GW - 355

MONITORING REPORTS

DATE:

12/99

Annual Report of Groundwater Remediation Activities

Transwestern Pipeline Company
Bell Lake Plant
Lea County, New Mexico

Submitted to:
New Mexico Oil Conservation Division

December 14, 1999

Prepared For:
Transwestern Pipeline Company
6381 North Main Street
Roswell, NM 88201

Prepared by:
Cypress Engineering Services, Inc.
10235 West Little York Road, Suite 256
Houston, Texas 77040

Report of Groundwater Remediation Activities

Transwestern Pipeline Company
Bell Lake Plant

I. Installation, Repair, & Abandonment of Wells

Installation of Five Additional SVE Wells

Five additional soil vapor extraction (SVE) wells were installed on May 22-27, 1999. The locations of the new wells are indicated in Figure 1 as wells SVE-8, SVE-9, SVE-10, SVE-11, and SVE-12. These wells were installed in order to more effectively remove phase separated hydrocarbon (PSH) accumulated at the water table. Two of the new wells were replacements for wells SVE-1 and SVE-4. The well screens in wells SVE-1 and SVE-4 had failed, presumably due to softening of the PVC material by PSH liquid. In light of this, all new SVE wells were completed using stainless steel screen.

Repair of Monitor Well MW-7

Monitor well MW-7 was damaged in the course of facility construction activities which were completed sometime just prior to the February 1999 sampling event. The protective well vault and surface pad had been inadvertently knocked off the well casing by heavy construction equipment. A new well vault and surface pad were constructed around monitor well MW-7 in May 1999. The well was subsequently redeveloped to remove soil and debris which had fallen into the well casing.

Abandonment of Monitor Well MW-3

Monitor well MW-3 was destroyed in the course of facility construction activities which were completed sometime just prior to the February 1999 sampling event. The protective well vault and surface pad had been inadvertently knocked off the well casing by heavy construction equipment. Soil and debris had filled the well casing to a depth above the water table which made rehabilitation efforts infeasible. As a result, monitor well MW-3 was abandoned in May 1999 by filling the remaining open casing with a 3-5% bentonite grout. This well was not replaced since it was an upgradient well and a sufficient history of background groundwater quality had already been developed.

II. Groundwater Monitoring Activities

Semiannual Groundwater Sampling Events

Three sampling events have been completed since the last report of groundwater remediation activities. These events were completed on August 3, 1998, February 10, 1999, and August 10, 1999.

Prior to sampling, the depth to water, and the depth to hydrocarbon where phase separated hydrocarbon (PSH) was present, was determined for each monitor well and soil vapor extraction (SVE) well. The measured depths and the corresponding water table elevation for each monitor well and SVE well are presented in Table 1.

In the course of each sample event, groundwater samples were collected from each of the monitor wells at the site. In addition, groundwater samples were collected from the on-site water well. Samples were not collected from monitor wells with PSH accumulated in the well casing. Samples were not collected from well MW-7 in the course of the February 1999 sampling event due to damage to the well which had occurred during facility construction activities. In addition, samples were not collected from well MW-3 in the course of the February 1999 or August 1999 sampling events due to damage to the well which had occurred during facility construction activities. Groundwater samples were delivered to a laboratory for analysis by EPA Method 8021B for benzene, toluene, ethylbenzene, and xylenes (BTEX), total dissolved solids (TDS), and chlorides. In addition, samples collected in the course of the August 1998 and August 1999 sampling events were also submitted to a laboratory for analysis for a selected list of

metals. A summary of the laboratory results for organics and for field measured parameters is presented in Table 2. A summary of the laboratory results for inorganics is presented in Table 3.

Results/Conclusions from Groundwater Sampling Events

Occurrence and Direction of Groundwater Flow

A groundwater surface elevation map, based on measurements obtained on August 10, 1999, is included as Figure 2. The apparent direction of groundwater flow is consistent with water table elevation maps previously developed for this site. The hydraulic gradient, as estimated from the information presented in Figure 2, is approximately 0.002 ft/ft over the site area.

Lateral Extent of Phase Separated Hydrocarbon

The lateral extent of PSH is currently defined by the occurrence of PSH at the water table in wells SVE-1, SVE-3, SVE-4, SVE-8, SVE-9, SVE-10, SVE-12, and MW-4, and the absence of PSH in all other wells. The thickness of accumulated PSH in wells is presented in Table 1. A figure indicating the estimated area with PSH present at the water table is included as Figure 3.

Condition of Affected Groundwater

The condition of affected groundwater, based on recent sampling events, has not changed significantly from previous sampling events as evidenced by the information presented in Tables 2 and 3 and in Figures 4 and 5. Elevated concentrations of benzene continue to be the primary concern. A sufficient history of constituent concentrations has yet to be developed in order to evaluate natural attenuation processes.

III. Planned Changes to the Groundwater Monitoring Program

Disposal of Monitor Well Purge Water

No changes are proposed at this time.

Frequency of Groundwater Monitoring

No changes are proposed at this time.

Sample Analysis Plan

The current sample analysis plan requires that groundwater samples are collected for analysis for BTEX constituents, Total Dissolved Solids (TDS), and chloride in the course of each semiannual sampling event and samples are collected for analysis for metal constituents in the course of just one semiannual sampling event (i.e., annually). The current list of analytes and laboratory analytical methods are as follows:

- BTEX Compounds (method 8021B)
- Total Dissolved Solids (method 160.1)
- Chloride (method 325.2)
- Total Metals including Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Mercury, Manganese, Selenium, Silver, & Zinc. [method 7470 for Mercury, method 7060 for Arsenic, method 7740 for Selenium, & method 6010 for all others]

The current sampling plan will be modified so that samples for TDS and chloride will be collected at the same frequency as metal constituents (i.e., annually). In addition, the current sampling plan will be modified to exclude nine of the twelve metal constituents from the sample analysis plan. Only three of the twelve metal constituents have consistently been detected above a NMWQCC groundwater standard: Arsenic, measured in samples from monitor wells MW-5, MW-6, MW-8, & MW-11; Barium, measured in samples from monitor wells MW-9, MW-10, & MW-11; and Manganese, measured in samples from monitor wells MW-2, MW-7, MW-10, & MW-11. In light of this, only these three metal constituents will be included in the sample analysis plan.

Routine Reporting of Monitoring Activities

Routine reporting will continue on an annual basis. The next annual report will be submitted to the OCD by December 1, 2000.

IV. Status of Remediation Activities

Remediation Activities Completed through November 1999

The following remediation activities were completed between June 1998 and November 1999:

1) Five additional SVE wells were installed in May 1999. Four of the five wells indicated the presence of accumulated PSH at the water table and have been connected to the SVE system manifold.

2) A liquid recovery pump is rotated between wells containing PSH in an effort to accelerate the removal of PSH accumulated at the water table. Liquid recovery is done concurrent with vapor extraction (i.e., dual phase extraction).

3) Three ground water sampling events were completed; and

4) Routine O&M of the remediation system has continued to ensure efficient and effective operation.

Current Status of Remediation Activities

Routine operation and maintenance of the remediation system is ongoing.

Remediation Activities Planned for December 1999 through November 2000

A downgradient monitor well will be installed at the location indicated as MW-13 in Figure 1. This well will be installed during the month of December 1999. The objective of this well is to provide a groundwater monitoring point directly downgradient of monitor well MW-11.

An additional SVE well will be installed adjacent to monitor well MW-4. The well screen in well MW-4 has failed, presumably due to softening of the PVC material by PSH liquid. The new SVE well will be completed using stainless steel screen.

The remediation system is anticipated to be in operation at least through year-2000 in order to achieve its cleanup objectives. The groundwater sampling program will continue as outlined above.

Annual Report of Ground Water Remediation Activities

Transwestern Pipeline Company
Bell Lake Plant

Figures

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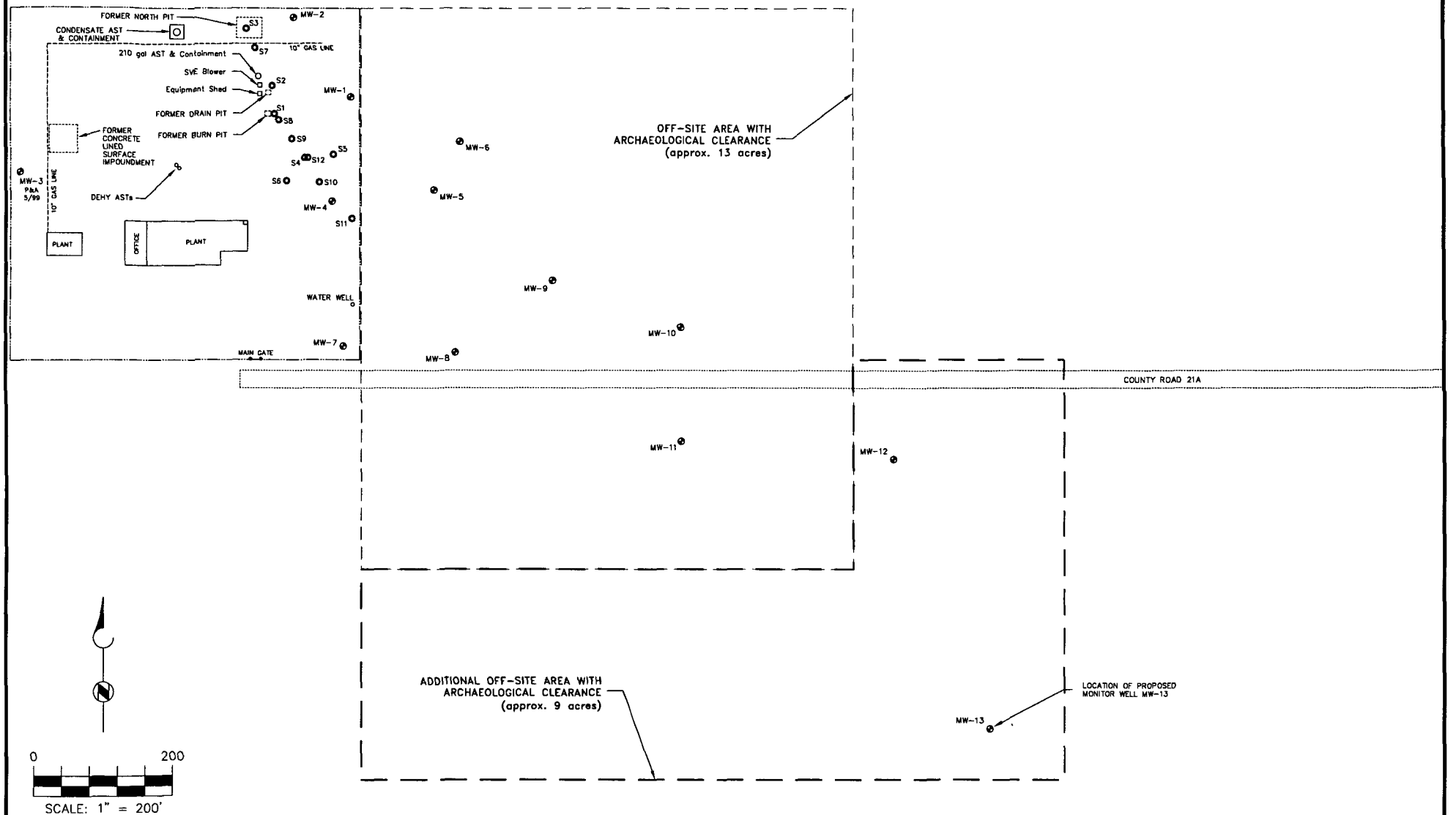

SITE MAP

TRANSWESTERN PIPELINE COMPANY

BELL LAKE PLANT

FIGURE 1

CYPRESS ENGINEERING SERVICES, INC.

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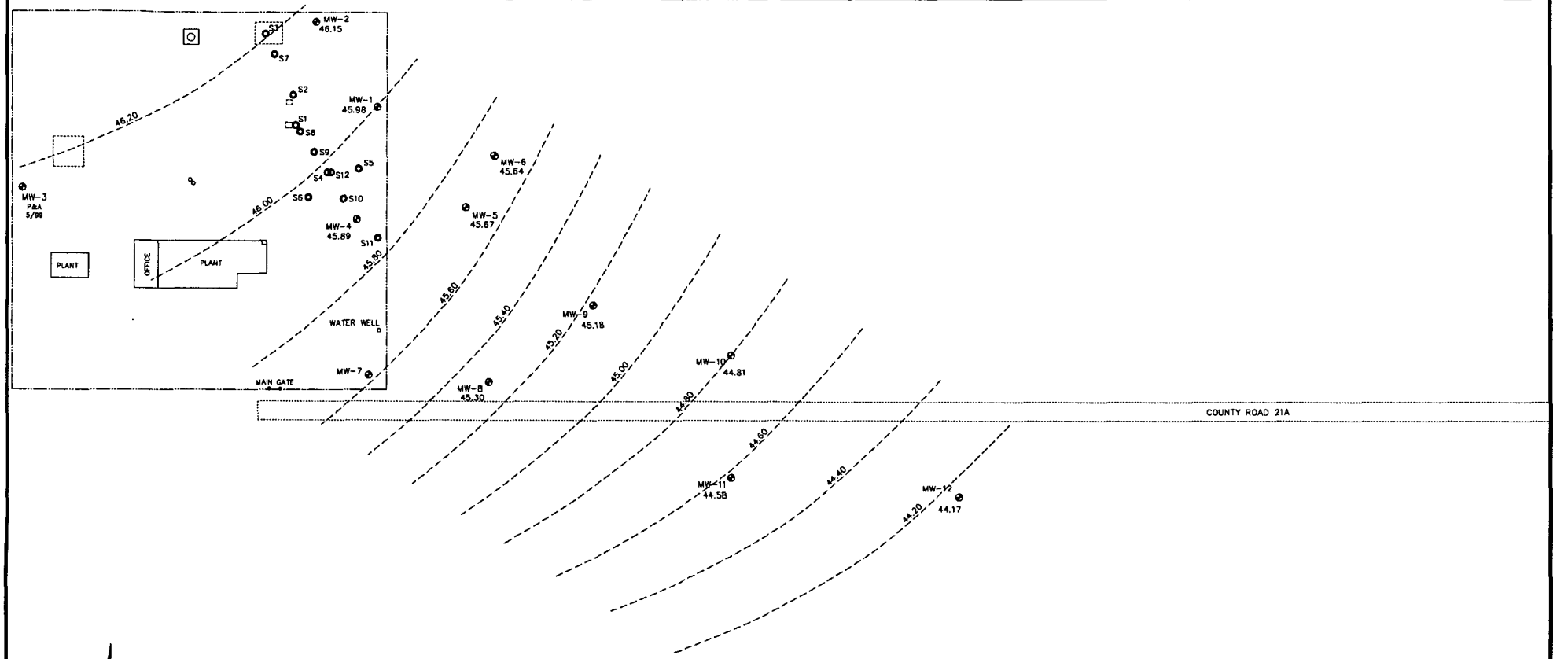

0 200

SCALE: 1" = 200'

LEGEND

- Monitoring Well
- SVE Well
- 46.00 Ground Water Elevation (ft. above datum at 3500 ft. msl)

GROUNDWATER SURFACE ELEVATION
AUGUST 10, 1999

TRANSWESTERN PIPELINE COMPANY
BELL LAKE PLANT

FIGURE 2

CYPRESS ENGINEERING SERVICES, INC.

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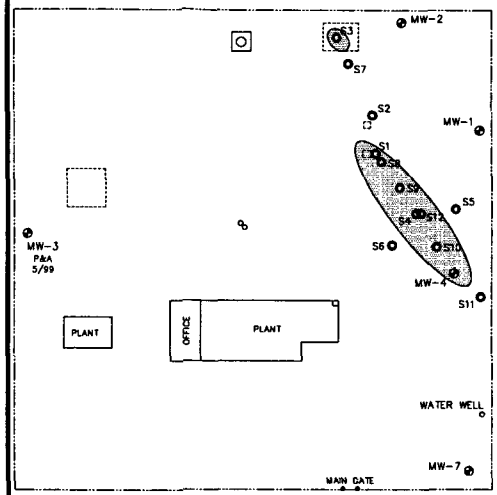

MW-6

MW-5

MW-9

MW-10

MW-8

COUNTY ROAD 21A

MW-11

MW-12

LOCATION OF PROPOSED MONITOR WELL MW-13

MW-13

0 200

SCALE: 1" = 200'

LEGEND

- Monitoring Well
- SVE Well
- Estimated Area of PSH (Phase Separated Hydrocarbon)

DISTRIBUTION OF PSH ON GROUNDWATER
AUGUST 10, 1999

TRANSWESTERN PIPELINE COMPANY
BELL LAKE PLANT

FIGURE 3

CYPRESS ENGINEERING SERVICES, INC.

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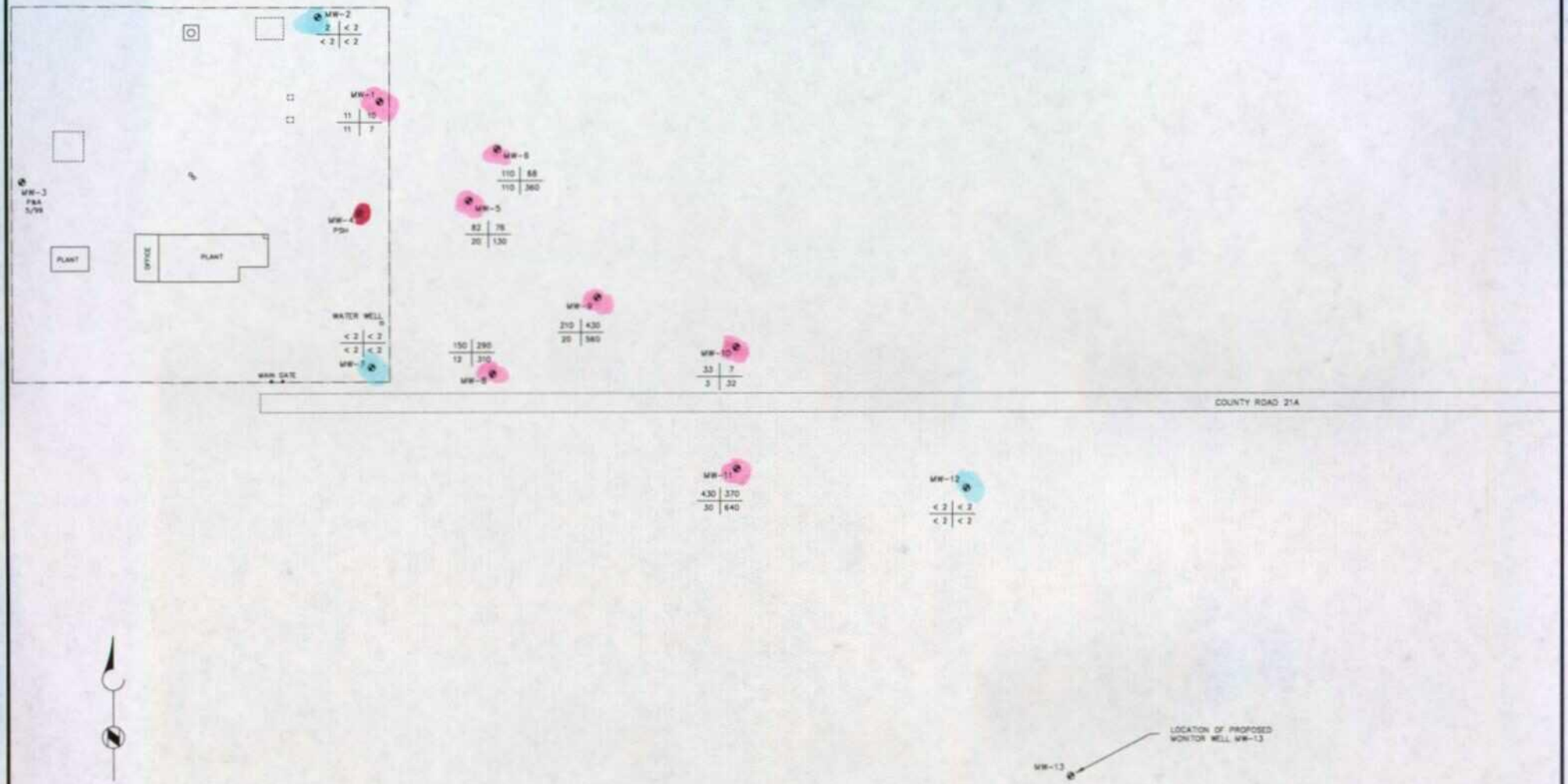

LEGEND

- Monitoring Well
- PSH Phase Separated Hydrocarbon
- B | T / E | X BTEX Concentration (ppb)

DISTRIBUTION OF BTEX COMPOUNDS IN GROUNDWATER - AUGUST 10, 1999

TRANSWESTERN PIPELINE COMPANY
BELL LAKE PLANT

CYPRESS ENGINEERING SERVICES, INC.

