallons)		рН	µmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
8-26-98	1/28										27.5	8.29	575		
8-26-98	1134						5.0	50			23.3	8.63	583		
8-26-98	1143						3.0	8.0			20.8	8.91	582		
8-26-98	1150						2.0	10.0			29.6	10.02	1252		
8-26-98	1158						1.D	11.0			21.0	9.69	777	45	
													/		
											ŭ.				

Comments THE WELL BAILED DAY P 11.0 SP	ALLONS. REMOVED THE OXYGEN COMPOUND S	ocks 37 DAVS BEFORE
Par = Bial	Par Pa	SHAPLING
	Date 5-26-78 Reviewer John Halle	Date9-1-98

FIELD SERVICES LABORATORY ANALYTICAL REPORT JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

	Field ID	Lab ID			
SAMPLE NUMBER:	N/A	980591			
MTR CODE SITE NAME:	N/A	Jaquez Cornfield			
SAMPLE DATE TIME (Hrs):	8/26/98	1226			
PROJECT:	Monito	or Well			
DATE OF BTEX EXT. ANAL.:	8/27/98	8/27/98			
TYPE DESCRIPTION:	M-4 Field Dup	Water			

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	DF	QUALIFI	ERS	
BENZENE	53.5	РРВ				
TOLUENE	2.83	РРВ				
ETHYL BENZENE	2.20	РРВ	· · · · · · · · · · · · · · · · · · ·			
TOTAL XYLENES	52.2	РРВ				
TOTAL BTEX	111	РРВ				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 98.9 % for this sample All QA/QC was acceptable. DF = Dilution Factor Used

Narrative: John Fartch Date: 9/1/48 Dat 980591BTEXJacquezCornfield,8/28/98 Approved By:



Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

980591

08/26/98

1226

Dennis Bird

Water

N/A

Jaquez

M-4 Field Dup

EPFS LAB ID: DATE SAMPLED: TIME SAMPLED (Hrs): SAMPLED BY: MATRIX: METER CODE: SAMPLE SITE NAME: SAMPLE POINT:

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as N0 ₃ -N	42.1	PPM	08/27/98
Nitrite as N0 ₂ -N	0.6	PPM	08/27/98

Lab Remarks:

Reported By: CR-V

Approved By: 980591GCS\$Nitrate-Nitrite, 8/31/98

Date: 9-1-98



QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 980579 to 980585, 980589 to 980591

QA/QC for 8/27/98 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE		EXPECTED	ANALYTICAL		ACCEPTABLE		
NUMBER	TYPE	RESULT	RESULT	%R			
ICV LA-52589		PPB	РРВ		YES NO		
50 PPB					RANGE		
Benzene	Standard	50.0	51.6	103.2	75 - 125 % X		
Toluene	Standard	50.0	51.8	104	75 - 125 % X		
Ethylbenzene	Standard	50.0	51.9	104	75 - 125 % X		
m & p - Xγlene	Standard	100	104	104.4	75 - 125 % X		
o - Xylene	Standard	50.0	51.9	104	75 - 125 % X		
SAMPLE		EXPECTED	ANALYTICAL		ACCEPTABLE		
NUMBER	ТҮРЕ	RESULT	RESULT	%R			
LCS LA-45476		РРВ	PPB		YES NO		
25 PPB					RANGE		
Benzene	Standard	25.0	25.4	101.8	39 - 150 X		
Toluene	Standard	25.0	25.8	103	46 - 148 X		
Ethylbenzene	Standard	25.0	25.8	103	32 - 160 X		
m & p - Xylene	Standard	50.0	51.8	104	Not Given X		
<u>o - Xylene</u>	Standard	25.0 25.9		104	Not Given X		
/ SAMPLE		EXPECTED	ANALYTICAL		ACCEPTABLE		
NUMBER	ТҮРЕ	RESULT	RESULT	%R			
CCV LA-52589		РРВ	PPB		YES NO		
50 PPB					RANGE		
Benzene	Standard	50.0	51.9	103.8	75 - 125 % X		
Toluene	Standard	50.0	52.0	104.0	75 - 125 % X		
Ethylenzene	Standard	50.0	52.5	105.1	75 - 125 % X		
m & p - Xylene	Standard	100	105	105.0	75 - 125 % X		
o - Xylene	Standard	50.0	52.1	104	75 - 125 % X		
SAMPLE		EXPECTED	ANALYTICAL		ACCEPTABLE		
NUMBER	ER TYPE RESUL		RESULT	%R			
CCV LA-52589		РРВ РРВ			YES NO		
<u>50 PPB</u>					RANGE		
Benzene	Standard	50.0	51.1	102.2	75 - 125 % X		
Toluene	Standard	50.0	50.9	101.8	75 - 125 % X		
Sthylbenzene	Standard	50.0	50.6	101.1	75 - 125 % X		
& p - Xylene	Standard	100	101	101.3	75 - 125 % X		
o - Xylene	Standard	50.0	50.9	101.8	75 - 125 % X		

1

larrative: Acceptable.