FIGURE 4

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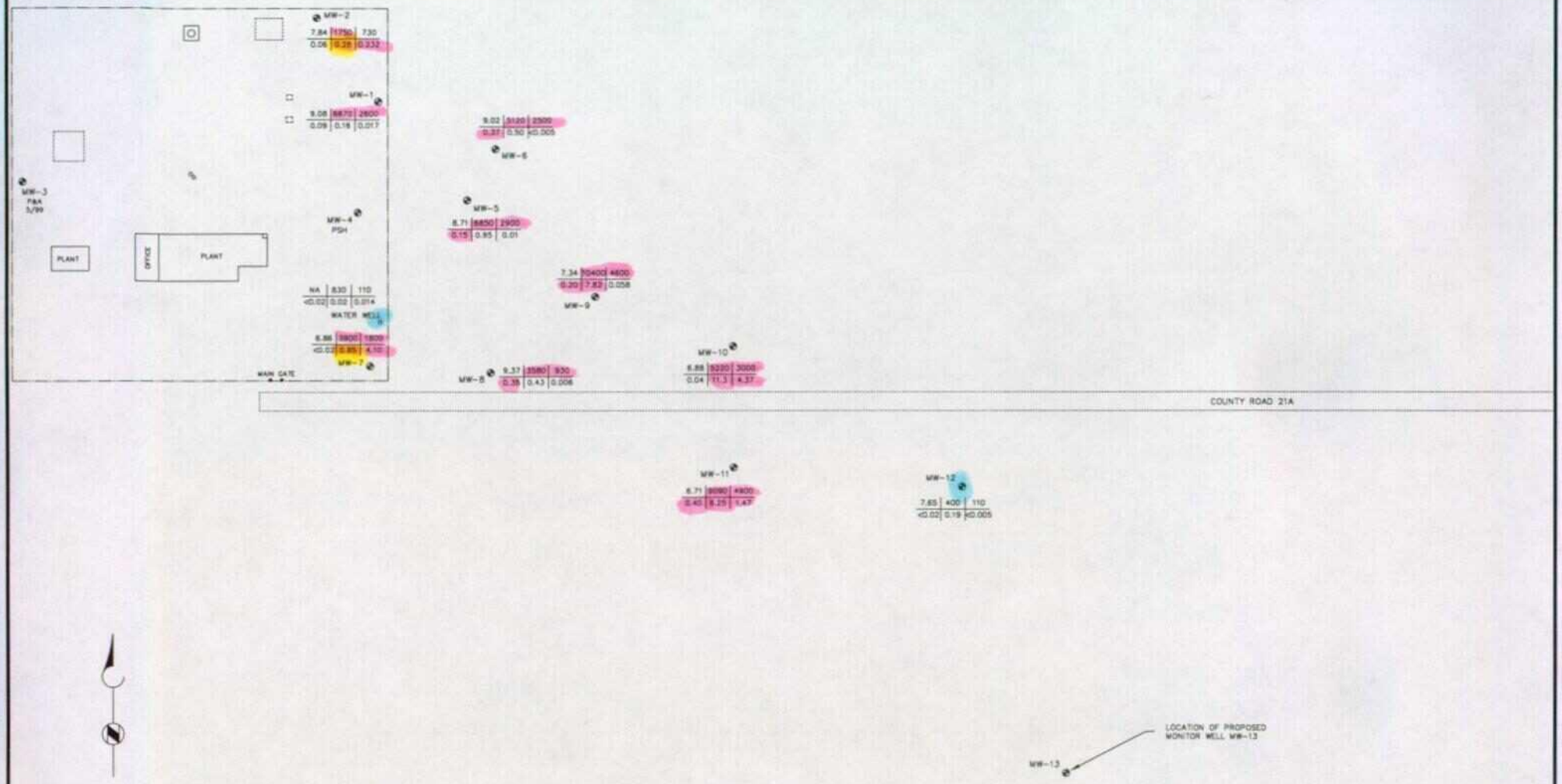

LEGEND

- Monitoring Well
- PSH Phase Separated Hydrocarbon
- pH | TDS | O / As | Ba | Mn Inorganic Constituents (mg/L)

DISTRIBUTION OF INORGANIC CONSTITUENTS IN GROUNDWATER - AUGUST 10, 1999

TRANSWESTERN PIPELINE COMPANY
BELL LAKE PLANT

FIGURE 5

CYPRESS ENGINEERING SERVICES, INC.

Annual Report of Ground Water Remediation Activities

Transwestern Pipeline Company
Bell Lake Plant

Tables

Table 1. Summary of Ground Water Surface Elevations
TW Bell Lake Gas Plant

Well	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Water (ft)	PSH (ft)	Surface Elevation (ft)
MW-1	10/24/93	3635.37	(a)	88.97	(a)	3546.40
	12/08/94		(a)	89.38	(a)	3545.99
	05/31/95		(a)	89.18	(a)	3546.19
	12/12/95		(a)	89.27	(a)	3546.10
	02/20/96		(a)	89.24	(a)	3546.13
	05/15/96		(a)	89.21	(a)	3546.16
	08/14/96		(a)	89.32	(a)	3546.05
	11/12/96		(a)	89.10	(a)	3546.27
	02/07/97		(a)	89.35	(a)	3546.02
	08/08/97		(a)	89.22	(a)	3546.15
	01/09/98		(a)	89.41	(a)	3545.96
	02/24/98		(a)	89.21	(a)	3546.16
	08/03/98		(a)	89.40	(a)	3545.97
	02/10/99		(a)	89.40	(a)	3545.97
	08/10/99		(a)	89.39	(a)	3545.98
MW-2	10/19/93	3634.63	(a)	88.02	(a)	3546.61
	12/08/94		(a)	88.15	(a)	3546.48
	05/31/95		(a)	88.23	(a)	3546.40
	12/12/95		(a)	88.31	(a)	3546.32
	02/20/96		(a)	88.29	(a)	3546.34
	05/15/96		(a)	88.27	(a)	3546.36
	08/14/96		(a)	88.39	(a)	3546.24
	11/12/96		(a)	88.10	(a)	3546.53
	02/07/97		(a)	88.37	(a)	3546.26
	08/08/97		(a)	88.27	(a)	3546.36
	01/09/98	3634.68 (c)	(a)	88.42	(a)	3546.26
	02/24/98		(a)	88.30	(a)	3546.38
	08/03/98		(a)	88.42	(a)	3546.26
	02/10/99		(a)	88.43	(a)	3546.25
	08/10/99		(a)	88.53	(a)	3546.15
MW-3	10/20/93	3639.64	(a)	92.96	(a)	3546.68
	12/08/94		(a)	93.08	(a)	3546.56
	05/31/95		(a)	93.17	(a)	3546.47
	12/12/95		(a)	93.24	(a)	3546.40
	02/20/96		(a)	93.20	(a)	3546.44
	05/15/96		(a)	93.20	(a)	3546.44
	08/14/96		(a)	93.31	(a)	3546.33
	11/12/96		(a)	93.30	(a)	3546.34
	02/07/97		(a)	93.31	(a)	3546.33
	08/08/97		(a)	93.27	(a)	3546.37
	01/09/98		(a)	93.40	(a)	3546.24
	02/24/98		(a)	93.28	(a)	3546.36
	08/03/98		(a)	93.41	(a)	3546.23

Table 1. Summary of Ground Water Surface Elevations
TW Bell Lake Gas Plant

Well	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Water (ft)	PSH (ft)	Surface Elevation (ft)
MW-4	12/08/94	3636.05	(a)	89.90	(a)	3546.15
	05/31/95		(a)	89.97	(a)	3546.08
	12/12/95		(a)	90.05	(a)	3546.00
	02/20/96		(a)	90.05	(a)	3546.00
	05/15/96		(a)	89.99	(a)	3546.06
	08/14/96		(a)	90.09	(a)	3545.96
	11/12/96		(a)	90.00	(a)	3546.05
	02/07/97		(a)	90.13	(a)	3545.92
	08/08/97		90.00	90.60	0.60	3545.93
	11/06/97		90.01	90.15	0.14	3546.01
	11/12/97		90.02	90.25	0.23	3545.98
	12/29/97	3637.04 (c)	90.69	92.55	1.86	3545.98
	11/24/98		90.28	94.04	3.76	3546.01
	01/28/99		90.50	94.03	3.53	3545.83
	02/10/99		90.81	91.93	1.12	3546.01
	02/24/99		90.45	93.54	3.09	3545.97
	06/02/99		89.90	92.65	2.75	3546.59
	06/04/99		90.80	91.54	0.74	3546.09
	08/10/99		90.66	93.12	2.46	3545.89
MW-5	12/08/94	3635.31	(a)	89.33	(a)	3545.98
	05/31/95		(a)	89.36	(a)	3545.95
	12/12/95		(a)	89.40	(a)	3545.91
	02/20/96		(a)	89.46	(a)	3545.85
	05/15/96		(a)	89.40	(a)	3545.91
	08/14/96		(a)	89.43	(a)	3545.88
	11/12/96		(a)	89.42	(a)	3545.89
	02/07/97		(a)	89.53	(a)	3545.78
	08/08/97		(a)	89.41	(a)	3545.90
	01/09/98		(a)	89.57	(a)	3545.74
	02/24/98		(a)	89.38	(a)	3545.93
	08/03/98		(a)	89.59	(a)	3545.72
	02/10/99		(a)	89.65	(a)	3545.66
	08/10/99		(a)	89.64	(a)	3545.67
MW-6	12/08/94	3634.66	(a)	88.65	(a)	3546.01
	05/31/95		(a)	88.70	(a)	3545.96
	12/12/95		(a)	88.72	(a)	3545.94
	02/20/96		(a)	88.81	(a)	3545.85
	05/15/96		(a)	88.75	(a)	3545.91
	08/14/96		(a)	88.82	(a)	3545.84
	11/12/96		(a)	88.81	(a)	3545.85
	02/07/97		(a)	88.88	(a)	3545.78
	08/08/97		(a)	88.80	(a)	3545.86
	01/09/98		(a)	88.92	(a)	3545.74
	02/24/98		(a)	88.75	(a)	3545.91
	08/03/98		(a)	88.93	(a)	3545.73
	02/10/99		(a)	89.00	(a)	3545.66
	08/10/99		(a)	89.02	(a)	3545.64

Table 1. Summary of Ground Water Surface Elevations
TW Bell Lake Gas Plant

Well	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Water (ft)	PSH (ft)	Surface Elevation (ft)
MW-7	12/12/95	3635.89	(a)	90.18	(a)	3545.71
	02/20/96		(a)	90.15	(a)	3545.74
	05/15/96		(a)	90.11	(a)	3545.78
	08/14/96		(a)	90.21	(a)	3545.68
	11/12/96		(a)	90.20	(a)	3545.69
	02/07/97		(a)	90.22	(a)	3545.67
	08/08/97		(a)	90.19	(a)	3545.70
	01/09/98		(a)	90.28	(a)	3545.61
	02/24/98		(a)	90.18	(a)	3545.71
	08/03/98		(a)	90.29	(a)	3545.60
	08/10/99	---	(a)	90.40	(a)	---
MW-8	12/12/95	3635.28	(a)	89.82	(a)	3545.46
	02/20/96		(a)	89.82	(a)	3545.46
	05/15/96		(a)	89.78	(a)	3545.50
	08/14/96		(a)	89.86	(a)	3545.42
	11/12/96		(a)	89.86	(a)	3545.42
	02/07/97		(a)	89.89	(a)	3545.39
	08/08/97		(a)	89.85	(a)	3545.43
	01/09/98	3635.30 (c)	(a)	89.95	(a)	3545.35
	02/24/98		(a)	89.87	(a)	3545.43
	08/03/98		(a)	89.95	(a)	3545.35
	02/10/99		(a)	89.97	(a)	3545.33
	08/10/99		(a)	90.00	(a)	3545.30
MW-9	12/12/95	3633.58	(a)	88.21	(a)	3545.37
	02/20/96		(a)	88.23	(a)	3545.35
	05/15/96		(a)	88.18	(a)	3545.40
	08/14/96		(a)	88.22	(a)	3545.36
	11/12/96		(a)	88.27	(a)	3545.31
	02/07/97		(a)	88.29	(a)	3545.29
	08/08/97		(a)	88.25	(a)	3545.33
	01/09/98		(a)	88.35	(a)	3545.23
	02/24/98		(a)	88.24	(a)	3545.34
	08/03/98		(a)	88.33	(a)	3545.25
	02/10/99		(a)	88.37	(a)	3545.21
	08/10/99		(a)	88.40	(a)	3545.18
MW-10	01/09/98	3633.25 (c)	(a)	88.42	(a)	3544.83
	02/24/98		(a)	88.33	(a)	3544.92
	08/03/98		(a)	88.41	(a)	3544.84
	02/10/99		(a)	88.43	(a)	3544.82
	08/10/99		(a)	88.44	(a)	3544.81
MW-11	01/09/98	3631.57 (c)	(a)	86.99	(a)	3544.58
	02/24/98		(a)	86.94	(a)	3544.63
	08/03/98		(a)	86.98	(a)	3544.59
	02/10/99		(a)	86.99	(a)	3544.58
	08/10/99		(a)	86.99	(a)	3544.58

Table 1. Summary of Ground Water Surface Elevations
TW Bell Lake Gas Plant

Well	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Water (ft)	PSH (ft)	Surface Elevation (ft)
MW-12	01/09/98	3630.61 (c)	(a)	86.39	(a)	3544.22
	02/24/98		(a)	86.29	(a)	3544.32
	08/03/98		(a)	86.37	(a)	3544.24
	02/10/99		(a)	86.39	(a)	3544.22
	08/10/99		(a)	86.44	(a)	3544.17
SVE-1	12/01/95	3637.06	90.68	92.12	1.44	3546.09
	02/20/96		90.52	92.12	1.60	3546.22
	05/01/96		90.51	92.20	1.69	3546.21
	01/17/97	3638.21 (c)	91.63	93.34	1.71	3546.24
	11/06/97		91.45	93.59	2.14	3546.33
	12/29/97		91.50	93.45	1.95	3546.32
	11/24/98		91.12	94.65	3.53	3546.38
	01/28/99		91.80	93.10	1.30	3546.15
	06/02/99		91.79	92.49	0.70	3546.28
	06/04/99		91.70	92.32	0.62	3546.39
	08/10/99		91.97	92.35	0.38	3546.16
SVE-2	12/01/95	3636.49	(a)	90.18	(a)	3546.31
	02/20/96		(a)	90.22	(a)	3546.27
	05/01/96		(a)	90.21	(a)	3546.28
	01/17/97	3637.53 (c)	(a)	91.20	(a)	3546.33
	11/06/97		(a)	91.10	(a)	3546.43
	12/29/97		(a)	91.13	(a)	3546.40
	08/04/98		(a)	91.32	(a)	3546.21
	11/24/98		(a)	91.30	(a)	3546.23
	02/10/99		(a)	91.21	(a)	3546.32
	06/02/99		(a)	91.34	(a)	3546.19
	08/10/99		(a)	91.36	(a)	3546.17
SVE-3	12/01/95	3636.44	90.00	90.30	0.30	3546.38
	02/20/96		89.52	92.37	2.85	3546.35
	05/01/96		89.38	92.92	3.54	3546.35
	01/17/97	3637.62 (c)	90.65	93.60	2.95	3546.38
	11/06/97		90.65	93.00	2.35	3546.50
	12/29/97		90.50	93.70	3.20	3546.48
	01/16/99		(a)	90.83	(a)	3546.79
	01/28/99		(a)	91.06	(a)	3546.56
	02/08/99		(a)	91.10	(a)	3546.52
	02/10/99		(a)	91.04	(a)	3546.58
	06/02/99		(a)	90.95	(a)	3546.67
	06/05/99		(a)	91.20	(a)	3546.42
	08/10/99		91.38	91.50	0.12	3546.22

Table 1. Summary of Ground Water Surface Elevations
TW Bell Lake Gas Plant

Well	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Water (ft)	PSH (ft)	Surface Elevation (ft)
SVE-4	11/12/97	3636.95 (c)	(a)	89.69	(a)	3547.26
	12/29/97		90.40	92.30	1.90	3546.17
	11/24/98		89.14	93.54	4.40	3546.93
	01/06/99	3636.49 (d)	87.70	91.75	4.05	3547.98
	02/08/99		89.85	93.26	3.41	3545.96
	06/02/99		89.65	90.82	1.17	3546.61
	06/04/99		89.75	90.73	0.98	3546.54
SVE-5	11/12/97	3635.65 (c)	(a)	89.60	(a)	3546.05
	12/29/97		(a)	89.59	(a)	3546.06
	01/09/98		(a)	89.75	(a)	3545.90
	11/24/98		(a)	89.60	(a)	3546.05
	02/10/99		(a)	89.67	(a)	3545.98
	06/02/99		(a)	89.59	(a)	3546.06
	08/10/99		(a)	89.71	(a)	3545.94
SVE-6	11/12/97	3636.38 (c)	(a)	90.20	(a)	3546.18
	12/29/97		(a)	90.20	(a)	3546.18
	01/09/98		(a)	90.25	(a)	3546.13
	11/24/98		(a)	90.20	(a)	3546.18
	02/10/99		(a)	90.27	(a)	3546.11
	06/02/99		(a)	90.13	(a)	3546.25
	08/10/99		(a)	90.23	(a)	3546.15
SVE-7	11/12/97	3637.01 (c)	(a)	89.61	(a)	3547.40
	12/29/97		(a)	90.52	(a)	3546.49
	08/04/98		(a)	90.58	(a)	3546.43
	11/24/98		(a)	90.71	(a)	3546.30
	02/10/99		(a)	90.60	(a)	3546.41
	06/02/99		(a)	89.61	(a)	3547.40
	08/10/99		(a)	89.80	(a)	3547.21
SVE-8	06/02/99	—	89.15	92.09	2.94	—
	06/04/99	3637.71 (d)	90.75	92.63	1.88	3546.58
SVE-9	06/02/99	—	89.28	91.56	2.28	—
	06/04/99	3637.48 (d)	90.41	93.14	2.73	3546.52
	08/10/99		90.96	93.27	2.31	3546.06
SVE-10	06/02/99	—	(a)	89.90	(a)	—
	06/04/99	3637.38 (d)	(a)	91.20	(a)	3546.18
	08/10/99		90.88	93.51	2.63	3545.97
SVE-11	06/02/99	—	(a)	90.89	(a)	—
	06/04/99	3637.31 (d)	(a)	91.45	(a)	3545.86
	08/10/99		(a)	91.45	(a)	3545.86

Table 1. Summary of Ground Water Surface Elevations
TW Bell Lake Gas Plant

Well	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Water (ft)	PSH (ft)	Surface Elevation (ft)
SVE-12	06/02/99	—	88.75	91.36	2.61	—
	06/04/99	3637.39 (d)	90.34	92.64	2.30	3546.59
	08/10/99		90.95	93.08	2.13	3546.01

NOTES:
(a) Not applicable since no measurable thickness of hydrocarbon is present
(b) Corrections to ground water surface elevation for presence of hydrocarbon is calculated assuming a specific gravity of 0.8
(c) TOC elevation based on survey by CES (GCR) on 01/09/98.
(d) TOC elevation based on survey by CES (GCR) on 08/11/99.

Table 2. Summary of Ground Water Analyses
Organics and Field Measured Parameters
TW Bell Lake Gas Plant

Well	Sampling Date	TPH (ug/L)	BTEX (ug/L)				Field Measured Parameters			
			Benzene	Toluene	Ethylbenzene	Total xylenes	DO (mg/L)	pH (units)	Temp. (C)	Conductivity (uS/cm)
NMWQCC Standard		none	10	750	750	620	none	6-9	none	none
MW-1	10/24/93	-	**24**	29	32	82	-	-	-	-
	12/07/94	-	**92**	50	54	< 111	-	8.82	-	-
	05/31/95	-	8	13	9	29	-	8.80	-	-
	12/14/95	-	< 200	366	< 200	204	-	**9.55**	18.7	8090
	02/21/96	757	**13**	6	29	54	-	-	-	-
	05/16/96	-	**15**	9	33	47	-	**9.68**	26.7	14650
	08/14/96	744	**11**	5	23	30	< 1	8.97	23.2	8490
	11/14/96	-	2.4	4.9	13	9	< 1	8.38	19.7	-
	02/08/97	-	**11**	13	11	14	< 1	**9.32**	14.5	9200
	08/09/97	-	**14**	14	12	12	0	8.92	23.1	8750
	02/25/98	-	6.54	7.66	8.45	7.01	0 / 0	**9.45**	19.7	9340
	08/03/98	-	6.5	6.4	11	11	1.5 / 0	8.59	22.4	7450
	02/10/99	-	5	3	14	3	1.3 / 0	8.63	22.2	7160
	08/10/99	-	**11**	10	11	7	0.7	**9.08**	23.8	7090
MW-2	10/19/93	-	< 5	< 5	< 5	< 5	-	-	-	-
	12/07/94	-	6	5	< 2	< 4	-	7.18	-	-
	05/31/95	-	3	< 2	< 2	< 2	-	7.40	-	-
	12/14/95	-	< 2	< 2	< 2	< 2	-	8.26	19.8	3890
	02/20/96	< 50	< 2	< 2	< 2	< 2	-	7.07	22.2	2220
	05/16/96	< 50	< 2	< 2	< 2	< 2	-	7.84	24.4	3950
	08/13/96	-	< 2	< 2	< 2	< 3	3	8.62	27.2	6860
	11/14/96	-	< 2	< 2	< 2	< 2	2	7.67	16.9	-
	02/08/97	-	< 2	< 2	< 2	< 2	4	7.38	13.7	2000
	08/08/97	-	7.3	5.4	< 2	2.7	1.7	7.38	22.0	1701
	02/25/98	-	< 5	< 5	< 5	< 5	2.8	7.56	18.6	1433
	08/03/98	-	< 5	< 5	< 5	< 5	3.6 / 1.0	8.12	22.5	3340
	02/10/99	-	1	< 1	< 1	< 1	2.5	7.53	22.1	1284
	08/10/99	-	2	< 2	< 2	< 2	2.5	7.84	21.8	2000
MW-3	10/20/93	-	< 5	< 5	< 5	< 5	-	-	-	-
	12/07/94	-	< 2	< 2	< 2	< 4	-	7.32	-	-
	05/31/95	-	< 2	< 2	< 2	< 2	-	7.70	-	-
	12/14/95	-	< 2	< 2	< 2	< 2	-	7.79	23.0	480
	02/20/96	-	< 2	< 2	< 2	2	-	7.52	22.7	490
	05/16/96	< 50	< 2	< 2	< 2	< 2	-	7.62	27.2	5880
	08/13/96	-	< 2	< 2	< 2	< 3	10	7.46	28.9	550
	11/14/96	-	< 2	< 2	< 2	< 2	8	7.37	17.2	-
	02/08/97	-	< 2	< 2	< 2	< 2	8	7.35	15.3	400
	08/09/97	-	< 2	< 2	< 2	< 2	8.1	7.53	21.6	573
	02/25/98	-	< 5	< 5	< 5	< 5	8.1	7.51	18.7	484
	08/03/98	-	< 5	< 5	< 5	< 5	8.5	7.51	21.8	516

Table 2. Summary of Ground Water Analyses
Organics and Field Measured Parameters
TW Bell Lake Gas Plant

Well	Sampling Date	TPH (ug/L)	BTEX (ug/L)				Field Measured Parameters			
			Benzene	Toluene	Ethylbenzene	Total xylenes	DO (mg/L)	pH (units)	Temp. (C)	Conductivity (uS/cm)
NMWQCC Standard		none	10	750	750	620	none	6-9	none	none
MW-4	12/07/94	-	**18**	71	4	160	-	**9.7**	-	-
	05/31/95	-	**300**	**1300**	< 2	**800**	-	**10.0**	-	-
	12/13/95	-	**445**	**1380**	< 200	**970**	-	**10.73**	17.7	6300
	02/21/96	2520	**< 200**	454	< 200	594	-	-	-	-
	05/16/96	58800	**92**	549	52	**1370**	-	**9.93**	27.5	9840
	08/14/96	80200	**333**	**992**	< 200	**2630**	< 1	**12.89**	24.0	6480
	11/14/96	-	**260**	**1010**	55	**1200**	< 1	8.51	21.1	-
	02/08/97	-	**240**	**1000**	< 100	**1200**	< 1	**10.73**	16.5	7600
MW-5	12/07/94	-	9	20	4	64	-	**9.29**	-	-
	05/31/95	-	**51**	109	16	219	-	**9.00**	-	-
	12/12/95	-	**27**	26	16	107	-	**10.40**	21.5	12420
	02/21/96	1090	**45**	59	17	133	-	**12.96**	20.4	9860
	05/16/96	1710	**51**	52	26	177	-	8.85	26.7	10110
	08/14/96	28900	**48**	33	21	150	< 1	**9.10**	24.4	10620
	11/14/96	-	**67**	56	32	270	< 1	8.61	22.6	-
	02/08/97	-	**75**	60	26	140	< 1	**9.58**	15.3	4200
	08/09/97	-	**140**	110	47	370	0.6	8.74	26.1	12060
	02/25/98	-	**91.8**	100	19.5	172.1	0.6	8.97	18.9	11540
	08/04/98	-	**110**	96	27	190	2.5	8.73	24.0	11760
	02/11/99	-	**120**	140	18	200	1.3	8.94	17.3	12000
	08/10/99	-	**82**	76	20	130	1.5	8.71	21.6	11010
MW-6	12/07/94	-	< 2	3	< 2	< 6	-	8.51	-	-
	05/31/95	-	**28**	26	4	57	-	**9.20**	-	-
	12/12/95	-	**18**	11	3	33	-	**9.13**	21.6	6150
	02/20/96	277	**16**	12	6	48	-	**9.04**	21.7	6000
	05/16/96	618	**24**	26	10	74	-	**9.09**	28.4	7880
	08/14/96	27100	**24**	23	< 20	80	< 1	8.79	23.1	6590
	11/14/96	-	**38**	31	11	43	< 1	8.62	21.9	-
	02/08/97	-	**24**	22	11	75	< 1	**9.67**	17.4	8700
	08/09/97	-	**68**	58	28	150	0	**9.14**	24.0	8470
	02/25/98	-	**26.1**	25.0	13.7	107.0	0.1	**9.06**	18.4	7390
	08/04/98	-	**29**	22	24	120	1.9 / 0	**9.01**	24.3	8540
	02/10/99	-	**32**	37	15	140	-	-	-	-
	08/10/99	-	**110**	68	110	360	1.5	**9.02**	21.5	8060

Table 2. Summary of Ground Water Analyses
Organics and Field Measured Parameters
TW Bell Lake Gas Plant

Well	Sampling Date	TPH (ug/L)	BTEX (ug/L)				Field Measured Parameters			
			Benzene	Toluene	Ethylbenzene	Total xylenes	DO (mg/L)	pH (units)	Temp. (C)	Conductivity (uS/cm)
NMWQCC Standard		none	10	750	750	620	none	6-9	none	none
MW-7	12/13/95	-	< 2	< 2	< 2	< 2	-	7.15	19.5	4580
	02/20/96	< 50	2	< 2	< 2	< 2	-	6.47	22.5	6310
	05/15/96	< 50	4	< 2	2	< 2	-	6.57	25.9	7070
	08/14/96	< 50	**11**	< 2	< 2	< 2	2	6.80	22.3	5270
	11/14/96	-	< 2	< 2	< 2	< 2	< 1	6.79	18.7	-
	02/08/97	-	< 2	< 2	< 2	< 2	1.4	6.97	15.0	5700
	08/08/97	-	< 2	< 2	< 2	< 2	0.9	6.84	22.6	6650
	02/24/98	-	< 5	< 5	< 5	< 5	2.0	6.79	20.3	6730
	08/04/98	-	< 5	5.6	< 5	< 5	2.3	6.80	22.8	7030
	08/10/99	-	< 2	< 2	< 2	< 2	2.5	6.86	21.3	6380
MW-8	12/12/95	-	**227**	391	< 200	228	-	8.76	19.7	4790
	02/21/96	1630	**191**	379	< 20	300	-	**9.34**	21.2	2920
	05/16/96	1110	**47**	94	5	91	-	8.43	27.2	6870
	08/14/96	45500	**54**	110	< 20	93	< 1	8.75	23.6	2440
	11/14/96	-	**110**	230	11	160	< 1	8.61	21.6	-
	02/08/97	-	**98**	210	8	130	0.4	**9.57**	16.9	4000
	08/09/97	-	**430**	660	< 100	610	0.1	**9.17**	24.7	5010
	02/26/98	-	**248**	461	14.9	388.2	1.1	**9.36**	18.3	4130
dup (MW-13)	02/26/98	-	**104**	207	< 50	121	-	-	-	-
	08/04/98	-	**200**	410	19	340	2.6 / 0	**9.14**	22.5	4080
	02/11/99	-	**210**	360	15	400	0.8	**9.43**	19.6	4480
	08/11/99	-	**150**	290	12	310	0.9	**9.37**	21.1	4760
dup (MW-13)	08/11/99	-	**86**	110	10	160	-	-	-	-
MW-9	12/12/95	-	**< 200**	241	< 200	383	-	7.17	23.2	14520
	02/21/96	2540	**331**	662	< 200	**739**	-	-	-	-
	05/16/96	42100	**460**	450	< 200	**1650**	-	6.93	30.1	17580
	08/14/96	46200	**250**	340	< 50	**800**	-	-	26.8	11640
	11/14/96	-	**240**	410	28	**780**	< 1	8.72	23.2	-
	02/08/97	-	**250**	480	< 100	**930**	< 1	7.50	18.9	17700
	08/09/97	-	**490**	**810**	< 100	**1100**	1.3	7.20	25.9	17080
	02/25/98	-	**251**	693	< 50	**845**	0	7.21	19.4	19960
	08/04/98	-	**190**	460	28	**680**	1.2	7.31	223	-
dup (MW-13)	02/11/99	-	**240**	520	25	**640**	-	-	-	-
	02/11/99	-	**230**	510	25	580	1.2	7.25	20.1	17460
	08/11/99	-	**210**	430	20	560	2.3 / 0.0	7.34	21.5	16650
MW-10	01/09/98	-	**49**	37	4.3	71	-	-	-	-
	02/25/98	-	**60.3**	46.3	< 5	79.1	0.7	6.74	18.7	953
	08/04/98	-	**56**	39	5.4	85	3.0	6.81	23.8	11040
	02/11/99	-	**56**	24	5	89	0.9 / 0	6.87	16.7	9860
	08/11/99	-	**33**	7	3	32	1.5	6.88	20.8	9320

Table 2. Summary of Ground Water Analyses
Organics and Field Measured Parameters
TW Bell Lake Gas Plant

Well	Sampling Date	TPH (ug/L)	BTEX (ug/L)				Field Measured Parameters			
			Benzene	Toluene	Ethylbenzene	Total xylenes	DO (mg/L)	pH (units)	Temp. (C)	Conductivity (uS/cm)
NMWQCC Standard		none	10	750	750	620	none	6-9	none	none
MW-11	01/10/98	-	**360**	320	19	490	-	-	-	-
	02/25/98	-	**466**	439	23.7	570	2.1	6.61	18.7	13670
	08/04/98	-	**490**	590	32	**650**	3.2	6.67	21.3	14570
	02/11/99	-	**610**	610	31	**670**	2.2 / 0	6.65	19.7	15560
	08/11/99	-	**430**	370	30	**640**	2.1/0.0	6.71	21.1	14950
MW-12	01/10/98	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-
	02/24/98	-	< 5	< 5	< 5	< 5	6.8 / 7.0	7.67	20.6	547
	08/04/98	-	< 1	< 1	< 1	< 1	7.4 / 7.5	7.67	21.3	617
	02/10/99	-	< 1	< 1	< 1	< 1	7.5 / 7.5	7.61	21.3	659
	08/10/99	-	< 2	< 2	< 2	< 2	7.6	7.65	20.9	686
Water Well	05/31/95	-	< 2	< 2	< 2	< 2	-	8.20	-	-
	12/14/95	-	< 2	< 2	< 2	< 2	-	8.53	22.9	1160
	02/21/96	-	< 2	< 2	< 2	< 2	-	-	23.3	9060
	05/16/96	< 50	< 2	< 2	< 2	< 2	-	7.52	27.3	1320
	08/14/96	-	< 2	< 2	< 2	< 3	-	-	-	-
	11/14/96	-	< 2	< 2	< 2	< 2	< 1	7.52	-	-
	02/08/97	-	< 2	< 2	< 2	< 2	0.8	8.45	20.2	1200
	08/09/97	-	< 2	< 2	< 2	< 2	1.1	8.11	24.9	1338
	02/26/98	-	< 5	< 5	< 5	< 5	0.8	7.56	20.6	1221
	08/04/98	-	< 1	< 1	< 1	< 1	1.4	8.12	22.2	1362
	02/11/99	-	< 1	< 1	< 1	< 1	-	-	-	-
	08/11/99	-	< 2	< 2	< 2	< 2	-	-	-	-
SVE-2	12/13/95	-	**< 200**	231	< 200	202	< 1	**9.50**	21.4	5820
	02/20/96	< 500	**133**	191	< 2	72	2	**9.05**	22.0	4750

Notes:
Values exceeding NMWQCC standards are shown in bold type
TPH - Total Petroleum Hydrocarbons by Method 8015 mod (gasoline fraction)

Table 3. Summary of Ground Water Analyses - Inorganics
TW Bell Lake Gas Plant

Well	Sampling Date	TDS (mg/L)	Alk., total (mg/L)	Major Ions (mg/L)									Metals (mg/L)										
				Chloride	Sulfate	Sulfite	N-Nitrate	N-Nitrite	Calcium	Magnesium	Potassium	Sodium	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Mercury	Manganese	Selenium	Silver	Zinc
NMWQCC Standard		1000	none	250	600	none	10	none	none	none	none	none	0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.002	0.2	0.05	0.05	10
MW-1	12/07/94	**7100**	-	-	140	-	.06[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/31/95	**5800**	1290	**2620**	78.3	2.0	0.37	0.04	62.7	114	12.6	1400	0.07	0.32	< 0.01	< 0.01	< 0.01	0.73	< 0.03	< 0.0002	**0.28**	< 0.04	< 0.01	< 0.03
	12/14/95	**5640**	-	**2500**	176	3.0	**30**	0.02	34.3	75.8	9.48	2400	-	-	-	-	-	-	-	-	-	-	-	-
	02/21/96	**5050**	-	**2450**	155	< 0.50	< 0.05	0.04	35.8	112	11.7	1550	-	-	-	-	-	-	-	-	-	-	-	-
	02/08/97	**5610**	-	**2350**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/09/97	**5090**	-	**2050**	-	-	-	-	-	-	-	-	< 0.03	0.30	< 0.01	< 0.01	0.01	**1.7**	< 0.03	< 0.0002	0.10	< 0.04	< 0.01	0.12
	02/25/98	**5700**	-	**2140**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/03/98	**3600**	-	**2215**	-	-	-	-	-	-	-	-	< 0.1	0.184	0.005	< 0.01	< 0.01	0.10	< 0.05	< 0.0002	0.063	< 0.1	< 0.01	< 0.02
	02/10/99	**5250**	-	**2100**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/10/99	**6670**	-	**2600**	-	-	-	-	-	-	-	-	0.085	0.159	< 0.002	< 0.005	< 0.002	0.053	< 0.025	< 0.0002	0.017	< 0.02	< 0.003	< 0.01
MW-2	10/19/93	**9200**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/07/94	**2600**	-	-	51	-	<0.05[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/31/95	**1500**	445	**512**	73.6	0.50	< 0.10	0.01	79.8	43.1	5.4	195	0.06	0.22	< 0.01	< 0.01	0.02	**3.7**	< 0.03	< 0.0002	**0.67**	< 0.04	< 0.01	0.04
	12/14/95	**1420**	-	**470**	89	< 1	**10**	0.02	132	46.2	5.89	3060	-	-	-	-	-	-	-	-	-	-	-	-
	02/20/96	940	-	214	95.5	< 0.50	< 0.05	< 0.01	85.7	44.8	5.75	216	-	-	-	-	-	-	-	-	-	-	-	-
	02/08/97	**1040**	-	**325**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/08/97	986	-	**280**	-	-	-	-	-	-	-	-	< 0.03	0.44	< 0.01	< 0.01	< 0.01	**2.3**	< 0.03	< 0.0002	**0.38**	< 0.04	< 0.01	0.03
	02/25/98	**1020**	-	**353**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/03/98	**1000**	-	**500**	-	-	-	-	-	-	-	-	< 0.1	0.231	< 0.005	< 0.01	< 0.01	< 0.02	< 0.05	< 0.0002	**0.339**	< 0.1	< 0.01	< 0.02
	02/10/99	**2830**	-	**1300**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/10/99	**1750**	-	**730**	-	-	-	-	-	-	-	-	0.056	0.280	< 0.002	< 0.005	< 0.002	< 0.01	< 0.025	< 0.0002	**0.232**	< 0.02	< 0.003	< 0.01
MW-3	10/20/93	**1500**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/07/94	320	-	-	31	-	3.6[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/31/95	380	210	14.5	43.4	0.50	3.3	< 0.01	54.7	17.6	7.1	20.5	< 0.03	0.21	< 0.01	< 0.01	< 0.01	0.22	< 0.03	< 0.0002	< 0.01	< 0.04	< 0.01	< 0.03
	12/14/95	334	-	17.0	35	< 1.0	6.7	0.01	68	15.8	6.69	20.6	-	-	-	-	-	-	-	-	-	-	-	-
	02/20/96	346	-	20.0	32.1	< 0.50	2.92	< 0.01	64.9	19.6	7.6	67.4	-	-	-	-	-	-	-	-	-	-	-	-
	02/08/97	368	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/09/97	380	-	10	-	-	-	-	-	-	-	-	< 0.03	0.21	< 0.01	< 0.01	< 0.01	**1.0**	< 0.03	< 0.0002	0.03	< 0.04	< 0.01	0.06
	02/25/98	330	-	13.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/03/98	200	-	15.0	-	-	-	-	-	-	-	-	< 0.1	0.184	< 0.005	< 0.01	< 0.01	< 0.02	< 0.05	< 0.0002	< 0.005	< 0.1	< 0.01	< 0.02