82798QCWater

LABORATORY DUPLICATES:

SAMPLE ID 980582	ТҮРЕ	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACI RANGE	CEPTABLE YES NO)
Benzene	Matrix Duplicate	38.3	37.8	1.19	+/- 20 %	X	
Toluene	Matrix Duplicate	3.8	3.8	1.29	+/-20 %	х	
Ethylbenzene	Matrix Duplicate	69.26	67.35	2.80	+/- 20 %	х	
m & p - Xylene	Matrix Duplicate	35.82	34.1	5.01	+/- 20 %	х	
o - Xylene	Matrix Duplicate	<1	< 1	0.00	+/- 20 %	Х	

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID 2nd Analysis 980582	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PDR	%R	ACCEPTABLE YES NO	
Benzene	50	28.3	90.7	104.8	75 125 % V	<u> </u>
Toluene	50	3.8	56.0	104.0	75 - 125 % A	
Ethylbenzene	50	69.3	120	104	75 - 125 % X	l
m & p - Xylene	100	35.8	142	106.0	75 - 125 % X	
o - Xylene	50	<1	52.8	106	75 - 125 % X	
Narrative: Acceptable						
AUTO BLANK	SOURCE		PPB (2 analyzed wi	th set)	STATUS	
Benzene	Boiled Water		<1.0	19 12 - 1914 (1917) - 1 9	ACCEPTABLE	
Toluene	Boiled Water		<1.0		ACCEPTABLE	
Ethylbenzene	Boiled Water		ACCEPTABLE			
Total Xylenes	Boiled Water		< 3.0		ACCEPTABLE	
Narrative: Acceptable.						

SOIL VIAL BLANK	SOURCE Lot MB1461	PPB (none analyzed with set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (none analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE
arrative: Accentable			اليصيدين ويستعد المحد

tive: Acceptable.

TRIP BLANK	SOURCE	PPB (2 analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Varrative: Acceptable.

Reported By: <u>C</u>RV

Approved By: Joles Parch Date: 9/1/48

8279BQCWater

November 18, 1998

4th Quarter 1998 REPORT

Jaquez Corn Field Monitor Well Analytical Results Lab Sample #'s 980786 to 980788 Sampled November 5, 1998 Sampled by Dennis Bird

Report Distribution:

Sandra Miller Scott Pope - Philip Services Company Results File Monitor Well Historic Excel

Attachments





CHAIN OF CUSTODY RECORD

Project No).	Project N	ame \	77	1900	52	<u></u>		Туре		7		7	Requ	uested alysis			
Samplers:	(Signature	P.	V.n	w	Blo	e/	Date: 11-5	-97F	and No. of Sample		Chinesting							Remarks
MATE'	, Date	Time	Comp.	GRAB		San	nple Number		ers						/			
CONTEN	11-5-18	147.5		X		9	50786		61	344	X.				MONT	2	1 W	EUM-3
WE TER	11-5-18	1526		X		4	750751	·••	6-1	Tipet	X				MONT	$\overline{\beta}_{i}$	PW	54 M-4
TER	11-5-18	1574		X		4	90788	s	6-1	342F	X				MONTO	7,57	WE	U M-4 FIELD DEP
		and a strength of the state of												/				
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Relinquis	hed by: (Sig	gnature)	102.		Date/	Time	Received by: (Sig	nature)		Relinqu	lished b	y: (Sign	ature)		De	ite/T	ime	Received by: (Signature)
Relinquis	hed by: (Sig	gnature)			Date/	Time	Received for Labo	pratory by: (1	Signature)	10/0	Date/T	ime SRA	Rem	narks:				
Carrier C Air Bill N	o: o.:							Carrier	one No.				Date	e Resul	Its Reported / by:	Sigi	nature)	

FIELD SERVICES LABORATORY ANALYTICAL REPORT

JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

-	Field ID	Lab ID				
SAMPLE NUMBER:	N/A	980786				
MTR CODE SITE NAME:	N/A	Jaquez Cornfield				
SAMPLE DATE TIME (Hrs):	11/5/98	1405				
PROJECT:	Monito	r Well				
ATE OF BTEX EXT. ANAL.:	11/6/98	11/6/98				
TYPE DESCRIPTION:	M-3	Water				

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS						
			DF	Q					
BENZENE	1.93	РРВ	1						
TOLUENE	3.15	РРВ	1						
ETHYL BENZENE	<1.0	PPB	1						
TOTAL XYLENES	<3.0	РРВ	1						
TOTAL BTEX	5	РРВ							

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 99.9 DF = Dilution Factor Used for this sample All QA/QC was acceptable.

Narrative:

John Forlichen Date: ______1/1/1/98 Approved By: 980786BTEXJaguezCornfield, 11/11/98



Sample Date



FIELD SERVICES LABORATORY ANALYTICAL REPORT JAQUEZ CORNFIELD

SAMPLE IDENTIFICATION

_	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980787
MTR CODE SITE NAME:	N/A	Jaquez Cornfield
SAMPLE DATE TIME (Hrs):	11/5/98	1526
PROJECT:	Moni	tor Well
ATE OF BTEX EXT. ANAL.:	11/6/98	11/6/98
TYPE DESCRIPTION:	M-4	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	QUALIFIERS						
			DF	Q				
BENZENE	69	РРВ	1					
TOLUENE	<1.0	PPB	1					
ETHYL BENZENE	<1.0	РРВ	1	/				
TOTAL XYLENES	33	PPB	1					
TOTAL BTEX	102	PPB						

--BTEX is by EPA Method 8020 --

for this sample All QA/QC was acceptable.

The Surrogate Recovery was at _____

Narrative:

Approved By:	John Farch 980787BTEX Jaquez Co	Date://////98

98.5





FIELD SERVICES LABORATORY **ANALYTICAL REPORT JAQUEZ CORNFIELD**

SAMPLE IDENTIFICATION

· · · · · · · · · · · · · · · · · · ·	Field ID	Lab ID		
SAMPLE NUMBER:	N/A	980788		
MTR CODE SITE NAME:	N/A	Jaquez Cornfield		
SAMPLE DATE TIME (Hrs):	11/5/98	∕1526		
PROJECT:	Monito	r Well		
ATE OF BTEX EXT. ANÀL.;	11/6/98	11/6/98		
TYPE DESCRIPTION:	M-4 Field Duplicate	Water		