Table 3. Summary of Ground Water Analyses - Inorganics
TW Bell Lake Gas Plant

Well	Sampling Date	TDS (mg/L)	Alk., total (mg/L)	Major Ions (mg/L)									Metals (mg/L)										
				Chloride	Sulfate	Sulfite	N-Nitrate	N-Nitrite	Calcium	Magnesium	Potassium	Sodium	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Mercury	Manganese	Selenium	Silver	Zinc
NMWQCC Standard		1000	none	250	600	none	10	none	none	none	none	none	0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.002	0.2	0.05	0.05	10
MW-4	12/07/94	**4700**	-	-	70	-	<0.05[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/31/95	**5200**	2180	**1700**	104	17.5	< 0.10	< 0.01	< 0.10	0.76	4.9	1650	**0.33**	0.23	< 0.01	< 0.01	< 0.01	0.11	< 0.03	< 0.0002	0.03	< 0.04	< 0.01	< 0.03
	12/13/95	**6600**	-	**1900**	90	21.0	**103**	< 0.01	74.2	4.25	6.15	1880	-	-	-	-	-	-	-	-	-	-	-	-
	02/21/96	**3450**	-	**1010**	35.7	20.0	< 0.05	< 0.01	10.6	2.02	4.84	1210	-	-	-	-	-	-	-	-	-	-	-	-
	02/08/97	**4380**	-	**1110**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-5	12/07/94	**9500**	-	-	49	-	<0.05[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/31/95	**7400**	1690	**4070**	12.4	4.5	< 0.10	0.01	4.8	2.0	13.8	2690	**0.14**	0.88	< 0.01	< 0.01	0.01	0.13	< 0.03	< 0.0002	0.02	< 0.04	< 0.01	< 0.03
	12/12/95	**7580**	-	**3650**	24	3.0	**53**	0.06	6.13	1.98	11.8	2590	-	-	-	-	-	-	-	-	-	-	-	-
	02/21/96	**8050**	-	**4050**	17.9	< 0.50	< 0.05	1.45	22.2	2.79	12.6	3100	-	-	-	-	-	-	-	-	-	-	-	-
	02/08/97	**6980**	-	**3300**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/09/97	**8370**	-	**1450**	-	-	-	-	-	-	-	-	< 0.03	0.94	< 0.01	< 0.01	< 0.01	0.93	< 0.03	< 0.0002	0.01	< 0.04	< 0.01	0.29
	02/25/98	**7300**	-	**3480**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/04/98	**6800**	-	**3330**	-	-	-	-	-	-	-	-	**0.2**	0.960	< 0.005	< 0.01	< 0.01	0.05	< 0.05	< 0.0002	0.014	< 0.1	< 0.01	< 0.02
	02/11/99	**7860**	-	**3200**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/10/99	**6850**	-	**2900**	-	-	-	-	-	-	-	-	**0.15**	0.946	< 0.002	< 0.005	< 0.002	0.033	< 0.025	< 0.0002	0.010	< 0.02	< 0.003	< 0.01
MW-6	12/07/94	**4700**	-	-	150	-	<0.05[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/31/95	**5400**	1070	**2670**	78.3	2.5	0.59	0.04	11.1	4.6	14.4	1320	**0.33**	0.36	< 0.01	< 0.01	< 0.01	0.25	< 0.03	< 0.0002	0.04	< 0.04	< 0.01	< 0.03
	12/12/95	**4770**	-	**2500**	92	2.0	**44.2**	0.03	68.8	11.8	17	1560	-	-	-	-	-	-	-	-	-	-	-	-
	02/20/96	**4830**	-	**2500**	85.9	< 0.50	< 0.50	< 0.01	26.6	10.5	18.1	1500	-	-	-	-	-	-	-	-	-	-	-	-
	02/08/97	**4050**	-	**2200**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/09/97	**5040**	-	**2220**	-	-	-	-	-	-	-	-	**0.39**	0.57	< 0.01	< 0.01	< 0.01	0.98	< 0.03	< 0.0002	0.03	< 0.04	< 0.01	< 0.03
	02/25/98	**5280**	-	**2540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/04/98	**4200**	-	**2450**	-	-	-	-	-	-	-	-	**0.4**	0.548	< 0.005	< 0.01	< 0.01	0.04	< 0.05	< 0.0002	0.001	< 0.1	< 0.01	< 0.02
	02/10/99	**5050**	-	**2500**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/10/99	**5120**	-	**2500**	-	-	-	-	-	-	-	-	**0.365**	0.496	< 0.002	< 0.005	< 0.002	0.016	< 0.025	< 0.0002	< 0.005	< 0.02	< 0.003	< 0.01

Table 3. Summary of Ground Water Analyses - Inorganics
TW Bell Lake Gas Plant

Well	Sampling Date	TDS (mg/L)	Alk., total (mg/L)	Major Ions (mg/L)									Metals (mg/L)										
				Chloride	Sulfate	Sulfite	N-Nitrate	N-Nitrite	Calcium	Magnesium	Potassium	Sodium	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Mercury	Manganese	Selenium	Silver	Zinc
NMWQCC Standard		1000	none	250	600	none	10	none	none	none	none	none	0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.002	0.2	0.05	0.05	10
MW-7	12/13/95	4040	-	2150	88	2.0	17.5	0.023	419	155	31.2	954	-	-	-	-	-	-	-	-	-	-	-	-
	02/20/96	4490	-	2500	60.9	< 0.50	< 0.50	< 0.01	499	193	29.3	745	-	-	-	-	-	-	-	-	-	-	-	-
	02/08/97	4350	-	2100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/08/97	6260	-	2200	-	-	-	-	-	-	-	-	< 0.03	1.5	< 0.01	< 0.01	0.04	3.1	< 0.03	< 0.0002	6.7	0.19	< 0.01	0.15
	02/24/98	4470	-	1810	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/04/98	3400	-	1950	-	-	-	-	-	-	-	-	< 0.01	0.968	< 0.005	< 0.01	< 0.01	0.11	< 0.05	< 0.0002	4.86	< 0.1	< 0.01	< 0.02
	08/10/99	3900	-	1800	-	-	-	-	-	-	-	-	< 0.02	0.854	< 0.002	< 0.005	0.0051	< 0.01	< 0.025	< 0.0002	4.10	< 0.02	< 0.003	0.021
MW-8	12/12/95	2840	-	1140	71	2.0	24.5	0.07	66.3	13	15.8	979	-	-	-	-	-	-	-	-	-	-	-	-
	02/21/96	2530	-	790	10.2	< 0.50	< 0.50	< 0.01	50.4	13.2	14.5	873	-	-	-	-	-	-	-	-	-	-	-	-
	02/08/97	3050	-	825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/09/97	4910	-	1420	-	-	-	-	-	-	-	-	0.29	0.63	< 0.01	< 0.01	0.02	4.2	< 0.03	< 0.0002	0.10	< 0.04	< 0.01	0.90
	02/26/98	2730	-	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
dup (MW-13)	02/26/98	2950	-	887	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/04/98	2600	-	960	-	-	-	-	-	-	-	-	0.3	0.481	< 0.005	< 0.01	< 0.01	0.29	< 0.05	< 0.0002	0.019	< 0.1	< 0.01	< 0.02
	02/11/99	3670	-	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/11/99	3580	-	930	-	-	-	-	-	-	-	-	0.352	0.430	< 0.002	< 0.005	< 0.002	0.268	< 0.025	< 0.0002	0.0062	< 0.02	< 0.003	< 0.01
dup (MW-13)	08/11/99	3530	-	980	-	-	-	-	-	-	-	-	0.365	0.467	< 0.002	< 0.005	< 0.002	0.293	< 0.025	< 0.0002	0.0060	< 0.02	< 0.003	< 0.01
MW-9	12/12/95	11700	-	4500	7	3.0	38.3	< 0.01	388	168	32	3030	-	-	-	-	-	-	-	-	-	-	-	-
	02/21/96	11000	-	4200	< 5.0	< 0.50	< 0.50	0.02	201	118	28.9	3740	-	-	-	-	-	-	-	-	-	-	-	-
	02/08/97	10800	-	4750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/09/97	11400	-	4450	-	-	-	-	-	-	-	-	< 0.03	14.7	< 0.01	< 0.01	< 0.01	4.8	< 0.03	< 0.0002	0.18	0.20	< 0.01	0.20
	02/25/98	10900	-	5730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/04/98	10900	-	4960	-	-	-	-	-	-	-	-	0.03	10.3	< 0.005	< 0.01	< 0.01	0.30	< 0.05	< 0.0002	0.107	< 0.1	< 0.01	< 0.02
dup (MW-13)	02/11/99	10500	-	3400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	02/11/99	10700	-	4600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/11/99	10400	-	4600	-	-	-	-	-	-	-	-	0.200	7.82	< 0.002	< 0.005	< 0.002	0.075	< 0.025	< 0.0002	0.0579	< 0.02	< 0.003	< 0.01
MW-10	01/09/98	5930	-	3600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	02/25/98	9150	-	3860	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/04/98	6200	-	3690	-	-	-	-	-	-	-	-	< 0.1	19.3	< 0.005	< 0.01	< 0.01	30.3	< 0.05	< 0.0002	11.3	< 0.1	< 0.01	< 0.02
	02/11/99	5710	-	2900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/11/99	5220	-	3000	-	-	-	-	-	-	-	-	0.040	11.3	< 0.002	< 0.005	< 0.002	0.012	< 0.025	< 0.0002	4.37	< 0.02	< 0.003	< 0.01

Table 3. Summary of Ground Water Analyses - Inorganics
TW Bell Lake Gas Plant

Well	Sampling Date	TDS (mg/L)	Alk., total (mg/L)	Major Ions (mg/L)									Metals (mg/L)										
				Chloride	Sulfate	Sulfite	N-Nitrate	N-Nitrite	Calcium	Magnesium	Potassium	Sodium	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Mercury	Manganese	Selenium	Silver	Zinc
NMWQCC Standard		1000	none	250	600	none	10	none	none	none	none	none	0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.002	0.2	0.05	0.05	10
MW-11	01/10/98	**6760**	-	**3500**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	02/25/98	**10800**	-	**4650**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/04/98	**9400**	-	**5140**	-	-	-	-	-	-	-	-	**0.5**	**10.0**	< 0.005	< 0.01	< 0.01	**21.1**	< 0.05	< 0.0002	**3.54**	< 0.1	< 0.01	< 0.02
	02/11/99	**9620**	-	**4600**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/10/99	**9090**	-	**4900**	-	-	-	-	-	-	-	-	**0.404**	**8.25**	< 0.002	< 0.005	< 0.002	0.267	< 0.025	< 0.0002	**1.47**	< 0.02	< 0.003	< 0.01
MW-12	01/10/98	413	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	02/24/98	362	-	77.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/04/98	340	-	80	-	-	-	-	-	-	-	-	< 0.1	0.176	< 0.005	< 0.01	< 0.01	< 0.02	< 0.05	< 0.0002	< 0.005	< 0.1	< 0.01	< 0.02
	02/10/99	390	-	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/10/99	400	-	110	-	-	-	-	-	-	-	-	< 0.02	0.194	< 0.002	< 0.005	< 0.002	< 0.01	< 0.025	< 0.0002	< 0.005	< 0.02	< 0.003	< 0.01
Water Well	05/31/95	900	144	100	356	0.50	< 0.10	< 0.01	38.7	23.2	5.3	194	0.02	0.02	< 0.01	< 0.01	< 0.01	0.39	< 0.03	< 0.0002	0.01	< 0.04	< 0.01	< 0.03
	12/14/95	825	-	106	345	< 1.0	1.7	< 0.01	38	22.2	5.32	186	-	-	-	-	-	-	-	-	-	-	-	-
	02/21/96	402	-	107	343	< 0.50	< 0.50	< 0.01	44.9	26.1	5.82	221	-	-	-	-	-	-	-	-	-	-	-	-
	02/08/97	854	-	109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/09/97	840	-	**500**	-	-	-	-	-	-	-	-	< 0.03	< 0.01	< 0.01	< 0.01	< 0.01	0.66	< 0.03	< 0.0002	0.02	< 0.04	< 0.01	0.19
	02/26/98	850	-	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/04/98	850	-	113	-	-	-	-	-	-	-	-	< 0.1	0.020	< 0.005	< 0.01	< 0.01	0.05	< 0.05	< 0.0002	0.015	< 0.1	< 0.01	< 0.02
	02/11/99	850	-	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/11/99	830	-	110	-	-	-	-	-	-	-	-	< 0.02	0.0238	< 0.002	< 0.005	< 0.002	0.018	< 0.025	< 0.0002	0.014	< 0.02	< 0.003	< 0.01
SVE-2	12/13/95	**2670**	-	**1500**	43	3.0	**31.9**	0.03	317	25.2	26.8	1720	-	-	-	-	-	-	-	-	-	-	-	-
	02/20/96	**2410**	-	**495**	33.5	< 0.50	< 0.50	0.01	66.5	56.6	25	1390	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
(a) Nitrate + Nitrite

Table 4. Summary of SVE Emissions at Individual Extraction Points
TW Bell Lake Gas Plant

SVE Well	Date	PID Reading	Gasoline Range VOCs		< C5	C5-C6	C6-C7	C7-C8	C8-C9	C9-C10	C10-C11	C11-C12	C12-C14	C14+
		(ppmv)	(ug/L)	(ppmv) [a]	(%)									
SVE-1	08/13/96	>2000	15,000	3,726	0.0	18.2	43.1	22.7	13.7	2.1	0.2	0.0	0.0	0.0
	02/08/97	>2000	650	161	0.0	8.3	29.1	56.6	5.5	0.4	0.1	0.0	0.0	0.0
	08/10/97	na	6,000	1,490	0.0	0.4	3.1	21.2	31.9	34.2	7.5	1.5	0.1	0.1
	01/09/98	na	6,400	1,590	0.0	0.9	5.2	17.6	32.7	28.9	12.4	2.1	0.2	0.0
	08/12/98	na	5,200	1,292	0.0	0.4	3.6	18.9	28.7	28.0	15.4	3.9	1.1	0.0
SVE-2	08/13/96	>2000	9,000	2,236	0.3	13.9	39.1	25.4	17.2	3.9	0.2	0.0	0.0	0.0
	02/08/97	>2000	630	156	0.0	1.9	25.4	61.7	9.1	1.3	0.0	0.1	0.3	0.2
	01/09/98	na	3,900	969	0.0	0.0	3.8	19.6	33.5	27.9	12.3	2.5	0.3	0.1
SVE-3	08/13/96	>2000	4,700	1,167	0.6	19.3	29.2	22.9	19.6	7.4	0.7	0.1	0.2	0.0
	02/08/97	>2000	800	199	0.0	2.0	27.8	61.3	8.1	0.8	0.0	0.0	0.0	0.0
	08/10/97	na	3,300	820	0.0	0.2	2.4	34.2	29.6	21.0	8.8	3.3	0.5	0.0
	01/09/98	na	1,400	348	0.0	0.0	1.4	17.6	28.6	24.8	18.6	7.3	1.7	0.0
	08/12/98	na	1,900	472	0.0	0.0	1.2	21.1	29.9	25.7	13.9	6.3	1.8	0.1
SVE-4	01/09/98	na	5,300	1,317	0.0	1.3	10.4	31.3	25.2	19.2	9.4	2.7	0.5	0.0
	08/12/98	na	1,800	447	0.0	0.9	8.0	28.7	21.7	20.4	9.4	4.3	5.0	1.6
SVE-7	01/09/98	na	4,100	1,018	0.0	0.1	2.6	25.9	38.2	23.2	7.1	2.2	0.7	0.0
MW-4	01/09/98	na	1,200	298	0.0	0.5	5.6	20.2	24.5	23.5	16.6	6.6	2.3	0.2
	08/12/98	na	820	204	0.0	0.4	4.7	24.3	24.7	23.8	14.1	5.1	2.6	0.3
SVE-Total	08/10/97	na	2,800	696	0.0	0.2	3.1	21.8	31.0	30.4	9.4	3.4	0.7	0.0
	01/09/98	na	4,000	994	0.0	0.2	4.1	19.7	32.7	26.8	12.6	3.2	0.7	0.0
	08/04/98	na	2,400	596	0.0	0.4	4.0	23.4	28.9	24.8	13.6	4.0	0.9	0.0
	08/12/98	na	2,300	571	0.0	0.3	3.1	22.1	28.9	24.8	16.1	3.5	1.2	0.0
(dup)	08/12/98	na	2,500	621	0.0	0.4	3.6	21.8	26.9	23.1	15.0	6.4	2.5	0.3
	04/14/99	na	3,000	745	0.0	0.4	3.4	16.4	27.2	31.3	13.7	6.1	1.5	0.0

All air samples analyzed by Hall Laboratory of Albuquerque, NM
PID = Photoionization detector
[a] Conversion Factor:
P = 0.88 atm, MW = 110 g/mole, R = 0.08205 L*atm/(K*mole), T = 293°K
C ppmv = C ug/L * ((R * T)/(MW*P))
C ppmv = C ug/L * 0.2484

Annual Report of Ground Water Remediation Activities

Transwestern Pipeline Company
Bell Lake Plant

Attachment #1

Laboratory Reports for the August 1998, February 1999 & August 1999 Ground Water Sampling Event

DELL CALLE

SPL LABORATORIES

August 20, 1998

Mr. George Robinson
CYPRESS ENGINEERING, INC.
10235 W. Little York Rd #256
Houston, TX 77040

The following report contains analytical results for the sample(s) received at Southern Petroleum Laboratories (SPL) on August 6, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9808149 and analyzed for all parameters as listed on the chain of custody.

Sample "Water Well" (SPL#9808149-08A) was randomly chosen as a Quality Control sample for the Volatile Aromatics analysis SW-846 method 8021B. The recovery of o-Xylene in the Matrix Spike (MS) and Matrix Spike Duplicate(MSD) was outside of the advisory QC limits. A Laboratory Control Sample was analyzed with the QC batch (HP_U980808054801). The recovery of all analytes in the LCS was within the mandatory QC limits, validating the batch.

Any data flag or quality control exception associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s).

If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Certificate of Analysis No. during any inquiries.