Field Remarks: Duplicate

RESULTS

PARAMETER	RÈSULT	UNITS		QUALIFI	ERS	
				Q		
BENZENE	65.3	РРВ	1			
TOLUENE	<1.0	PPB	1			
ETHYL BENZENE	<1.0	РРВ	1			
TOTAL XYLENES	33	PPB	1			
TOTAL BTEX	99	РРВ				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 99.8 for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

John Fard Date: 11/11/68 Approved By:

980788BTEXJaquezCornfield,11/11/98



Water Removal Data

		Develo	pment	Removal	Intake	Ending Water	Water V	/olume	Product	Volume	Temperature		Conductivity	Dissolved	
Date	Time	Meth	nod	Rate	Depth	Depth	Removi	ed (gal)	Removed	(gallons)	°C	рН	µmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
11-5-98	1315										14.4	6.49	691		
11-5-98	1320						5.0	50			13.7	5.95	625		
11-5-98	1325						5.0	10.0			13.6	6.16	526		
11-5-98	1335						5.0	15.0			13.6	6.54	503		
11-5-98	1340						5.0	20.0			13.4	6.47	478		
11-5-98	1350						50	25.0			13.3	6.7/	473	2.5	

Comments REMOVED THE OXYGEN RELEASE COMPOUND SOCKS 31 DAYS BEFORE SAMPLING. Developer's Signature Developer's Signature Date 11/10/48 ______ Date 11/10/48



Water Removal Data

		Develo	pment	Removal	Intake	Ending Water	Water \	/olume	Product	Volume	Temperature		Conductivity	Dissolved	
Date	Time	Met	hod	Rate	Depth	Depth	Remov	ed (gal)	Removed	(gallons)	°C	рН	µmho/cm	Oxygen	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative				mg/L	
11-5-98	1428										13.0	7.84	1547		
11-5-98	1433						5.0	50			13.3	8.05	1575		
11-5-98	1438						3.0	8.0			13.3	8.06	1565		
11-5-98	1446						2.0	10.0			13.1	8.61	1543		
11-5-98	1459	-					1.0	11.0			12.7	8.53	1726	4.5	
											1				
											2				

comments THE WELL BAILED ORY @ 11,0 SAULONS.	REMOVED THE DKYGEN	COMPOUND	SOCKS 3/ DAVS BEFOR
Sou i Rial	11 - 90	. 1.	SAMPLING.
Developer's Signature	Date_//-5-78_Reviewer	John Hende	Date 1/10/48



QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 980783 and 980788

QA/QC for 11/6/98 Sample Set

SAMPLE		EXPECTED	ANALYTICAL		ACCEPTABLE
NUMBER	TYPE	RESULT	RESULT	%R	
ICV LÅ+52589 50 pp8		PPB	РРВ		YES NO
Benzene	Standard	50.0	51.1	102.3	75 - 125 % X
Toluene	Standard	50.0	51.3	103	75 - 125 % X
Ethylbenzene	Standard	50.0	51.5	103	75 - 125 % X
m&р-Хуiene	Standard	100	105.6	105.6	75 - 125 % X
o - Xylene	Standard	50.0	52.1	104	75 - 125 % X
SAMPLE		EXPECTED	ANALYTICAL		ACCEPTABLE
NUMBER	TŸPĔ	ŘËSULT	RESULT	%R	
LCS LA-45476		PPB	PPB		YES NO
25 PPB			3 		RANGE
Benzene	Standard	25.0	25.5	102.0	39 - 150 X
Toluene	Standard	25.0	25.8	103	46 - 148 X
Ethylbenzene	Standard	25.0	25.9	104	32 - 160 X
m & p - Xylene	Standard	50.0	53.2	106	Not Given X
o - Xylene	Standard	25.0	26.4	106	Not Given X
SAMPLE		EXPECTED	ANALYTICAL		ACCEPTABLE
SAMPLE Number:	ŢŶ₽Ĕ	EXPECTED RESULT	ANALYTICAL RESULT	%R	ACCEPTABLE
SAMPLE Number CCV LA-52589	Түре	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE Yes no
SAMPLE NUMBER CCV LA-52589 S0 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT. PPB	%R	ACCEPTABLE Yes no Range
SAMPLE NUMBER CCV LA-52589 50: PPB Benzene	TYPE Standard	EXPECTED RESULT PPB 50.0	ANALYTICAL RESULT PPB 52.4	%R 104.7	ACCEPTABLE YES NO RANGE 75 - 125 % X
SAMPLE NUMBER CCV LA-52589 50: PPB Benzene Toluene	TYPE Standard Standard	EXPECTED RESULT PPB 50.0 50.0	ANALYTICAL RESULT. PPB 52.4 52.4	%R 104.7 104.8	ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X
SAMPLE NUMBER CCV LA-52589 50:PPB Benzene Toluene Ethylenzene	TYPE Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0	ANALYTICAL RESULT PPB 52.4 52.4 52.3	%R 104.7 104.8 104.6	ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X 75 - 125 % X
SAMPLE NUMBER CCV LA-52589 50:PPB Benzene Toluene Ethylenzene m & p - Xylene	TYPE Standard Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100	ANALYTICAL RESULT. PPB 52.4 52.4 52.3 106.7	%R 104.7 104.8 104.6 106.7	ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X 75 - 125 % X 75 - 125 % X
SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene	TYPE Standard Standard Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0	ANALYTICAL RESULT PPB 52.4 52.4 52.3 106.7 53.1	%R 104.7 104.8 104.6 106.7 106	ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X 75 - 125 % X 75 - 125 % X 75 - 125 % X
SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene SAMPLE	TYPE Standard Standard Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0 EXPECTED	ANALYTICAL RESULT. PPB 52.4 52.3 106.7 53.1 ANALYTICAL	%R 104.7 104.8 104.6 106.7 106	ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X
SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene SAMPLE NUMBER	TYPE Standard Standard Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0 EXPECTED RESULT	ANALYTICAL RESULT PPB 52.4 52.4 52.3 106.7 53.1 ANALYTICAL RESULT	%R 104.7 104.8 104.6 106.7 106 %R	ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X ACCEPTABLE
SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene SAMPLE NUMBER CCV LA-52589	TYPE Standard Standard Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 100 50.0 EXPECTED RESULT PPB	ANALYTICAL RESULT. PPB 52.4 52.3 106.7 53.1 ANALYTICAL RESULT. PPB	%R 104.7 104.8 104.6 106.7 106 %R	ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X ACCEPTABLE YES NO
SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE Standard Standard Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0 100 50.0 EXPECTED RESULT PPB	ANALYTICAL RESULT PPB 52.4 52.4 52.3 106.7 53.1 ANALYTICAL RESULT PPB	% 104.7 104.8 104.6 106.7 106 %	ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X ACCEPTABLE YES NO RANGE
SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene SAMPLE NUMBER CCV LA-52589 50 PPB Benzene	TYPE Standard Standard Standard Standard Standard TYPE Standard	EXPECTED RESULT PPB 50.0 50.0 100 50.0 EXPECTED RESULT PPB 50.0	ANALYTICAL RESULT. PPB 52.4 52.3 106.7 53.1 ANALYTICAL RESULT. PPB 51.9	%R 104.7 104.8 104.6 106.7 106 %R %R	ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X 75 - 125 % X 75 - 125 % X 75 - 125 % X ACCEPTABLE YES NO RANGE 75 - 125 % X
SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene sAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene	TYPE Standard Standard Standard Standard Standard TYPE Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0 EXPECTED RESULT PPB 50.0 50.0	ANALYTICAL RESULT. PPB 52.4 52.4 52.3 106.7 53.1 ANALYTICAL RESULT. PPB 51.9 50.8	%R 104.7 104.8 104.6 106.7 106 %R %R 103.7 101.7	ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X 75 - 125 % X 75 - 125 % X ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X
SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene toluene	TYPE Standard Standard Standard Standard Standard TYPE Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 100 50.0 EXPECTED RESULT PPB 50.0 50.0 50.0	ANALYTICAL RESULT. PPB 52.4 52.4 52.3 106.7 53.1 ANALYTICAL RESULT. PPB 51.9 50.8 50.3	%R 104.7 104.8 104.6 106.7 106 %R %R 103.7 101.7 100.5	ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X 75 - 125 % X 75 - 125 % X 75 - 125 % X ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X 75 - 125 % X
SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene sAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene thylbenzene m & p - Xylene	TYPE Standard Standard Standard Standard Standard TYPE Standard Standard Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0 EXPECTED RESULT PPB 50.0 50.0 50.0 100	ANALYTICAL RESULT. PPB 52.4 52.4 52.3 106.7 53.1 ANALYTICAL RESULT. PPB 51.9 50.8 50.3 101.6	%R 104.7 104.8 104.6 106.7 106 %R 106 7 %R 101.7 100.5 101.6	ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X 75 - 125 % X 75 - 125 % X 75 - 125 % X ACCEPTABLE YES NO RANGE 75 - 125 % X 75 - 125 % X 75 - 125 % X 75 - 125 % X