Again, SPL is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Southern Petroleum Laboratories

Electa Brown

Electa Brown
Project Manager

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-08-149

Approved for Release by:

Electa Brown, Project Manager — 8-21-98 Date

Greg Grandits
Laboratory Director

Cynthia Schreiner
Quality Assurance Officer

The attached analytical data package may not be reproduced except in full without the express written approval of this laboratory.
The results relate only to the samples tested.
Results reported on a Wet Weight Basis unless otherwise noted.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-01

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-7

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 10:30:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: AB Date: 08/17/98 15:00:00	1950	20	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 08/07/98 16:25:00	3400	100	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Barium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.968	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-01

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-7

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 10:30:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chromium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.11	0.02	mg/L
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 08/19/98 14:13:00	ND	0.0002	mg/L
Manganese, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	4.86	0.005	mg/L
Dissolved Metals Prep. Method 3005A *** Analyzed by: GJ Date: 08/06/98 20:00:00	08/06/98		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-01

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-7

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 10:30:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Lead, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.05	mg/L
Selenium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Zinc, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-01

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-7

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 10:30:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	5.0	ug/L
Toluene	5.6	5.0	ug/L
Ethyl benzene	ND	5.0	ug/L
Total Xylene	ND	5.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	150 ug/L	100	50	150
4-Bromofluorobenzene	150 ug/L	93	50	150

ANALYZED BY: YN DATE/TIME: 08/08/98 04:09:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-02

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress-Engineering
SAMPLE ID: MW-6

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 11:35:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: AB Date: 08/17/98 15:00:00	2450	20	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 08/07/98 16:25:00	4200	100	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.4	0.1	mg/L
Barium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.548	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-02

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-6

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 11:35:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chromium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.04	0.02	mg
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 08/19/98 14:13:00	ND	0.0002	mg/L
Manganese, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.007	0.005	mg/L
Dissolved Metals Prep. Method 3005A *** Analyzed by: GJ Date: 08/06/98 20:00:00	08/06/98		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-02

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-6

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 11:35:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Lead, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.05	mg/L
Selenium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Zinc, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-02

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-6

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 11:35:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	29	1.0	ug/L
Toluene	22	1.0	ug/L
Ethyl benzene	24	1.0	ug/L
Total Xylene	120	1.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	30 ug/L	100	50	150
4-Bromofluorobenzene	30 ug/L	103	50	150

ANALYZED BY: TB DATE/TIME: 08/10/98 06:40:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-03

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-10

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 12:40:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: AB Date: 08/17/98 15:00:00	3690	20	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: DS Date: 08/10/98 14:30:00	6200	100	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Barium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	19.3	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-03

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-10

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 12:40:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chromium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	30.3	0.02	mg/L
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 08/19/98 14:13:00	ND	0.0002	mg/L
Manganese, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	11.3	0.005	mg/L
Dissolved Metals Prep. Method 3005A *** Analyzed by: GJ Date: 08/06/98 20:00:00	08/06/98		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-03

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-10

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 12:40:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Lead, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.05	mg/L
Selenium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Zinc, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-03

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-10

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 12:40:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	56	5.0	ug/L
Toluene	39	5.0	ug/L
Ethyl benzene	5.4	5.0	ug/L
Total Xylene	85	5.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	150 ug/L	93	50	150
4-Bromofluorobenzene	150 ug/L	87	50	150

ANALYZED BY: YN DATE/TIME: 08/08/98 07:07:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: *These analyses are performed in accordance* with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-04

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-5

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 14:10:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: AB Date: 08/17/98 15:00:00	3330	20	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: DS Date: 08/10/98 14:30:00	6800	100	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.2	0.1	mg/L
Barium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.960	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-04

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-5

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 14:10:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chromium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.05	0.02	mg/L
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 08/19/98 14:13:00	ND	0.0002	mg/L
Manganese, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.014	0.005	mg/L
Dissolved Metals Prep. Method 3005A *** Analyzed by: GJ Date: 08/06/98 20:00:00	08/06/98		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-04

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-5

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 14:10:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Lead, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.05	mg/L
Selenium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Zinc, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
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Certificate of Analysis No. H9-9808149-04

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-5

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 14:10:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	110	5.0	ug/L
Toluene	96	5.0	ug/L
Ethyl benzene	27	5.0	ug/L
Total Xylene	190	5.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	150 ug/L	100	50	150
4-Bromofluorobenzene	150 ug/L	57	50	150

ANALYZED BY: DN DATE/TIME: 08/09/98 11:11:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-05

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-8

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 15:05:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: AB Date: 08/17/98 15:00:00	960	10	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: DS Date: 08/10/98 14:30:00	2600	100	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.3	0.1	mg/L
Barium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.481	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-05

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-8

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 15:05:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chromium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.29	0.02	mg/L
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 08/19/98 14:13:00	ND	0.0002	mg/L
Manganese, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.019	0.005	mg/L
Dissolved Metals Prep. Method 3005A *** Analyzed by: GJ Date: 08/06/98 20:00:00	08/06/98		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-05

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-8

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 15:05:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Lead, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.05	mg/L
Selenium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Zinc, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-05

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-8

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 15:05:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	200	5.0	ug/L
Toluene	410	5.0	ug/L
Ethyl benzene	19	5.0	ug/L
Total Xylene	340	5.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	150 ug/L	100	50	150
4-Bromofluorobenzene	150 ug/L	60	50	150

ANALYZED BY: DN DATE/TIME: 08/09/98 11:37:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-06

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-9

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 16:20:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: AB Date: 08/17/98 15:00:00	4960	50	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: DS Date: 08/11/98 12:00:00	10900	100	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.3	0.1	mg/L
Barium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	10.3	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-06

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-9

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 16:20:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chromium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.30	0.02	mg/L
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 08/19/98 14:13:00	ND	0.0002	mg/L
Manganese, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.107	0.005	mg/L
Dissolved Metals Prep. Method 3005A *** Analyzed by: GJ Date: 08/06/98 20:00:00	08/06/98		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-06

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-9

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 16:20:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Lead, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.05	mg/L
Selenium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Zinc, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-06

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-9

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 16:20:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	190	25	ug/L
Toluene	460	25	ug/L
Ethyl benzene	28	25	ug/L
Total Xylene	680	25	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	750 ug/L	95	50	150
4-Bromofluorobenzene	750 ug/L	95	50	150

ANALYZED BY: YN DATE/TIME: 08/08/98 07:58:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-07

Cypress Engineering, Inc.
10235 W. Little York Rd. #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-11

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 17:20:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: AB Date: 08/17/98 15:00:00	5140	50	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: DS Date: 08/11/98 12:00:00	9400	100	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.5	0.1	mg/L
Barium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	10.0	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-07

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-11

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 17:20:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chromium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	21.1	0.02	mg/L
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 08/19/98 14:13:00	ND	0.0002	mg/L
Manganese, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	3.54	0.005	mg/L
Dissolved Metals Prep. Method 3005A *** Analyzed by: GJ Date: 08/06/98 20:00:00	08/06/98		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-07

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-11

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 17:20:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Lead, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.05	mg/L
Selenium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Zinc, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-07

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-11

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 17:20:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	490	25	ug/L
Toluene	590	25	ug/L
Ethyl benzene	32	25	ug/L
Total Xylene	650	25	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	750 ug/L	95	50	150
4-Bromofluorobenzene	750 ug/L	91	50	150

ANALYZED BY: YN DATE/TIME: 08/08/98 08:23:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-08

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: Water Well

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 18:10:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: AB Date: 08/17/98 15:00:00	113	2	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: DS Date: 08/11/98 12:00:00	850	10	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Barium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.020	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-08

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: Water Well

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 18:10:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chromium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.05	0.02	mg
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 08/19/98 14:13:00	ND	0.0002	mg/L
Manganese, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.015	0.005	mg/L
Dissolved Metals Prep. Method 3005A *** Analyzed by: GJ Date: 08/06/98 20:00:00	08/06/98		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-08

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: Water Well

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 18:10:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Lead, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.05	mg/L
Selenium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Zinc, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-08

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: Water Well

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 18:10:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Ethyl benzene	ND	1.0	ug/L
Total Xylene	ND	1.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	30 ug/L	97	50	150
4-Bromofluorobenzene	30 ug/L	93	50	150

ANALYZED BY: YN DATE/TIME: 08/08/98 06:42:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-09

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: Monitor Well Purge 1/9/98

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 18:10:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Ethyl benzene	ND	1.0	ug/L
Total Xylene	ND	1.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	30 ug/L	93	50	150
4-Bromofluorobenzene	30 ug/L	100	50	150

ANALYZED BY: TB DATE/TIME: 08/12/98 07:33:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-10

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-3

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/03/98 15:15:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: AB Date: 08/17/98 15:00:00	15	1	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 08/07/98 16:25:00	200	100	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Barium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.184	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-10

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-3

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/03/98 15:15:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chromium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 08/19/98 14:13:00	ND	0.0002	mg/L
Manganese, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L
Dissolved Metals Prep. Method 3005A *** Analyzed by: GJ Date: 08/06/98 20:00:00	08/06/98		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-10

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-3

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/03/98 15:15:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Lead, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.05	mg/L
Selenium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Zinc, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-11

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-2

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/03/98 16:25:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: AB Date: 08/17/98 15:00:00	500	5	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 08/07/98 16:25:00	1000	100	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Barium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.231	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-11

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-2

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/03/98 16:25:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chromium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 08/19/98 14:13:00	ND	0.0002	mg/L
Manganese, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.339	0.005	mg/L
Dissolved Metals Prep. Method 3005A *** Analyzed by: GJ Date: 08/06/98 20:00:00	08/06/98		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-11

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-2

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/03/98 16:25:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Lead, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.05	mg/L
Selenium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Zinc, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-11

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-2

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/03/98 16:25:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
Ethyl benzene	ND	5.0	ug/L
Total Xylene	ND	5.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	150 ug/L	100	50	150
4-Bromofluorobenzene	150 ug/L	93	50	150

ANALYZED BY: YN DATE/TIME: 08/08/98 09:14:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-12

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/03/98 17:40:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: AB Date: 08/17/98 15:00:00	2215	50	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 08/07/98	3600	100	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Barium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.184	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-12

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/03/98 17:40:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chromium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.10	0.02	mg/L
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 08/19/98 14:13:00	ND	0.0002	mg/L
Manganese, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.063	0.005	mg/L
Dissolved Metals Prep. Method 3005A *** Analyzed by: GJ Date: 08/06/98 20:00:00	08/06/98		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-12

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/03/98 17:40:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Lead, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.05	mg/L
Selenium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Zinc, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-12

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/03/98 17:40:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	6.5	1.0	ug/L
Toluene	6.4	1.0	ug/L
Ethyl benzene	11	1.0	ug/L
Total Xylene	11	1.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	30 ug/L	97	50	150
4-Bromofluorobenzene	30 ug/L	57	50	150

ANALYZED BY: TB DATE/TIME: 08/10/98 03:35:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-13

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-12

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 09:40:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: AB Date: 08/17/98 15:00:00	80	1	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 08/07/98	340	10	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Barium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	0.176	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-13

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-12

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 09:40:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chromium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 08/19/98 14:13:00	ND	0.0002	mg/L
Manganese, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.005	mg/L
Dissolved Metals Prep. Method 3005A *** Analyzed by: GJ Date: 08/06/98 20:00:00	08/06/98		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-13

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

DATE: 08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-12

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 09:40:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Lead, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.05	mg/L
Selenium, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.1	mg/L
Zinc, Dissolved Method 6010B *** Analyzed by: EG Date: 08/19/98 09:30:00	ND	0.02	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-13

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-12

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 09:40:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Ethyl benzene	ND	1.0	ug/L
Total Xylene	ND	1.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	30 ug/L	97	50	150
4-Bromofluorobenzene	30 ug/L	97	50	150

ANALYZED BY: YN DATE/TIME: 08/08/98 03:19:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808149-14

Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: George Robinson

08/20/98

PROJECT: TWP Bell Lake
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: Monitor Well Purge 2/98

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/04/98 07:50:00
DATE RECEIVED: 08/06/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Ethyl benzene	ND	1.0	ug/L
Total Xylene	1.0	1.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	30 ug/L	97	50	150
4-Bromofluorobenzene	30 ug/L	110	50	150

ANALYZED BY: TB DATE/TIME: 08/10/98 07:06:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

QUALITY CONTROL

DOCUMENTATION

HOUSTON LABORATORY
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** SPL BATCH QUALITY CONTROL REPORT **
Method 8021B ***

Batch Id: HP_U980812120801

Units: ug/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	59	118	50 - 150
Toluene	ND	50	58	116	50 - 150
Ethyl Benzene	ND	50	58	116	50 - 150
M and P Xylene	ND	100	110	110	50 - 150
O-Xylene	ND	50	58	116	50 - 150

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
BENZENE	3.7	20	28	122	27	116	5.04	40	75 - 137
TOLUENE	ND	20	25	125	25	125	0	19	77 - 132
ETHYL BENZENE	ND	20	24	120	23	115	4.26	36	71 - 133
M AND P XYLENE	ND	40	47	118	46	115	2.58	22	81 - 122
O XYLENE	ND	20	26	130 *	25	125 *	3.92	22	81 - 122

Analyst: TB
Sequence Date: 08/12/98
SPL ID of sample spiked: 9808245-03A
Sample File ID: U_H2084.TX0
Method Blank File ID:
Blank Spike File ID: U_H2079.TX0
Matrix Spike File ID: U_H2081.TX0
Matrix Spike Duplicate File ID: U_H2082.TX0

* = Values outside QC Range due to Matrix Interference (except RPD)
« = Data outside Method Specification limits.
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL Historical limits 1st Qtr.'97
(***) = Source: SPL Historical Limits 1st Qtr.'97

SAMPLES IN BATCH(SPL ID): 9808245-02A 9808245-03A 9808245-01A 9808149-09A 9808245-05A

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** SPL BATCH QUALITY CONTROL REPORT **
Method 8021B ***

Batch Id: HP_U980809101300

Matrix: Aqueous
Units: ug/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	47	94.0	50 - 150
Toluene	ND	50	48	96.0	50 - 150
Ethyl Benzene	ND	50	47	94.0	50 - 150
M and P Xylene	ND	100	93	93.0	50 - 150
O-Xylene	ND	50	48	96.0	50 - 150

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
BENZENE	ND	20	16	80.0	20	100	22.2	40	75 - 137
TOLUENE	ND	20	16	80.0	21	105	27.0 *	19	77 - 132
ETHYL BENZENE	ND	20	16	80.0	20	100	22.2	36	71 - 133
M AND P XYLENE	ND	40	32	80.0 *	40	100	22.2 *	22	81 - 122
O-XYLENE	ND	20	16	80.0 *	21	105	27.0 *	22	81 - 122

* = Values outside QC Range due to Matrix Interference (except RPD)
« = Data outside Method Specification limits.
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL Historical limits 1st Qtr.'97
(***) = Source: SPL Historical Limits 1st Qtr.'97

Analyst: DN
Sequence Date: 08/09/98
SPL ID of sample spiked: 9808243-01A
Sample File ID: U_H1251.TX0
Method Blank File ID:
Blank Spike File ID: U_H1247.TX0
Matrix Spike File ID: U_H1248.TX0
Matrix Spike Duplicate File ID: U_H1249.TX0

SAMPLES IN BATCH(SPL ID): 9808243-05A 9808149-04A 9808149-05A 9808243-01A 9808243-02A 9808243-03A 9808243-04A

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** SPL BATCH QUALITY CONTROL REPORT **
Method 8021B ***

Batch Id: HP_U980810075410

Units: ug/L

L A B O R A T O R Y C O N T R O L S A M P L E

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	48	96.0	50 - 150
Toluene	ND	50	48	96.0	50 - 150
Ethyl Benzene	ND	50	48	96.0	50 - 150
M and P Xylene	ND	100	95	95.0	50 - 150
O-Xylene	ND	50	49	98.0	50 - 150

M A T R I X S P I K E S

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
BENZENE	5.8	20	24	91.0	26	101	10.4	40	75 - 137
TOLUENE	4.7	20	24	96.5	22	86.5	10.9	19	77 - 132
ETHYL BENZENE	20	20	32	60.0 *	32	60.0 *	0	36	71 - 133
AND P XYLENE	45	40	66	52.5 *	65	50.0 *	4.88	22	81 - 122
XYLENE	13	20	28	75.0 *	27	70.0 *	6.90	22	81 - 122

Analyst: TB
Sequence Date: 08/10/98
SPL ID of sample spiked: 9808247-05A
Sample File ID: U_H2009.TX0
Method Blank File ID:
Blank Spike File ID: U_H2004.TX0
Matrix Spike File ID: U_H2006.TX0
Matrix Spike Duplicate File ID: U_H2007.TX0

* = Values outside QC Range due to Matrix Interference (except RPD)
« = Data outside Method Specification limits.
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL Historical limits 1st Qtr.'97
(***) = Source: SPL Historical Limits 1st Qtr.'97

SAMPLES IN BATCH(SPL ID): 9808149-02A 9808149-14A 9808243-05A 9808149-12A 9808243-06A

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** SPL BATCH QUALITY CONTROL REPORT **
Method 8021B ***

Batch Id: HP_U980808054801

Matrix: Aqueous
Units: ug/L

L A B O R A T O R Y C O N T R O L S A M P L E

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	50	100	50 - 150
Toluene	ND	50	50	100	50 - 150
Ethyl Benzene	ND	50	50	100	50 - 150
M and P Xylene	ND	100	98	98.0	50 - 150
O-Xylene	ND	50	50	100	50 - 150

M A T R I X S P I K E S

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
BENZENE	ND	20.0	27	135	26	130	3.77	40	75 - 137
TOLUENE	ND	20.0	26	130	26	130	0	19	77 - 132
ETHYL BENZENE	ND	20.0	26	130	25	125	3.92	36	71 - 133
M AND P XYLENE	ND	40.0	50	125 *	49	122	2.43	22	81 - 122
O-XYLENE	ND	20.0	26	130 *	26	130 *	0	22	81 - 122

Analyst: YN
Sequence Date: 08/08/98
SPL ID of sample spiked: 9808149-08A
Sample File ID: U_H1231.TX0
Method Blank File ID:
Blank Spike File ID: U_H1243.TX0
Matrix Spike File ID: U_H1228.TX0
Matrix Spike Duplicate File ID: U_H1229.TX0

* = Values outside QC Range due to Matrix Interference (except RPD)
« = Data outside Method Specification limits.
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL Historical limits 1st Qtr.'97
(***) = Source: SPL Historical Limits 1st Qtr.'97

SAMPLES IN BATCH(SPL ID): 9808149-08A 9808149-03A 9808149-06A 9808149-07A 9808149-10A 9808149-11A 9808149-13A 9808149-02A 9808149-01A

ICP Spectroscopy Method 6010 Quality Control Report

Analyst: EG

Matrix: DISSOLVED Units: mg/L

Date:081998 Time:0930 File Name: 081998M6

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Laboratory Control Sample

Element	Mth. Blank	True Value	Result	% Recovery	Lower Limit	Upper Limit
Silver	ND	2.00	1.96	98	1.60	2.40
Aluminum						
Arsenic	ND	4.00	4.07	102	3.20	4.80
Barium	ND	2.00	1.85	92	1.60	2.40
Beryllium						
Calcium						
Cadmium	ND	2.00	2.11	105	1.60	2.40
Cobalt						
Chromium	ND	2.00	2.10	105	1.60	2.40
Copper	ND	2.00	1.94	97	1.60	2.40
Iron	ND	2.00	2.09	105	1.60	2.40
Potassium						
Magnesium						
Manganese	ND	2.00	2.04	102	1.60	2.40
Sodium						
Nickel						
Lead	ND	2.00	2.10	105	1.60	2.40
Antimony						
Selenium	ND	4.00	4.10	103	3.20	4.80
Thallium						
Vanadium						
Zinc	ND	2.00	2.12	106	1.60	2.40

Work Orders in Batch

Work Order	Fractions
98-08-149	01C-08C
	10C-13C

Matrix Spike - Spike Duplicate Results Work Order Spiked: 9808149-01C

Element	Sample Result	Spike Added	Matrix Spike Result	Matrix Spike Recovery	Matrix Spike Duplicate Result	Matrix Spike Duplicate Recovery	QC Limits % Recovery		Spike RPD %	QC Limits %
Silver	ND	1.0	0.8186	81.9	0.8164	81.6	80	120	0.3	20.0
Aluminum										
Arsenic	0.0159	2.0	2.181	108.3	2.164	107.4	80	120	0.8	20.0
Barium	0.9681	1.0	1.85	88.2	1.855	88.7	80	120	0.6	20.0
Beryllium										
Calcium										
Cadmium	ND	1.0	1.078	107.8	1.07	107.0	80	120	0.7	20.0
Cobalt										
Chromium	ND	1.0	1.004	100.4	1.001	100.1	80	120	0.3	20.0
Copper	ND	1.0	0.9852	98.5	0.9874	98.7	80	120	0.2	20.0
Iron	0.1058	1.0	1.097	99.1	1.094	98.8	80	120	0.3	20.0
Potassium										
Magnesium										
Manganese	4.856	1.0	5.676	82.0	5.671	81.5	80	120	0.6	20.0
Sodium										
Nickel										
Lead	ND	1.0	1.045	104.5	1.027	102.7	80	120	1.7	20.0
Antimony										
Selenium	ND	2.0	2.11	105.5	2.141	107.1	80	120	1.5	20.0
Thallium										
Vanadium										
Zinc	ND	1.0	1.08	108.0	1.079	107.9	80	120	0.1	20.0

Elements Post Spiked: ALL.

Checked: JL 8/20/98

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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/19/98
Analyzed on: 08/19/98
Analyst: AG

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Mercury, Dissolved
Method 7470 A***

SPL Sample ID Number	Blank Value ug/L	LCS Concentration ug/L	Measured Concentration ug/L	% Recovery	QC Limits Recovery
LCS	ND	2.00	2.06	103	80 - 120

-9808837

Samples in batch:

9808149-01C	9808149-02C	9808149-03C	9808149-04C
9808149-05C	9808149-06C	9808149-07C	9808149-08C
9808149-10C	9808149-11C	9808149-12C	9808149-13C

COMMENTS:
LCS = SPL ID# 94-452-45-21

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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/19/98
Analyzed on: 08/19/98
Analyst: AG

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Mercury, Dissolved
Method 7470 A***

SPL Sample ID Number	Method Blank ug/L	Sample Result ug/L	Spike Added ug/L	Matrix Spike Result ug/L	Matrix Spike Recovery %	Matrix Spike Duplicate Result ug/L	Matrix Spike Duplicate Recovery %	RPD (%)	QC LIMITS (Advisory) RPD Max	QC LIMITS (Advisory) % REC
9808149-01C	ND	ND	2.00	1.65	82.5	1.58	79.0	4.3	20	75 -125

-9808837

Samples in batch:

9808149-01C	9808149-02C	9808149-03C	9808149-04C
9808149-05C	9808149-06C	9808149-07C	9808149-08C
9808149-10C	9808149-11C	9808149-12C	9808149-13C

COMMENTS:
LCS = SPL ID# 94-452-45-21

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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/18/98
Analyzed on: 08/17/98
Analyst: AB

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Chloride
Method 325.3 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	186	177	95.2	94 - 106

-9808904

Samples in batch:

9808102-01E	9808111-01F	9808149-01B	9808149-02B
9808149-03B	9808149-04B	9808149-05B	9808149-06B
9808149-07B	9808149-08B	9808149-10B	9808149-11B
9808149-12B	9808149-13B	9808220-02K	9808360-01F
9808360-02F	9808552-01A		

COMMENTS:
SPL LCS# 94453209-13

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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/18/98
Analyzed on: 08/17/98
Analyst: AB

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Chloride
Method 325.3 *

SPL Sample ID Number	Method Blank mg/L	Sample Result mg/L	Spike Added mg/L	Matrix Spike Result mg/L	Matrix Spike Recovery %	Matrix Spike Duplicate Result mg/L	Matrix Spike Duplicate Recovery %	RPD (%)	QC LIMITS (Advisory) RPD Max	QC LIMITS (Advisory) % REC
9808552-01A	ND	72.67	100.0	170.16	97.5	170.16	97.5	0	5	92 -109

-9808785

Samples in batch:

9808102-01E 9808111-01F 9808149-01B 9808149-02B
9808149-03B 9808149-04B 9808149-05B 9808552-01A
9808657-01A

COMMENTS:

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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/18/98
Analyzed on: 08/17/98
Analyst: AB

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Chloride
Method 325.3 *

SPL Sample ID Number	Method Blank mg/L	Sample Result mg/L	Spike Added mg/L	Matrix Spike Result mg/L	Matrix Spike Recovery %	Matrix Spike Duplicate Result mg/L	Matrix Spike Duplicate Recovery %	RPD (%)	QC LIMITS (Advisory) RPD Max	QC LIMITS (Advisory) % REC
9808149-06B	ND	99.26	100	194.97	95.7	198.52	99.3	3.7	5	92 -109

-9808791

Samples in batch:

9808149-06B	9808149-07B	9808149-08B	9808149-10B
9808149-11B	9808149-12B	9808149-13B	9808220-02K

COMMENTS:

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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/10/98
Analyzed on: 08/07/98
Analyst: KS

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Total Dissolved Solids
Method 160.1 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	283.9	281.0	99.0	93 - 107

-9808365

Samples in batch:

9808149-01B 9808149-02B 9808149-10B 9808149-11B
9808149-12B 9808149-13B

COMMENTS:

LCS= SPL ID# 95535210-19

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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/10/98
Analyzed on: 08/07/98
Analyst: KS

This sample was randomly selected for use in the SPL quality control program. The results are as follows:

Total Dissolved Solids
Method 160.1 *

-- DUPLICATE ANALYSIS --

SPL Sample ID	Original Sample Concentration mg/L	Duplicate Sample mg/L	RPD	RPD Max.
9808149-13B	344	343	0.3	5

--9808364

Samples in batch:

9808149-01B 9808149-02B 9808149-10B 9808149-11B
9808149-12B 9808149-13B

COMMENTS:

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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/14/98
Analyzed on: 08/10/98
Analyst: DS

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Total Dissolved Solids
Method 160.1 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	455.9	453.0	99.4	93 - 107

-9808610

Samples in batch:

9808149-03B 9808149-04B 9808149-05B

COMMENTS:

LCS=SPL ID 95535216-17.

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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/14/98
Analyzed on: 08/10/98
Analyst: DS

This sample was randomly selected for use in the SPL quality control program. The results are as follows:

Total Dissolved Solids
Method 160.1 *

-- DUPLICATE ANALYSIS --

SPL Sample ID	Original Sample Concentration mg/L	Duplicate Sample mg/L	RPD	RPD Max.
9808149-01B	3460	3460	0	5

-9808609

Samples in batch:

9808149-03B 9808149-04B 9808149-05B

COMMENTS:

9808149-01B WAS USED FOR QC PURPOSES ONLY.

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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/14/98
Analyzed on: 08/11/98
Analyst: DS

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Total Dissolved Solids
Method 160.1 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	455.9	454.0	99.6	93 - 107

-9808613

Samples in batch:

9808149-06B 9808149-07B 9808149-08B 9808220-01D
9808220-02H 9808220-03G 9808220-04G 9808362-01E
9808363-01E 9808367-01D 9808410-01A 9808410-02A
9808410-05A

COMMENTS:

LCS=SPL ID#95535216-17.

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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/14/98
Analyzed on: 08/11/98
Analyst: DS

This sample was randomly selected for use in the SPL quality control program. The results are as follows:

Total Dissolved Solids
Method 160.1 *

-- DUPLICATE ANALYSIS --

SPL Sample ID	Original Sample Concentration mg/L	Duplicate Sample mg/L	RPD	RPD Max.
9808149-03B	7700	7790	1.2	5

-9808612

Samples in batch:

9808149-06B 9808149-07B 9808149-08B 9808220-01D
9808220-02H 9808220-03G

COMMENTS:
9808149-03B IS USED FOR QC PURPOSES ONLY.

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No: 9808149

47523

page 1 of 1

Client Name: CYPRESS ENGINEERING

Address/Phone: 10235 WEST LITTLE YORK SUITE 256 HOUSTON, TX 77040 (713) 856-7980

Client Contact: SANDY SHARP (713) 466-7252

Project Name: TWP BELL LAKE

Project Number:

Project Location:

Invoice To: GEORGE ROBINSON

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil SL=sludge O=other:)	bottle (P=plastic A=amber glass G=glass V=vial)	size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz)	pres. (1=HCl 2=HNO3 3=H2SO4 O=other:)	Number of Containers	Requested Analysis: 8021 BTEX ONLY	TDS, CHLORIDE	Dissolved metals (7470/6010)	As, Ba, Cd, Cr, Pb, Hg Se, Ag, Cu, Fe, Mn, Zn	* Filtered metals before adding Preservatives
MW-7	8/4/98	1030		X	W	G	40	1	3	X				
MW-7		1030		X	W	P	1	0	2		X	X		
MW-6		1135		X	W	G	40	1	3	X				
MW-6		1135		X	W	P	1	0	2	BTEX	X	X		
MW-10		~~SHH~~ 1240		X	W	G	40	1	3	X				
MW-10		~~SHH~~ 1240		X	W	P	1	0	2		X	X		
MW-5		1410		X	W	G	40	1	3	X			PUSH	
MW-5		1410		X	W	P	1	0	2		X	X		

Client/Consultant Remarks:

Laboratory remarks:

Intact? Y N

Temp: 4c

Requested TAT

24hr ☐ 72hr ☐

48hr ☐ Standard ☒

Other ☐ _____

Special Reporting Requirements: Fax Results ☒ Raw Data ☐ Standard QC ☒ Level 3 QC ☐ Level 4 QC ☐

Special Detection Limits (specify):

PM review (initial): EB 8/8

	date	time	
1. Relinquished by Sampler: Sandy Sharp	8/5/98	0700	2. Received by:
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	date	time	6. Received by Laboratory: 8/6/98 1000

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☐ 500 Ambassador Caffery Parkway, Scott, LA 70583 (318) 237-4775

☐ 459-Hu[illegible]s Drive, Traverse City, MI 49684 (616) 947-5777

☐ 1501 E. Orangethorpe Avenue, Fullerton, CA 92631 ([illegible]) 447-6868

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No: 9808149 — 7514

page 1 of 1

Client Name: CYPRESS ENGINEERING
Address/Phone: 10235 WEST LITTLE YORK, SUITE 256 HOUSTON, TX 77040 (713) 856-7980
Client Contact: SANDY SHARP (713)646-7252
Project Name: TWP BELL LAKE
Project Number:
Project Location:
Invoice To: GEORGE ROBINSON

matrix: W=water S=soil SL=sludge O=other:
bottle: P=plastic A=amber glass G=glass V=vial
size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz
pres.: 1=HCl 2=HNO3 3=H2SO4 O=other:

SAMPLE ID	DATE	TIME	comp	grab	matrix	bottle	size	pres.	Number of Containers	Requested Analysis: 8021 BTEX only	TDS, CHLORIDE	DISSOLVED METALS (1470/6010) As, Ba, Cd, Cr, Pb, Hg, Se, Ag, Cu, Fe, Mn, Zn	* FILTER BEFORE ADDING PRESERVATIVES
MW-8	8/4/98	1505		X	W	G	40	1	3	X			
MW-8		1505		X	W	P	1	0	2		X	X	
MW-9		1620		X	W	G	40	1	3	X			
MW-9		1620		X	W	P	1	0	2		X	X	
MW-11		1720		X	W	G	40	1	3	X			
MW-11		1720		X	W	P	1	0	2		X	X	
WATER WELL		1810		X	W	G	40	1	3	X			
WATER WELL		1810		X	W	P	1	0	2		X	X	
MONITOR WELL PURGE/ DEVELOPMENT H2O 1/9/98		1810		X	W	G	40	1	3	X			RUSH

Client/Consultant Remarks:

Laboratory remarks: MPS 950 1929 1663

Intact? Y N

Temp: 4c

Requested TAT

24hr ☐ 72hr ☐

48hr ☐ Standard ☒

Other ☐ _____

Special Reporting Requirements: Fax Results ☒ Raw Data ☐ Standard QC ☒ Level 3 QC ☐ Level 4 QC ☐

Special Detection Limits (specify):

PM review (initial): EB 8/8

	date	time
1. Relinquished by Sampler: Sandy Sharp	8/5/98	0700
2. Received by:		
3. Relinquished by:	date	time
4. Received by:		
5. Relinquished by:	date	time
6. Received by Laboratory:		8/6/98 1000

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☐ 459-Hughes Drive, Traverse City, MI 49684 (616) 947-5777
☐ 500 Ambassador Caffery Parkway, Scott, LA 70583 (318) 237-4775
☐ 1501 E. Orangethorpe Avenue, Fullerton, CA 92631 (714) 447-6868

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No: 9808149

47513

page 1 of 1

Client Name: CYPRESS ENGINEERING

Address/Phone: 10235 WEST LITTLE YORK, SUITE 256 (713)856-7980 HOUSTON TX 77040

Client Contact: SANDY SHARP (713)646-7252

Project Name: TWP BELL LAKE

Project Number:

Project Location:

Invoice To: GEORGE ROBINSON

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil SL=sludge O=other:)	bottle (P=plastic A=amber glass G=glass V=vial)	size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz)	pres. (1=HCl 2=HNO3 3=H2SO4 O=other:)	Number of Containers	Requested Analysis: 8021 BTEX ONLY	TDS, CHLORIDE	METALS (MTD/6010) DISSOLVED (As, Ba, Cd, Cr, Pb, Hg, Se, Ag, Cu, Fe, Mn, Zn *FILTER BEFORE YOU Add PRESERVATIVES)
MW-3	8/3/98	1515		X	W	G	40	1	3	X		
MW-3	8/3/98	1515		X	W	P	1	0	2		X	X
MW-2	8/3/98	1625		X	W	G	40	1	3	X		
MW-2	8/3/98	1625		X	W	P	1	0	2		X	X
MW-1	8/3/98	1740		X	W	G	40	1	3	X		
MW-1	8/3/98	1740		X	W	P	1	0	2		X	X
MW-12	8/4/98	0940		X	W	G	40	1	3	X		
MW-12	8/4/98	0940		X	W	P	1	0	2		X	RUSH
Monitor Well Purge H2O 2/98	8/4/98	0750		X	W	G	40	1	3	X		

Client/Consultant Remarks:

Laboratory remarks: MPS 950 1979 672

Intact? Y N

Temp:

Requested TAT

24hr ☐ 72hr ☐

48hr ☐ Standard ☒

Other ☐ _____

Special Reporting Requirements: Fax Results ☒ Raw Data ☐ Standard QC ☒ Level 3 QC ☐ Level 4 QC ☐

Special Detection Limits (specify):

PM review (initial): EB 8/8

1. Relinquished by Sampler: Sandy Sharp	date 8/5/98	time 0700	2. Received by:
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	date	time	6. Received by Laboratory: Karen Stk 8/6/98 1000

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☐ 1501 E. Orangethorpe Avenue, Fullerton, CA 92631 (7[illegible]) 447-6868

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 8/6/98	Time: 1000

SPL Sample ID:
9808149

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	*If no, Non-Conformance Worksheet has been completed.*			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		4 C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	806949036202	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name: Arden Stahl	Date: 8/6/98

OAL

L10036

February 26, 1999

George Robinson
Enron Gas Pipeline Group
333 Clay St., Room 3142
P.O. Box 1188
Houston, TX 77002

Phone: (713) 646-7327
FAX: (713) 646-7867

Re: Laboratory Sample Analysis

Project: Bell Lake
Transwestern Pipeline

Project Manager: George Robinson

Dear George Robinson:

On Saturday, February 13, 1999, OAL received thirteen (13) water samples for analysis. The samples were analyzed utilizing EPA, ASTM, or equivalent methodology.

Should you have any questions concerning the results in this report, please contact us at (503) 590-5300. Refer to OAL login number L10036.

Sincerely,

for

Kami Morrow
Project Manager

Deborah L. McBrean-McKenzie
for

Suzanne LeMay
QA/QC Officer

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L10036

Sample Summary

Sample ID	Lab #	Description	Sampled	Received
LOCKRIDGE LARGE AST	L10036-1	water	02/09/99 12:30	02/13/99
MW-10	L10036-2	water	02/11/99 09:30	02/13/99
MW-6	L10036-3	water	02/10/99 18:15	02/13/99
MW-2	L10036-4	water	02/10/99 15:00	02/13/99
MW-12	L10036-5	water	02/10/99 17:15	02/13/99
MW-1	L10036-6	water	02/10/99 15:50	02/13/99
TRIP BLANK	L10036-7	water	02/11/99	02/13/99
MW-11	L10036-8	water	02/11/99 14:30	02/13/99
MW-13	L10036-9	water	02/11/99 08:30	02/13/99
MW-9	L10036-10	water	02/11/99 13:15	02/13/99
MW-8	L10036-11	water	02/11/99 12:10	02/13/99
MW-5	L10036-12	water	02/11/99 10:30	02/13/99
WATER WELL	L10036-13	water	02/11/99 15:20	02/13/99

Definition of Terms

D Reported value is based on a dilution.
MI Matrix interference.
ND Analytical result was below the reporting limit.
P Sample was unpreserved.