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

arrative: Acceptable.

LABORATORY DUPLICATES:

		SAMPLE	DUPLICATE		ACCEPTABLE			
SAMPLE	TYPE	RESULT	RESULT	RPD				
ID		PPB	PPB			YES	NO	
980787	an an an An an			adaptini i manina	RANGE			
Benzene	Matrix Duplicate	69.0	67.4	2.30	+/- 20 %	x		
Toluene	Matrix Duplicate	0.6	0.7	6.97	+/- 20 %	x		
Ethylbenzene	Matrix Duplicate	0.82	0.77	6.22	+/- 20 %	x		
m & p - Xylene	Matrix Duplicate	20.64	20.0	2.96	+/- 20 %	x		
o - Xylene	Matrix Duplicate	12.77	12.58	1.52	+/- 20 %	X]	

Narrative: Acceptable.

LABORATORY SPIKES:

	SAMPLE	SPIKE	SAMPLE	SAMPLE SPIKE		Ar	ACCEPTABLE		
- 	ID	ADDED	RESULT	SAMPLE	%R	1		1	
it. L	2nd Analysis	PPB	PPB	RESULT		1	YES	NO	
<u></u>	980787	i'.	<u>ا'</u>	PPB	<u> </u>	RANGE			
	Benzene	50	69.0	116.5	95.1	75 - 125 %	X		
l	Toluene	50	0.6	52.6	104	75 - 125 %	х		
	Ethylbenzene	50	0.8	53.6	106	75 - 125 %	х		
<u></u>	m & p - Xylene	100	20.6	127.0	106.4	75 - 125 %	х		
	o - Xylene	50	12.8	64.9	104	75 - 125 %	х		

Narrative: Acceptable

AUTO BLANK	SOURCE	AUTÔ BLANK	STATUS
		(1 analyzed with set)	
Benzene	Boiled Water	<1.0	ACCEPTABLE
Toluene	Boiled Water	<1.0	ACCEPTABLE
<i>thylbenzene</i>	Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

	SOURCE	PPB	STATUS
SOIL VIAL BLANK	Lot MB1461	(none analyzed with set)	
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION	SOURCE	PPB	STATUS
CARRYOVER CHECK	and the second second	(one analyzed with this set)	
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Varrative: Acceptable.

TRIP	SOURCE	РРВ	STATUS
BLANK	n and a second	(1 analyzed with this set - 11/05/98)	
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
thylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
btal Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

larrative: Acceptable.

eported By: JAL

Approved By: John Partch. Date: 11/11/48



Jaquez Seep Investigation Sample Results Lab Sample #'s 980793 to 980794 Sampled November 11, 1998 Sampled by John Lambdin

Report Distribution:

Sandra Miller Results Files

Bill -Please copy Scott Pope po that he can include in animal ruport. Thanks SM.