Analysts

Initials	Analyst	Title
CAC	Cindy Covey	Technician
WB	Wayne Boyle	Analyst
ZB	Zachary Brooks	Technician

Method Summary

Analysis	Method
BTEX	EPA 8021
Chloride	EPA 300.0
Solids, Total Dissolved (TDS)	EPA 160.1 / SM 2540C

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L10036

Client: *Enron Gas Pipeline Group*
Contact: *George Robinson*

Project: *Bell Lake*
Transwestern Pipeline

Inorganics

Analyte	Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	Analyst
MW-10 ***Water***				**Sampled:** *02/11/99*			***L10036-2***
Chloride	2,900	50.	mg/L	02/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	5,710	10.	mg/L	02/16/99	EPA 160.1 / SM 2540C		ZB
MW-6 ***Water***				**Sampled:** *02/10/99*			***L10036-3***
Chloride	2,500	10.	mg/L	02/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	5,050	10.	mg/L	02/16/99	EPA 160.1 / SM 2540C		ZB
MW-2 ***Water***				**Sampled:** *02/10/99*			***L10036-4***
Chloride	1,300	10.	mg/L	02/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	2,830	10.	mg/L	02/16/99	EPA 160.1 / SM 2540C		ZB
MW-12 ***Water***				**Sampled:** *02/10/99*			***L10036-5***
Chloride	93.	1.0	mg/L	02/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	390.	10.	mg/L	02/16/99	EPA 160.1 / SM 2540C		ZB
MW-1 ***Water***				**Sampled:** *02/10/99*			***L10036-6***
Chloride	2,100	10.	mg/L	02/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	5,250	10.	mg/L	02/16/99	EPA 160.1 / SM 2540C		ZB
MW-11 ***Water***				**Sampled:** *02/11/99*			***L10036-8***
Chloride	4,600	50.	mg/L	02/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	9,620	10.	mg/L	02/16/99	EPA 160.1 / SM 2540C		ZB
MW-13 ***Water***				**Sampled:** *02/11/99*			***L10036-9***
Chloride	3,400	50.	mg/L	02/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	10,500	10.	mg/L	02/16/99	EPA 160.1 / SM 2540C		ZB

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Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***
Transwestern Pipeline

Inorganics

Sample ID / Analyte	*Matrix* / Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	*Lab Number* / Analyst
MW-9	***Water***			**Sampled:*02/11/99***			***L10036-10***
Chloride	4,600	50.	mg/L	02/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	10,700	10.	mg/L	02/16/99	EPA 160.1 / SM 2540C		ZB
MW-8	***Water***			**Sampled:*02/11/99***			***L10036-11***
Chloride	1,000	10.	mg/L	02/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	3,670	10.	mg/L	02/16/99	EPA 160.1 / SM 2540C		ZB
MW-5	***Water***			**Sampled:*02/11/99***			***L10036-12***
Chloride	3,200	50.	mg/L	02/19/99	EPA 300.0	D	C
Solids, Total Dissolved (TDS)	7,860	10.	mg/L	02/16/99	EPA 160.1 / SM 2540C		ZB
WATER WELL	***Water***			**Sampled:*02/11/99***			***L10036-13***
Chloride	110	1.0	mg/L	02/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	850.	10.	mg/L	02/16/99	EPA 160.1 / SM 2540C		ZB

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***
Transwestern Pipeline

BTEX
by EPA 8021

Sample ID / *Matrix* / Analyte	Result	Reporting Limit	Units (ppb)	Comment	*Lab Number*
LOCKRIDGE LARGE AST / ***Water***				Sampled: *02/09/99* Analyzed: *02/17/99 by WB*	***L10036-1***
Benzene	110	1.	µg/L		
Toluene	1,200	1.	µg/L		
Ethylbenzene	57.	1.	µg/L		
Total Xylenes	4,300	1.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	94.%	50 - 150
Bromofluorobenzene	126.%	50 - 150

Sample ID / *Matrix* / Analyte	Result	Reporting Limit	Units (ppb)	Comment	*Lab Number*
MW-10 / ***Water***				Sampled: *02/11/99* Analyzed: *02/17/99 by WB*	***L10036-2***
Benzene	56.	1.	µg/L		
Toluene	24.	1.	µg/L		
Ethylbenzene	5.	1.	µg/L		
Total Xylenes	89.	1.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	81.%	50 - 150
Bromofluorobenzene	MI	50 - 150

Sample ID / *Matrix* / Analyte	Result	Reporting Limit	Units (ppb)	Comment	*Lab Number*
MW-6 / ***Water***				Sampled: *02/10/99* Analyzed: *02/16/99 by WB*	***L10036-3***
Benzene	32.	1.	µg/L	P	
Toluene	37.	1.	µg/L		
Ethylbenzene	15.	1.	µg/L		
Total Xylenes	140	1.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	91.%	50 - 150
Bromofluorobenzene	MI	50 - 150

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Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***
Transwestern Pipeline

BTEX
by EPA 8021

Sample ID	*Matrix*					*Lab Number*
Analyte		**Result**	**Reporting Limit**	**Units (ppb)**	**Comment**	

MW-2 — ***Water*** — **Sampled:** ***02/10/99*** — **Analyzed:** ***02/16/99 by WB*** — ***L10036-4***

Benzene	**1.**	**1.**	**µg/L**	
Toluene	ND	1.	µg/L	
Ethylbenzene	ND	1.	µg/L	
Total Xylenes	ND	1.	µg/L	

Surrogate	Recovery	Limit
Trifluorotoluene	83.%	50 - 150
Bromofluorobenzene	MI	50 - 150

MW-12 — ***Water*** — **Sampled:** ***02/10/99*** — **Analyzed:** ***02/16/99 by WB*** — ***L10036-5***

Benzene	ND	1.	µg/L	
Toluene	ND	1.	µg/L	
Ethylbenzene	ND	1.	µg/L	
Total Xylenes	ND	1.	µg/L	

Surrogate	Recovery	Limit
Trifluorotoluene	92.%	50 - 150
Bromofluorobenzene	129.%	50 - 150

MW-1 — ***Water*** — **Sampled:** ***02/10/99*** — **Analyzed:** ***02/16/99 by WB*** — ***L10036-6***

Benzene	**5.**	**1.**	**µg/L**	P
Toluene	**3.**	**1.**	**µg/L**	
Ethylbenzene	**14.**	**1.**	**µg/L**	
Total Xylenes	**3.**	**1.**	**µg/L**	

Surrogate	Recovery	Limit
Trifluorotoluene	103.%	50 - 150
Bromofluorobenzene	144.%	50 - 150

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Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***
Transwestern Pipeline

BTEX
by EPA 8021

Sample ID	*Matrix*				*Lab Number*
Analyte	**Result**	**Reporting Limit**	**Units (ppb)**	**Comment**	

TRIP BLANK — ***Water*** — **Sampled:** ***02/11/99*** — **Analyzed:** ***02/17/99 by WB*** — ***L10036-7***

Benzene	ND	1.	µg/L
Toluene	ND	1.	µg/L
Ethylbenzene	ND	1.	µg/L
Total Xylenes	ND	1.	µg/L

Surrogate	Recovery	Limit
Trifluorotoluene	99.%	50 - 150
Bromofluorobenzene	113.%	50 - 150

MW-11 — ***Water*** — **Sampled:** ***02/11/99*** — **Analyzed:** ***02/17/99 by WB*** — ***L10036-8***

Benzene	**610**	**1.**	**µg/L**	**P**
Toluene	**610**	**1.**	**µg/L**	
Ethylbenzene	**31.**	**1.**	**µg/L**	
Total Xylenes	**670**	**1.**	**µg/L**	

Surrogate	Recovery	Limit
Trifluorotoluene	100.%	50 - 150
Bromofluorobenzene	MI	50 - 150

MW-13 — ***Water*** — **Sampled:** ***02/11/99*** — **Analyzed:** ***02/17/99 by WB*** — ***L10036-9***

Benzene	**240**	**1.**	**µg/L**	**P**
Toluene	**520**	**1.**	**µg/L**	
Ethylbenzene	**25.**	**1.**	**µg/L**	
Total Xylenes	**640**	**1.**	**µg/L**	

Surrogate	Recovery	Limit
Trifluorotoluene	99.%	50 - 150
Bromofluorobenzene	MI	50 - 150

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***
Transwestern Pipeline

BTEX
by EPA 8021

Sample ID	*Matrix*					*Lab Number*
Analyte		Result	Reporting Limit	Units (ppb)	Comment	

MW-9	*Water*				Sampled: *02/11/99* Analyzed: *02/17/99 by WB*	*L10036-10*
Benzene		230	1.	µg/L	P	
Toluene		510	1.	µg/L		
Ethylbenzene		25.	1.	µg/L		
Total Xylenes		580	1.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	100.%	50 - 150
Bromofluorobenzene	MI	50 - 150

MW-8	*Water*				Sampled: *02/11/99* Analyzed: *02/17/99 by WB*	*L10036-11*
Benzene		210	1.	µg/L	P	
Toluene		360	1.	µg/L		
Ethylbenzene		15.	1.	µg/L		
Total Xylenes		400	1.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	77.%	50 - 150
Bromofluorobenzene	MI	50 - 150

MW-5	*Water*				Sampled: *02/11/99* Analyzed: *02/17/99 by WB*	*L10036-12*
Benzene		120	1.	µg/L	P	
Toluene		140	1.	µg/L		
Ethylbenzene		18.	1.	µg/L		
Total Xylenes		200	1.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	89.%	50 - 150
Bromofluorobenzene	MI	50 - 150

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L10036

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***
Transwestern Pipeline

BTEX
by EPA 8021

Sample ID	*Matrix*				*Lab Number*
Analyte		**Result**	**Reporting Limit**	**Units (ppb)**	**Comment**

WATER WELL	***Water***	**Sampled:** ***02/11/99*** **Analyzed:** ***02/17/99 by WB***		***L10036-13***
Benzene		ND	1.	µg/L
Toluene		ND	1.	µg/L
Ethylbenzene		ND	1.	µg/L
Total Xylenes		ND	1.	µg/L

Surrogate	Recovery	Limit
Trifluorotoluene	97.%	50 - 150
Bromofluorobenzene	123.%	50 - 150

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L10036

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***
Transwestern Pipeline

Batch Q.C.

Blank

Inorganics - Waters (mg/L)

Analyte	Result	Reporting Limit	Q	Date Analyzed
Chloride	ND	0.1		02/19/99
Solids, Total Dissolved (TDS)	NA	10		02/16/99

Comments:

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Printed on recycled paper

OAL

L10036

Client: *Enron Gas Pipeline Group*
Contact: *George Robinson*

Project: *Bell Lake*
Transwestern Pipeline

Batch Q.C.

LCSW

Inorganics - Waters (mg/L)

Analyte	True Value	Result	% Recovery	% Limit	Date Analyzed
Chloride	10.00	9.29	93	90-110	02/19/99
Solids, Total Dissolved (TDS)	NA	NA	NA		02/16/99

Comments:

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OAL

L10036

Client: *Enron Gas Pipeline Group*
Contact: *George Robinson*

Project: *Bell Lake*
Transwestern Pipelin

Batch Q.C.

Duplicate

Inorganics - Waters (mg/L)

Analyte	Result	Duplicate Result	Reporting Limit	RPD	RPD Limit	Q	Date Analyzed
Chloride	2900	2900	50	<1	20		02/19/99
Solids, Total Dissolved (TDS)	860	840	10	2	20		02/16/99

Comments: Chloride Batch QC for L10036-2 through -6, & -8.
Total Dissolved Solids (TDS) Batch QC for L10036-2 through 6 and -8 through -10.

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L10036

Client: *Enron Gas Pipeline Group*
Contact: *George Robinson*

Project: *Bell Lake*
Transwestern Pipeline

Batch Q.C.

Duplicate

Inorganics - Waters (mg/L)

Analyte	Result	Duplicate Result	Reporting Limit	RPD	RPD Limit	Q	Date Analyzed
Chloride	3400	3400	50	<1	20		02/19/99
Solids, Total Dissolved (TDS)	180	210	10	15	20		02/16/99

Comments: Chloride Batch QC for L10036-9 through -13.
Total Dissolved Solids (TDS) Batch QC for L10036-11 through -13.

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OAL

L10036

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***
Transwestern Pipeline

Batch Q.C.

Spike

Inorganics - Waters (mg/L)

Analyte	Spike Result	Sample Result	Spike Added	% Recovery	% Limit	Q	Date Analyzed
Chloride	5900	2900	3000	100	75-125		02/19/99
Solids, Total Dissolved (TDS)	NA	NA	NA	NA			02/16/99

Comments:

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OAL

L10036

Client: *Enron Gas Pipeline Group*
Contact: *George Robinson*

Project: *Bell Lake*
Transwestern Pipeline

Batch Q.C.

Method Blank

BTEX/Water (ug/L)

Analyte	Result	Reporting Limit	Q	Date Analyzed
Benzene	ND	1		02/16/99
Toluene	ND	1		
Ethylbenzene	ND	1		
Xylenes	ND	1		

Surrogates	% Recovery
Trifluorotoluene	89
Bromofluorobenzene	105

Comments: L10036-3 through 6.

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OAL

L10036

Client: *Enron Gas Pipeline Group*
Contact: *George Robinson*

Project: *Bell La*
Transwestern Pipeline

Batch Q.C.

Method Blank

BTEX/Water (ug/L)

Analyte	Result	Reporting Limit	Q	Date Analyzed
Benzene	ND	1		02/17/99
Toluene	ND	1		
Ethylbenzene	ND	1		
Xylenes	ND	1		

Surrogates	% Recovery
Trifluorotoluene	96
Bromofluorobenzene	111

Comments: L10036-1,2 & 7 through 13.

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OAL

L10036

Client: *Enron Gas Pipeline Group*
Contact: *George Robinson*

Project: *Bell Lake*
Transwestern Pipeline

Batch Q.C.

LCS

BTEX/Water (ug/L)

Analyte	Result	True Value	% Recovery	Q	Date Analyzed
Benzene	9.9	10.0	99		02/08/99
Toluene	9.9	10.0	99		
Ethylbenzene	10.1	10.0	101		
Xylenes	19.7	20.0	99		

Surrogates	% Recovery
Trifluorotoluene	99
Bromofluorobenzene	98

Comments: L10036-1, 3 through 6.

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L10036

Client: *Enron Gas Pipeline Group*
Contact: *George Robinson*

Project: *Bell Lak*
Transwestern Pipeline

Batch Q.C.

MS

BTEX/Water (ug/L)

Analyte	Sample Result	MS Result	True Value	% Recovery	Q	Date Analyzed
Benzene	ND	9.5	10.0	95		02/08/99
Toluene	ND	9.4	10.0	94		
Ethylbenzene	ND	9.6	10.0	96		
Xylenes	ND	18.6	20.0	93		

Surrogates	% Recovery Sample	% Recovery MS
Trifluorotoluene	94	93
Bromofluorobenzene	97	94

Comments: L10036-1, 3 through 6.

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OAL

L10036

Client: *Enron Gas Pipeline Group*
Contact: *George Robinson*

Project: *Bell Lake*
Transwestern Pipeline

Batch Q.C.

LCS

BTEX/Water (ug/L)

Analyte	Result	True Value	% Recovery	Q	Date Analyzed
Benzene	9.9	10.0	99		02/08/99
Toluene	9.9	10.0	99		
Ethylbenzene	10.1	10.0	101		
Xylenes	19.7	20.0	99		

Surrogates	% Recovery
Trifluorotoluene	99
Bromofluorobenzene	98

Comments: L10036-1, 3 through 6.

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L10036

Client: *Enron Gas Pipeline Group*
Contact: *George Robinson*

Project: *Bell Lak*
Transwestern Pipeline

Batch Q.C.

MS

BTEX/Water (ug/L)

Analyte	Sample Result	MS Result	True Value	% Recovery	Q	Date Analyzed
Benzene	ND	9.5	10.0	95		02/08/99
Toluene	ND	9.4	10.0	94		
Ethylbenzene	ND	9.6	10.0	96		
Xylenes	ND	18.6	20.0	93		

Surrogates	% Recovery Sample	% Recovery MS
Trifluorotoluene	94	93
Bromofluorobenzene	97	94

Comments: L10036-1, 3 through 6.

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L10036

Client: *Enron Gas Pipeline Group*
Contact: *George Robinson*

Project: *Bell Lake*
Transwestern Pipeline

Batch Q.C.

Duplicate

BTEX/Water (ug/L)

Analyte	Result	Duplicate Result	RPD	Reporting Limit	Q	Date Analyzed
Benzene	112	114	2	1		02/17/99
Toluene	1170	1200	3	1		
Ethylbenzene	57.2	63.7	11	1		
Xylenes	4330	4490	4	1		

Surrogates	% Recovery Sample	% Recovery Duplicate
ifluorotoluene	94	96
omofluorobenzene	126	105

Comments: L10036-1 through 10.

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L10036

Client: *Enron Gas Pipeline Group*
Contact: *George Robinson*

Project: *Bell Lake*
Transwestern Pipeline

Batch Q.C.

Duplicate

BTEX/Water (ug/L)

Analyte	Result	Duplicate Result	RPD	Reporting Limit	Q	Date Analyzed
Benzene	210	211	<1	1		02/17/99
Toluene	362	359	<1	1		
Ethylbenzene	14.8	14.9	<1	1		
Xylenes	401	401	<1	1		

Surrogates	% Recovery Sample	% Recovery Duplicate
Trifluorotoluene	77	80
Bromofluorobenzene	MI	MI

Comments: L10036-11 through 13.

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OAL Oregon Analytical Laboratory

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Beaverton, Oregon 97007
(503) 590-5300
FAX (503) 590-1404

CHAIN [illegible] CUSTODY RECORD
LABORATORY ANALYSIS REQUEST

Sampling: ☒ Grab ☐ Comp
OAL hrs. ______
ISCO ______
Page 1 of 2

Site Visit ☐

Client Information	Billing Information	Project Information	
Company CYPRESS ENGINEERING	Company ENRON	Project Name TRANSWESTERN PIPELINE	Sampler's Name SANDY SHARP
Contact SANDY SHARP	Contact c/o GEORGE ROBINSON	Project # BELL LAKE	Signature [signature]
Address 10235 WEST LITTLEYORK STE 256	Address	P.O. #	Quote #
HOUSTON, TX 77040		Comments	NOTE: If quote number is not referenced, standard pricing will be applied.
Phone # (713) 646-7252 Fax # (713) 646-7867	Phone # (713) 646-7327 Fax # (713) 646-7867		Provide Fax Results ☒ Yes ☐ No

Remarks

[N] Normal – 10 working days
[S] Special – 5 working days
[R] Rush – 24-72 hrs.
[O] Other – ______

	Sample Identification	Date	Time	FOR LAB USE ONLY OAL Login #	# of Containers	Soil	Water	Other (Note in Remarks)	Volatiles 624 / 8260 / 8240 8010 / 8020	Semivolatiles 625 / 8270 PAH(SIM) PAH 8310	Organochlorine 608 / 8080 / 8081 PCB Pesticide	NW TPH-HCID Quantify? ☐ Yes ☐ No	NW TPH Quantification G D 418.1M	BTEX 602 / 8020 ☐ MTBE ☐ Naphthalene	TPH 418.1 Oil & Grease 413.1 / 1664 ☐ Total ☐ NP	Metals ☐ Total ☐ TCLP ☐ Dissolved As Ba Cd Cr Pb Hg Se Ag Other		8021 BTEX	TDS, CHLORIDE		Turnaround	Remarks
1	Lockridge Large AST	2/9/99	1230	L10036-1	3		X											X			N	
2	MW-10	2/11/99	0930	-2	5		X											X	X			
3	MW-6	2/10/99	1815	-3	5		X											X	X			
4	MW-2	2/10/99	1500	-4	5		X											X	X			
5	MW-12	2/10/99	1715	-5	5		X											X	X			
6	MW-1	2/10/99	1550	-6	5		X											X	X			
7	TRIP BLANK			-7	3		X											X				
8																						
9																						

Relinquished	
Signature [signature]	Date 2/12/99
Print Name SANDY SHARP	Time 0800
Company CYPRESS	
Received	
Signature Paul Clark	Date 2/13/99
Print Name Paul Clark	Time 0930
Company OAL	

Relinquished	
Signature	Date
Print Name	Time
Company	
Received	
Signature	Date
Print Name	Time
Company	

Relinquished	
Signature	Date
Print Name	Time
Company	
Received	
Signature	Date
Print Name	Time
Company	

☐ Courier ☐ UPS ☒ FedEx ☐ Other
Received @ 2°C
Appropriate Containers ☒ Yes ☐ No
____ 4oz./8oz. Jars
21 VOA Vials
5 Plastic Bottles 1L
____ Glass Bottles
____ Other ______