Attachments





CHAIN OF CUSTODY RECORD

Project N). 1	Project N	ame. }	R-		- /			-		7		7	Requ	ested				
NY	<u>t</u>	<u> </u>	AC	QUE	<u> </u>	nvest	igation		and a		/ 5	-		7	7	-/	• •		
Samplers	(Signature	P					Date:		No. of		Sec. Sec.		1	/	/	/		Remarks	
	oun	Jan	Vill	<u>h'</u>	· · · · · · · · · · · · · · · · · · ·		11/6/	98	Sample		, š /	+/	$\langle g \rangle$	' /	' /	/			
marit	Date	Time	Comp	GRAB		Sa	mple Number		ers		/ 2								
ubter	11/6/48	1430	X		9	807	93		26	4° #4</td <td>X</td> <td></td> <td></td> <td></td> <td>Dou</td> <td>INSTREAM</td> <td>nd</td> <td>Seep Areq -</td> <td>1</td>	X				Dou	INSTREAM	nd	Seep Areq -	1
Soil	11/6/98	1435	X		9	807	94		16	406	Х	X			At	- Serp	Are	a //	
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						T	1 Nor	n Howlt	? ni	11/4/4	18	1620							
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Air Bill I	No.:																		



FIELD SERVICES LABORATORY ANALYTICAL REPORT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980793
MTR CODE SITE NAME:	N/A	Jaquez
SAMPLE DATE TIME (Hrs):	11/6/98	1430
PROJECT:	Jaquez In	restigation
ATE OF BTEX EXT. ANAL.:	11/9/98	11/9/98
TYPE DESCRIPTION:	Water	Downstream of Seep Area

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS			
			DF	a left Q line to be the	
BENZENE	<1.0	PPB	1		
TOLUENE	<1.0	РРВ	1		
ETHYL BENZENE	<1.0	РРВ	1		
TOTAL XYLENES	<3.0	РРВ	1		
TOTAL BTEX	<6.0	PPB			

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 98.9 for this sample, All QA/QC was acceptable. DF = Dilution Factor Used

Narrative:

All QC Acceptat	ole.			
Approved By:	John Saba	Date:	11/11/98	
	980793BTEXJaque	zSeep.11/11/98		



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

SAMPLE IDENTIFICATION

	Field ID	Lab ID		
SAMPLE NUMBER:	N/A	980794		
MTR CODE SITE NAME:	N/A	Jaquez		
SAMPLE DATE TIME (Hrs):	11/6/98	1435		
PROJECT:	Jaquez in	investigation		
DATE OF TPH EXT. ANAL.:	11/10/98	11/10/98		
ATE OF BTEX EXT. ANAL.:	11/9/98	11/9/98		
TYPE DESCRIPTION:	Soil	At Seep Area		

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS .		QUALIFI	ERS				
	्राः सः अत्य विश्वेष्ठः स्टब्स् के विश्व स्थिति । स्वत्य स्वित्रेष्ठः अस्त्रेते दृष्ट्रः स्वति स्वत्य स्वत्य स्व		請求(DF)。主	Q	M(g)	∵V(ml)			
BENZENE	<0.5	MG/KG	1						
TOLUENE	<0.5	MG/KG	1						
ETHYL BENZENE	<0.5	MG/KG	1						
TOTAL XYLENES	<1.5	MG/KG	1						
TOTAL BTEX	<3	MG/KG							
TPH (MOD.8015)	<20	MG/KG	1						
HEADSPACE PID	Not Run	РРМ							
PERCENT SOLIDS	77.8	%							
TPH is by EPA Method 8015 and BTEX is by EPA Method 8020									

The Surrogate Recovery was at 100.1 for this sample. All QA/QC was acceptable.

Narrative:

TPH was analyzed by Pinnacle Laboratory in Albuquerque, NM.

All QA/QC is acceptable.

D _____ Dilution Factor Used

Approved By:

980794BTEXSOILJaquezSeep

Jarlelin Date: 11/11/98

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

Pinnacle Lab ID number November 16, 1998 811026



EL PASO FIELD SERVICES 770 WEST NAVAJO FARMINGTON, NM 87401

Project Name Project Number JACQUEZ (none)

Attention: JOHN LAMBDIN

On 11/10/98 Pinnacle Laboratories, Inc. Inc., (ADHS License No. AZ0592), received a request to analyze **non-aq** 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.

Kimberly D. McNeill Project Manager

MR: mt

Enclosure

tull.

H. Mitchell Rubenstein, Ph. D. General Manager

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



CLIENT	: EL PASO FIELD SERVICES	PINNACLE ID	: 811026
PROJECT #	: (none)	DATE RECEIVED	: 11/10/98
PROJECT NAME	: JACQUEZ	REPORT DATE	: 11/16/98
			DATE
μ μ	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	980794	NON-AQ	11/6/98



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

GAS CHROMOTOGRAPHY RESULTS

TEST	TEST : EPA 8015 MODIFIED (DIRECT INJECT)						
CLIENT		: EL PASO FIEI	LD SERVICE	S		PINNACLE I.D.	: 811026
PROJECT #	¥	: (none)					
PROJECT		: JACQUEZ					
SAMPLE				DATE	DATE	DATE	DIL.
<u>ID. #</u>	CLIENT I.D.		MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	980794		NON-AQ	11/6/98	11/10/98	11/10/98	1
PARAMETE	R	DET. LIMIT	UN	ITS	01		
FUEL HYDE	ROCARBONS, C6-C10	10	MG	/KG	< 10	<u>_</u>	
FUEL HYDF	ROCARBONS, C10-C22	5.0	MG	/KG	< 5.0		
FUEL HYDF	ROCARBONS, C22-C36	5.0	MG	/KG	< 5.0		
CALCULAT	ED SUM:				2		
	FE: NYL (%) FE LIMITS	(66 - 151)			102		

CHEMIST NOTES: N/A

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



GAS CHROMOTOGRAPHY RESULTS						
	REAGENT	BLANK				
TEST	: EPA 8015 MODIFIED (DIRECT	INJECT)	ł			
BLANK I.D.	: 111098		PINNACLE I.D).	: 811026	
CLIENT	: EL PASO FIELD SERVICES		DATE EXTRA	CTED	: 11/10/98	
PROJECT #	: (none)		DATE ANALYZ	ZED	: 11/10/98	
PROJECT NAME	: JACQUEZ		SAMPLE MAT	RIX	: NON-AQ	
			× – – – – – – – – – – – – – – – – – – –			
PARAMETER		UNITS				
FUEL HYDROCARBONS, (C6-C10	MG/KG	<	10		
FUEL HYDROCARBONS, (C10-C22	MG/KG	<	5.0		
FUEL HYDROCARBONS, C	C22-C36	MG/KG	<	5.0		
÷0						
SURROGATE:						
C RPHENYL (%)				123		
ROGATE LIMITS	(80 - 151)					

[

CHEMIST NOTES: N/A



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

I.

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		GAS CHR			TY CONTROL				
TEST	: EPA 8015 M	ODIFIED (D	IRECT INJECT)		2			
NSMSD # CLIENT PROJECT # PROJECT NAME	: : EL PASO FIE : (none) : JACQUEZ	ELD SERVIC	CES		DATE EXTR DATE ANAL SAMPLE MA	.D. ACTED YZED ATRIX	:	811026 11/10/98 11/10/98 NON-AQ	
					UNITS		:	MG/KG	
PARAMETER	SAMPLE RESULT		SPIKED SAMPLE	% 	DUP SPIKE	DUP <u>%</u> REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<5.0	100	125	125	117	117	7	(56 - 148)	20
CHEMIST NOTES:	mple Result - Sa	mple Result)						
% Recovery =	Spike Concentrat	ion	- X 100						
RPD (Relative Percent Diffe	(San rence) =	nple Result -	- Duplicate Res	uit)	X 100				
`	. *	Average	e Result						

American Environmental Network (NM), Inc.

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CHAIN OF CUSTODY

AEN(NM) Accession #: 611026 PROJECT MANAGER: John Lambdin ANALYSIS REQUEST ONLY. Paso Field Services EI TRPH Base/Neutral/Acid Compounds GC/MS (625/8270) PCE COMPANY. 1311) Ð 770 West NAVAjo ADDRESS: Polynuclear Aromatics (610/8310) Petroleum Hydrocarbons (418.1) EArmington, NM 87401 (505) 599-2144 Organics Ш. (MOD.8015) Diesel/Direct Inject RCRA Metals by TCLP (Method C TMB USE 8260 (CUST) Volatile Organics Farget Analyte List Metals (23) 8021 (BTEX)/8015 (Gasoline) 3260 (TCL) Volatile Organics Priority Pollutant Metals (13) 8260 (Full) Volatile Organics & Trap PHONE: Pesticides /PCB (608/8081) ш (505) 599-2261 504.1 EDB 0 / DBCP 0 NUMBER OF CONTAINERS LA E FAX. C MTBE 8260 (Landfill) Volatile Herbicides (615/8151) (M8015) Gas/Purge Above General Chemistry: OH BILL TO: RCRA Metals (8) 8021 (BTEX) [8021 (TCL) COMPANY: 8021 (CUST) Ш. 8021 (HALO) 8021 (EDX) ш ADDRESS: **m** Metals: 4 SAMPLE ID S REA 1/6/98 1435 Soil 980794 01 常期有限 4 **D** SHADE 南亚市 COMPLETELY. PROJECT INFORMATION PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS BELINQUISHED BY RELINQUISHED BY: 2 FORM IN Signature Time Time. NIA Signature: (RUSH) 🗙 24hr 🗌 48hr 🗍 72hr 1 WEEK (NORMAL) [] PROJ. NO.: JACQUEZ-[] SDWA [_]OTHER CERTIFICATION REQUIRED: [] NM PROJ. NAME: Printed Name: Date: Printed Name. Date. NHA METHANOL PRESERVATION [1] P.O. NO.: Company: Company: THIS SHIPPED VIA: Tol-X COMMENTS: FIXED FEE Please FAX results to (Sost 599-2144 Hold Sample for further instructions. SAMPLE RECEIPT 22 RECEIVED BY: RECEIVED BY: (LAB) 2. Manaturel 1030 NO. CONTAINERS FLL Signature: Time[.] (Y)N/NA CUSTODY SEALS Printed Name Date: Date: 11/10/18 Printed Name: Date: PLEASE RECEIVED INTACT Ves American Enviromental Network (NM), Inc. Company: с<u>с</u>) BLI" 1977

1/5/98 Action C.: American Environmental Network (NM), Inc. • 2709-D Pan American Freeway, NE • Albuquere, New Mexico 87107 • (505) 344-3777 • Fax (505) 344-4413

DISTRIBUTION: White SerN, Canary - Originate









EL PASO FIELD SERVICES

QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 980792 and 980793

QA/QC for 11/9/98 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE		EXPECTED	ANALYTICAL			ACCEPTABL	E
NUMBER	TYPE	RESULT	RESULT	XR			
ICV LA-52589		PPB	PPB			YES	NÖ
50 PPB		La serie Ala	, pina di sena di secondo di secon		RANGE		
Benzene	Standard	50.0	50.9	101.7	75 - 125 %	x	
Toluene	Standard	50.0	50.8	102	75 - 125 %	x	
Ethylbenzene	Standard	50.0	51.0	102	75 - 125 %	x	
m & p ~ Xylene	Standard	100	104.4	104.4	75 - 125 %	х	
o - Xylene	Standard	50.0	51.5	103	75 - 125 %	X	
SAMPLE		EXPECTED	ANALYTICAL			ACCEPTABL	E
NUMBER	TYPE	RESULT	RESULT	%R			•
LCS LA=45476		PPB	PPB		4 7	YEŚ	NO
25 RPB			L		RANGE		
Benzene	Standard	25.0	25.0	99.9	39 - 150	x	
Toluene	Standard	25.0	·· 25.3	101	46 - 148	х	
Ethylbenzene	Standard	25.0	25.6	102	32 - 160	х	
m & p - Xylene	Standard	50.0	51.9	104	Not Given	х	
o - Xylene	Standard	25.0	25.9	104	Not Given	х	
SAMPLE		EXPECTED	ANALYTICAL		AC	CEPTABLE	
NUMBER	TYPE	RESULT	RESULT	%R			, i
CCV LA-52589		ррв	РРВ			YES	NO
50 PPB				And the second sec	RANGE	· · ·	
Benzene	Standard	50.0	50.7	101.5	75 - 125 %	x	
Toluene	Standard	50.0	50.6	101.2	75 - 125 %	х	
Ethylenzene	Standard	50.0	50.5	101.0	75: - 125 %	x	
m & p - Xylene	Standard	100	102.9	102.9	75 - 125 %	x	
o - Xylene	Standard	50.0	51.4	103	75 - 125 %	x	
SAMPLE		EXPECTED	ANALYTICAL		AC	CEPTABLE	
NUMBER	TYPE	RESULT	RESULT	%R			
COV LA-52589		PPB	PPB			YES	NQ ·
50. PPB				·	RANGE		
Contraction of the State of the second second second	Marine and a second	Strategie and Andrews	in the second	مرا شور و در می می می اور	and the second se		
Benzene	Standard	<u> </u>		++++++++++++++++++++++++++++++++++++++			
Benzene Toluene	Standard Standard	<u> </u>	<u> </u>	<u></u>			
Benzene Toluene Ethylbenzene	Standard Standard Standard		<u>,</u>				
Benzene Toluene Ethylbenzene m & p - Xylene	Standard Standard Standard Standard Standard	<u>, , , , , , , , , , , , , , , , , , , </u>	<u>, , , , , , , , , , , , , , , , , , , </u>				

Jarrative: Acceptable.

LABORATORY DUPLICATES:

:			SAMPLE	DUPLICATE	•	AI AI	CEPTABL	E
.	SAMPLE	TYPE	RESULT	RESULT	RPD	•		
	ID		PPB	PPB			YÈS	NO
	980793					RANGE	· · · ·	
	Benzene	Matrix Duplicate	<1	<1	0,00	+/- 20 %	x	
	Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	x	
	Ethylbenzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	x	
	m & p - Xylene	Matrix Duplicate	<2	<2	0.00	+/- 20 %	x	
	o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	x	

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE	SPIKE	SAMPLE	SPIKE		AC	CEPTABLE
10	ADDED	RESULT	SAMPLE	%R		
2nd Analysis	PPB	PPB_	RESULT	(:		YES NO
980793			PPB		RANGE	· · ·
Benzene	50	<1	51.0	102.1	75 - 125 %	x
Toluene	50	<1	50.4	101	75 - 125 🛪	x
Ethylbenzene	50	<1	50.5	101	75 - 125 %	x
m & p - Xýlene	100	<2	103.0	103.0	75 - 125 %	x
o - Xylene	50	<1	51.2	102	75 - 125 %	x

Narrative: Acceptable

1	AUTO BLANK	SOURCE	PPB	STATUS
			(2 analyzed with set)	· · · · ·
	Benzene	Boiled Water	<1.0	ACCEPTABLE
	Toluene	Boiled Water	<1.0	ACCEPTABLE
	Ethylbenzene	Boiled Water	<1.0	ACCEPTABLE
	Total Xylenes	Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

	SOURCE	Р́Р́В	STATUS
SOIL VIAL BLANK	Lot MB1461	(none analyzed with set)	
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION	SOURCE	₽₽₿	STATUS
CARRYOVER CHECK		(none analyzed with this set)	
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

ŤRÍP	SOURCE	βĝġ	STATUS
BLANK		(1 analyzed with this set - 11/06/98)	
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

Reported By: JAL

Approved By: John Forthelin Date: 11/11/98

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QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 980771 to 980773, 980789 to 980791, 980794

QA/QC for 11/9/98 Sample Set

LABORATORY CALIBRATION CHECKS, LABORATORY CONTROL SAMPLES:

SAMPLE		EXPECTED	ANALYTICAL	Soly and Sole		ACCEPTABLE
NUMBER	TYPE	RESULT	RESULT	%R		
ICV LA-52589		PPB	PPB			YES NO.
50 PPB				<u> </u>	RANGE	
Benzene	Standard	50.0	50.9	101.7	75 - 125 %	۲ X
Toluene	Standard	50.0	50.8	101.7	75 - 125 %	κ x
Ethyl benzene	Standard	50.0	51.0	102.1	75 - 125 %	ί Χ
m & p - Xylene	Standard	100	104.4	104.4	75 - 125 %	к х
o - Xylene	Standard	50.0	51.5	103.0	75 - 125 %	<u> </u>
SAMPLE		EXPECTED	ANALYTICAL			
NUMBER	TYPE	RESULT	RESULT	%R		ACCEPTABLE
LCS LA-45476		PPB	PPB			YES NO
25 PPB					RANGE	
Benzene	Standard	25.0	25.0	99.9	39 - 150	X
Toluene	Standard	25.0	25.3	101.3	46 - 148	x
Ethyl benzene	Standard	25.0	25.6	102.3	32 - 160	x
m & p - Xylene	Standard	50.0	51.9	103.8	Not Given	х
o - Xylene	Standard	25.0	25.9	103.7	Not Given	X
SAMPLE		EXPECTED	ANALYTICAL			ACCEPTABLE
NUMBER	TYPE	RESULT	RESULT	%R		
CCV1 LA-52589		PPB	PPB			YES NO
50. PPB		and a state			RANGE	
Benzene	Standard	50.0	50.7	101.5	75 - 125 %	Х
Toluene	Standard	50.0	50.6	101.2	75 - 125 %	x
Ethyl benzene	Standard	50.0	50.5	101.0	75 - 125 %	x
m & p - Xylene	Standard	100	102.9	102.9	75 - 125 %	x
o - Xylene	Standard	50.0	51.4	102.8	75 - 125 %	X
SAMPLE		EXPECTED	ANALYTICAL			ACCEPTABLE
NOMBER	TYPE	RESULT	RESULT	%R		
CCV2 LA-52589		PPB	PPB			YES NO
50 PPB	ling and the second second Second second				RANGE	
Benzene	Standard	50.0	50.5	101.1	75 - 125 %	х
Toluene	Standard	50.0	50.2	100.4	75 - 125 %	x
Ethyl benzene	Standard	50.0	50.0	100.1	75 - 125 %	x
m & p - Xylene	Standard	100	101.5	101.5	75 - 125 %	х
o - Xylene	Standard	50.0	51.0	102.0	75 - 125 %	X
LABORATORY DUPLICATES:						
SAMPLE		SAMPLE	DUPLICATE			ACCEPTABLE
NUMBER	TYPE	RESULT	RESULT	RPD		
						YES NO
980771		ug/L	ug/L		RANGE	
Benzene	Extraction Dup	<1	<1	0.00	+/- 35 %	X
Toluene	Extraction Dup	<1	<1	0.00	+/- 35 %	x
Ethyl benzene	Extraction Dup	<1	<1	0.00	+/- 35 %	х

<2

<1

<2

<1

0.0

0.00

+/- 35 %

+/- 35 %

m & p - Xylene

o - Xylene

Extraction Dup

Extraction Dup

Х

Х

LABORATORY DUPLICATES:

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SAMPLE		SAMPLE	DUPLICATE		· · · · · · · · · · · · · · · · · · ·	ACCEPTABLE
NUMBER	TYPE	RESULT	RESULT PPM	ŔPD		YES NO
980771		ug/L	ug/L		RANGE	
Benzene	Matrix Duplicate	<1	<1	0.00	+/- 35 %	X
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 35 %	x
Ethyl benzene	Matrix Duplicate	<1	<1	0.00	+/- 35 %	x
m & p - Xylene	Matrix Duplicate	<2	<2	0.00	+/- 35 %	x
o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 35 %	X

Narrative: Acceptable

LABORATORY SPIKES:

SAMPLE Number 980771	SPİKE Added PPB	SAMPLE RESULT PPB	SPTKE SAMPLE RESULT PPB	%R	RANGE	ACCEP YES	TABLE NO
Benzene	50.0	<1	51.0	102.0	75 - 125 X	x	
Toluene	50.0	<1	50.7	101.4	75 - 125 %	х	
Ethyl benzene	50.0	<1	50.3	100.7	75 - 125 %	х	
m & p - Xylene	100.0	<2	102.3	102.3	75 - 125 %	x	
o - Xylene	50.0	<1	51.5	·/ 103.0	75 - 125 %	Х	

Narrative: Acceptable

ADDITIONAL ANALYTICAL BLANKS:

SAMPLE ID	SOURCE	PPB	STATUS
AUTO BLANK/BOILED WATER		(1 analyzed with this set)	
Benzene	Boiled Water	<1.0	ACCEPTABLE
Toluene	Boiled Water	<1.0	ACCEPTABLE
Ethyl benzene	Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Boiled Water	<3.0	ACCEPTABLE
Narrative: Acceptable			
SAMPLE ID	SOURCE	PPB	STATUS

SOIL VIAL BLANK		(None analyzed with this set)	
Benzene	ial + Boiled Wate	<1.0	ACCEPTABLE
Toluene	ial + Boiled Wate	<1.0	ACCEPTABLE
Ethyl benzene	ial + Boiled Wate	<1.0	ACCEPTABLE
Total Xylenes	ial + Boiled Wate	<3.0	ACCEPTABLE

Narrative: Acceptable

SAMPLE ID EXTRACTION BLANK	SOURCE 0913. ext blk	PPB. 1 analyzed with this set)	STATUS
Benzene	Methanol	<1.0	ACCEPTABLE
Toluene	Methanol	<1.0	ACCEPTABLE
Ethyl benzene	Methanol	<1.0	ACCEPTABLE
Total Xylenes	Methanol	<3.0	ACCEPTABLE

Narrative: Acceptable

	SOURCE	NARRĂTIVE	STATUS
Carryover contamination			· ·
checks		(one analyzed with this set)	
Benzene	ial + Boiled Wate	<1.0	ACCEPTABLE
Toluene	ial + Boiled Wate	<1.0	ACCEPTABLE
Ethyl benzene	ial + Boiled Wate	<1.0	ACCEPTABLE
Total Xylenes	ial + Boiled Wate	<3.0	ACCEPTABLE

Narrative: Acceptable

SAMPLE 1D	SOURCE	PPB	STATUS
METHANOL CHECK	Lot # H18318	(None analyzed with this set)	
Benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Toluene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	MeOH/Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable

Report By: ______

Accepted By: John Laubolu. Date: 11/11/98