PCF [illegible]

OAL Oregon Analytical Laboratory

14855 S.W. Scholls Ferry Rd.
Beaverton, Oregon 97007
(503) 690-5300
FAX (503) 690-1404

CHAIN OF CUSTODY RECORD
LABORATORY ANALYSIS REQUEST

Sampling: X Grab ☐ Comp
OAL hrs. _____
ISCO _____

Page 2 of 2 Pages
Site Visit ☐

Client Information
Company: CYPRESS ENGINEERING
Contact: SANDY SHARP
Address: 10235 WEST LITTLE YORK, SUITE 250
HOUSTON, TX 77040
Phone #: (713) 466-7252 Fax #: (713) 466-7467

Billing Information
Company: ENRON
Contact: C/O GEORGE ROBINSON
Address: _____
Phone #: (713) 646-7527 Fax #: (713) 646-7467

Project Information
Project Name: TRANSWESTERN PIPELINE
Project #: BELL LAKE
P.O. #: _____
Comments: _____

Sampler's Name: SANDY SHARP
Signature: Sandy Sharp

Quote #: _____
NOTE: If quote number is not referenced, standard pricing will be applied.
Provide Fax Results: X Yes ☐ No

	Sample Identification	Date	Time	FOR LAB USE ONLY OAL Login #	# of Containers	Matrix: Soil	Matrix: Water	Matrix: Other (Note in Remarks)	Analyses: BTEX 8021	Analyses: TDS, Chlorides
1	MW-11	2/4/99	1430	L10036-8	3		X		X	X
2	MW-13	2/4/99	0830	-9	3		X		X	X
3	MW-9	2/4/99	1315	-10	3		X		X	X
4	MW-8	2/4/99	1210	-11	3		X		X	X
5	MW-5	2/4/99	1030	-12	3		X		X	X
6	WATER WELL	2/4/99	1520	-13	3		X		X	X
7										
8										
9										

Remarks

Turnaround
[N] Normal – 10 working days
[S] Special – 5 working days
[R] Rush – 24-72 hrs.
[O] Other – _____

Remarks

Relinquished	Received
Signature: Sandy Sharp	Signature: Paul Clark
Print Name: SANDY SHARP	Print Name: PAUL CLARK
Company: CYPRESS ENGINEERING	Company: OAL
Date: 2/12/99	Date: 2/13/99
Time: 0800	Time: 0930

Relinquished	Received
Signature:	Signature:
Print Name:	Print Name:
Company:	Company:
Date:	Date:
Time:	Time:

Relinquished	Received
Signature:	Signature:
Print Name:	Print Name:
Company:	Company:
Date:	Date:
Time:	Time:

☐ Courier ☐ UPS X FedEx ☐ Other
Received @ 3 °C
Appropriate Containers X Yes ☐ No
_____ 4oz./8oz. Jars
18 VOA Vials
6 Plastic Bottles 1L
_____ Glass Bottles
_____ Other _____

PGE 10650 (JAN 99)

Hall Environmental
Analysis Laboratory, Inc.

April 23,1999

Hall Environmental Analysis Laboratory
4901 Hawkins NE, Suite A
Albuquerque, NM 87109
(505)345-3975

Cypress Engineering
10235 West Little York, #256
Houston, Texas 77040

Dear Mr. Robinson:

Enclosed are the results for the analyses that were requested. These were done according to EPA procedures or the equivalent.

Detection limits are determined by EPA methodology. No determination of compounds below these levels (denoted by nd or the < sign) has been made.

Please don't hesitate to contact me for any additional information or clarifications.

Sincerely,

Nancy McDuffie
Assistant Laboratory Manager

Project: 9904092/Transwestern

Hall Environmental Analysis Laboratory, Inc.

Client :	Cypress Engineering Services	**Date Collected:**	4/13/99
Project:	Transwestern	**Date Received:**	4/16/99
Sample Matrix:	Air	**Date Extracted:**	NA

Gasoline Range Organics
EPA Method 8015 Modified
Units: µg/L

Sample Name:	**LR NE**	**LR Total**	**LR Dup**
Lab Code:	9904092-1	9904092-2	9904092-3
Date Analyzed:	4/16/99	4/16/99	4/16/99

Compound	MRL	Result	Result	Result
Gasoline Range Organics	5.0	2,000	2,200	2,400
BFB (Surrogate) Recovery %		**	**	**
Dilution Factor		25	25	25

Hydrocarbon Ranges

<C5	0.0 %	0.0%	0.0 %
C5-C6	2.6 %	1.1 %	1.1 %
C6-C7	9.8 %	5.1%	5.0 %
C7-C8	30.4 %	19.2 %	19.0 %
C8-C9	38.0 %	30.7 %	30.5 %
C9-C10	17.6 %	31.1 %	31.1 %
C10-C11	0.9 %	6.9 %	7.0 %
C11-C12	0.3 %	4.7 %	5.0%
C12-C14	0.4 %	1.2 %	1.3 %
C14+	0.0 %	0.0%	0.0 %

** Surrogate not recoverable due to matrix interference.

Hall Environmental Analysis Laboratory, Inc.

Client :	Cypress Engineering Services	**Date Collected:**	4/13/99
Project:	Transwestern	**Date Received:**	4/16/99
Sample Matrix:	Air	**Date Extracted:**	NA

Gasoline Range Organics
EPA Method 8015 Modified
Units: µg/L

Sample Name:	**LR NW**	**WT-1 DEHY Ttl.**	**Bell Lake Ttl.**
Lab Code:	9904092-4	9904092-5	9904092-6
Date Analyzed:	4/16/99	4/16/99	4/16/99

Compound	MRL	Result	Result	Result
Gasoline Range Organics	5.0	1,400	6,800	3,000
BFB (Surrogate) Recovery %		**	**	**
Dilution Factor		25	25	25

Hydrocarbon Ranges

<C5	0.0 %	0.0%	0.0 %
C5-C6	0.4 %	1.2 %	0.4 %
C6-C7	3.1 %	8.0 %	3.4 %
C7-C8	15.3 %	28.5 %	16.4 %
C8-C9	26.5 %	32.7 %	27.2 %
C9-C10	35.7%	23.6 %	31.3 %
C10-C11	9.5 %	3.9 %	13.7 %
C11-C12	7.4 %	1.8%	6.1 %
C12-C14	2.1 %	0.3 %	1.5 %
C14+	0.0 %	0.0 %	0.0 %

** Surrogate not recoverable due to matrix interference.

Hall Environmental Analysis Laboratory, Inc.

Client :	Cypress Engineering Services	**Date Collected:**	NA
Project:	Transwestern	**Date Received:**	NA
Sample Matrix:	Aqueous	**Date Extracted:**	NA

Gasoline Range Organics
EPA Method 8015 Modified
Units: PPBµg/L

Sample Name:	**Reagent**
Lab Code:	**Blank**
Date Analyzed:	4/16/99

Compound	MRL	Result
Gasoline Range Organics	0.05	nd
BFB (Surrogate) Recovery		101
Dilution Factor		1

Hall Environmental Analysis Laboratory, Inc.

Client:	Cypress Engineering Services	**Date Collected:**	NA
Project:	Transwestern	**Date Received:**	NA
Sample Matrix:	Aqueous	**Date Extracted:**	NA
		Date Analyzed:	4/16/99

Volatile Organic Compounds
Units: PPBµg/L
BS/BSD 4/19

EPA Method 8015 Modified

Compound	Sample Result	Amount Added	Blank Spike	BS %	BS Dup	BSD %	RPD
Gasoline	<0.05	0.50	0.47	94	0.49	98	4

CHAIN-OF-CUSTODY RECORD

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite A
Albuquerque, New Mexico 87109
505.345.3975
Fax 505.345.4107

Client: Cypress Engineering

Project Name: Transwestern

Address: 10235 W. Little York Rd.
Suite 256
Houston, TX 77040

Project #:

Project Manager: George Robinson

Phone #: 713-646-7327

Sampler: George Robinson

Fax #: 713-646 7867

Samples Cold?: ☐ Yes ☒ No

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative: HgCl$_2$	Preservative: HCl	Preservative:	HEAL No.
4-13-99	0830	Air	LOCKRIDGE NE	1-1L Manifold				9904092-1
"	0840	"	LOCKRIDGE TOTAL	1-1L				-2
"	0850	"	LOCKRIDGE DUP	1-1L				-3
"	0910	"	LOCKRIDGE NW	1-1L Manifold				-4
"	1230	"	WT-1 DEHY TOTAL	1-1L				-5
4-14-99	0810	"	BELL LAKE TOTAL	1-1L				-6

ANALYSIS REQUEST

Sample I.D. No.	BTEX + MTBE (602/8020)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015 MOD (Gas/Diesel)	TPH (Method 418.1)	8010/8020 Volatiles	EDB (Method 504)	EDC (Method 8010)	8310 (PNA or PAH)	RCRA 8 Metals	Cations (Na, K, Ca, Mg)	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8080 Pesticides / PCB's	8260 (VOA)	8270 (Semi-VOA)			Air Bubbles or Headspace (Y or N)
LOCKRIDGE NE			X														
LOCKRIDGE TOTAL			X														
LOCKRIDGE DUP			X														
LOCKRIDGE NW			X														
WT-1 DEHY TOTAL			X														
BELL LAKE TOTAL			X														

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
4-15-99	0700	George Robinson	Anne Storm 4/16/99

Remarks:

OAL

L12607

August 25, 1999

George Robinson
Enron Gas Pipeline Group
333 Clay St., Room 3142
P.O. Box 1188
Houston, TX 77002

Phone: (713) 646-7327
FAX: (713) 646-7867

Re: Laboratory Sample Analysis

Project: Bell Lake

Project Manager: George Robinson

Dear George Robinson:

On August 12 through 13, 1999, OAL received fourteen (14) water samples for analysis. The samples were analyzed utilizing EPA, ASTM, or equivalent methodology.

Should you have any questions concerning the results in this report, please contact us at (503) 590-5300. Refer to OAL login number L12607.

Sincerely,

Doug McKenzie
Project Manager

OREGON ANALYTICAL LABORATORY
A Division of Portland General Electric
14855 S.W. Scholls Ferry Road, Beaverton, OR 97007
Phone 503-590-5300 • Fax 503-590-1404
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OAL

L12607

Sample Summary

Sample ID	Lab #	Description	Sampled	Received
MW-2	L12607-1	water	08/10/99 10:45	08/12/99
MW-1	L12607-2	water	08/10/99 13:35	08/12/99
MW-7	L12607-3	water	08/10/99 14:25	08/12/99
MW-12	L12607-4	water	08/10/99 15:30	08/12/99
MW-11	L12607-5	water	08/10/99 16:30	08/12/99
MW-6	L12607-6	water	08/10/99 17:20	08/12/99
MW-5	L12607-7	water	08/10/99 18:05	08/12/99
PURGE H2O 2/99	L12607-8	water	08/10/99 18:45	08/12/99
MW-13	L12607-9	water	08/11/99 08:00	08/13/99
WATER WELL	L12607-10	water	08/11/99 08:45	08/13/99
MW-10	L12607-11	water	08/11/99 09:30	08/13/99
MW-8	L12607-12	water	08/11/99 10:25	08/13/99
MW-9	L12607-13	water	08/11/99 11:30	08/13/99
TRIP BLANK	L12607-14	water	08/11/99	08/13/99

Definition of Terms

D	Reported value is based on a dilution.
D1	Reported value is based on a dilution due to matrix interference.
MI	Matrix interference.
ND	Analytical result was below the reporting limit.
P	Sample was unpreserved.

Laboratory Certifications*

Agency	Number
Florida Department of Health	ID #E87569
Oregon Health Division	State Lab #OR020
Washington Department of Ecology	Lab Accreditation #C136
Washington Department of Health	Washington Code #136

* Current Scopes of Accreditation are available upon request.

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L12607

Analysts

Initials	Analyst	Title
CAC	Cindy Covey	Technician
CV	Cheryl Vezzani	Chemist
GCK	Bill Kernion	Chemist
JD	Jason Davendonis	Technician
WB	Wayne Boyle	Chemist

Method Summary

Analysis	Method
Arsenic	EPA 200.9
BTEX	EPA 8021
Barium	EPA 200.7/6010
Cadmium	EPA 200.7/6010
Chloride	EPA 300.0
Chromium	EPA 200.7/6010
Copper	EPA 200.7/6010
Iron	EPA 200.7/6010
Lead	EPA 200.7/6010
Manganese	EPA 200.7/6010
Mercury	EPA 245.1/7470A
Selenium	EPA 200.9
Silver	EPA 200.7/6010
Solids, Total Dissolved (TDS)	EPA 160.1 / SM 2540C
Zinc	EPA 200.7/6010

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Dissolved Metals

Sample ID / *Matrix* / Analyte	Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	*Lab Number* / Analyst
				Sampled: *08/10/99*			
				Filtration EPA 3005A: *08/16/99*			
MW-2 / *Water*				Mercury Digestion: *08/16/99*			*L12607-1*
Arsenic	0.056	0.020	mg/L	08/18/99	EPA 200.9	D	GCK
Barium	0.280	0.0010	mg/L	08/16/99	EPA 200.7/6010		CV
Cadmium	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV
Chromium	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010		CV
Copper	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV
Iron	ND	0.010	mg/L	08/16/99	EPA 200.7/6010		CV
Lead	ND	0.025	mg/L	08/16/99	EPA 200.7/6010		CV
Manganese	0.232	0.0050	mg/L	08/16/99	EPA 200.7/6010	D1	C
Mercury	ND	0.00020	mg/L	08/17/99	EPA 245.1/7470A		JD
Selenium	ND	0.020	mg/L	08/18/99	EPA 200.9	D	GCK
Silver	ND	0.0030	mg/L	08/16/99	EPA 200.7/6010		CV
Zinc	ND	0.010	mg/L	08/16/99	EPA 200.7/6010		CV

Analyte	Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	Analyst
				Sampled: *08/10/99*			
				Filtration EPA 3005A: *08/16/99*			
MW-1 / *Water*				Mercury Digestion: *08/16/99*			*L12607-2*
Arsenic	0.085	0.020	mg/L	08/18/99	EPA 200.9	D	GCK
Barium	0.159	0.0010	mg/L	08/16/99	EPA 200.7/6010		CV
Cadmium	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV
Chromium	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010		CV
Copper	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV
Iron	0.053	0.010	mg/L	08/16/99	EPA 200.7/6010		CV
Lead	ND	0.025	mg/L	08/16/99	EPA 200.7/6010		CV
Manganese	0.017	0.0050	mg/L	08/16/99	EPA 200.7/6010	D1	CV
Mercury	ND	0.00020	mg/L	08/17/99	EPA 245.1/7470A		JD
Selenium	ND	0.020	mg/L	08/18/99	EPA 200.9	D	GCK
Silver	ND	0.0030	mg/L	08/16/99	EPA 200.7/6010		CV
Zinc	ND	0.010	mg/L	08/16/99	EPA 200.7/6010		C

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Dissolved Metals

Sample ID	*Matrix*							*Lab Number*
Analyte	**Result**	**Reporting Limit**	**Units (ppm)**	**Date Analyzed**	**Method**	**Comment**	**Analyst**	
MW-7	*Water*							*L12607-3*
				Sampled: *08/10/99*				
				Filtration EPA 3005A: *08/16/99*				
				Mercury Digestion: *08/16/99*				
Arsenic	ND	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Barium	0.854	0.0010	mg/L	08/16/99	EPA 200.7/6010		CV	
Cadmium	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Chromium	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010		CV	
Copper	0.0051	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Iron	ND	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	
Lead	ND	0.025	mg/L	08/16/99	EPA 200.7/6010		CV	
Manganese	4.10	0.0050	mg/L	08/16/99	EPA 200.7/6010	D1	CV	
Mercury	ND	0.00020	mg/L	08/17/99	EPA 245.1/7470A		JD	
Selenium	ND	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Silver	ND	0.0030	mg/L	08/16/99	EPA 200.7/6010		CV	
Zinc	0.021	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	

MW-12	*Water*							*L12607-4*
				Sampled: *08/10/99*				
				Filtration EPA 3005A: *08/16/99*				
				Mercury Digestion: *08/16/99*				
Arsenic	ND	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Barium	0.194	0.0010	mg/L	08/16/99	EPA 200.7/6010		CV	
Cadmium	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Chromium	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010		CV	
Copper	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Iron	ND	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	
Lead	ND	0.025	mg/L	08/16/99	EPA 200.7/6010		CV	
Manganese	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010	D1	CV	
Mercury	ND	0.00020	mg/L	08/17/99	EPA 245.1/7470A		JD	
Selenium	ND	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Silver	ND	0.0030	mg/L	08/16/99	EPA 200.7/6010		CV	
Zinc	ND	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Dissolved Metals

Sample ID	*Matrix*							*Lab Number*
Analyte	Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	Analyst	
MW-11	***Water***				Sampled: *08/10/99* Filtration EPA 3005A: *08/16/99* Mercury Digestion: *08/16/99*			***L12607-5***
Arsenic	0.404	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Barium	8.25	0.0010	mg/L	08/16/99	EPA 200.7/6010		CV	
Cadmium	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Chromium	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010		CV	
Copper	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Iron	0.267	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	
Lead	ND	0.025	mg/L	08/16/99	EPA 200.7/6010		CV	
Manganese	1.47	0.0050	mg/L	08/16/99	EPA 200.7/6010	D1	C	
Mercury	ND	0.00020	mg/L	08/17/99	EPA 245.1/7470A		JD	
Selenium	ND	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Silver	ND	0.0030	mg/L	08/16/99	EPA 200.7/6010		CV	
Zinc	ND	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	
MW-6	***Water***				Sampled: *08/10/99* Filtration EPA 3005A: *08/16/99* Mercury Digestion: *08/16/99*			***L12607-6***
Arsenic	0.365	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Barium	0.496	0.0010	mg/L	08/16/99	EPA 200.7/6010		CV	
Cadmium	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Chromium	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010		CV	
Copper	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Iron	0.016	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	
Lead	ND	0.025	mg/L	08/16/99	EPA 200.7/6010		CV	
Manganese	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010	D1	CV	
Mercury	ND	0.00020	mg/L	08/17/99	EPA 245.1/7470A		JD	
Selenium	ND	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Silver	ND	0.0030	mg/L	08/16/99	EPA 200.7/6010		CV	
Zinc	ND	0.010	mg/L	08/16/99	EPA 200.7/6010		C	

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Dissolved Metals

Sample ID / *Matrix* / Analyte	Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	Analyst	*Lab Number*
MW-5 / ***Water***				Sampled: *08/10/99* Filtration EPA 3005A: *08/16/99* Mercury Digestion: *08/16/99*				***L12607-7***
Arsenic	0.15	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Barium	0.946	0.0010	mg/L	08/16/99	EPA 200.7/6010		CV	
Cadmium	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Chromium	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010		CV	
Copper	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Iron	0.033	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	
Lead	ND	0.025	mg/L	08/16/99	EPA 200.7/6010		CV	
[redacted]nganese	0.010	0.0050	mg/L	08/16/99	EPA 200.7/6010	D1	CV	
Mercury	ND	0.00020	mg/L	08/17/99	EPA 245.1/7470A		JD	
Selenium	ND	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Silver	ND	0.0030	mg/L	08/16/99	EPA 200.7/6010		CV	
Zinc	ND	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	

Sample ID / *Matrix* / Analyte	Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	Analyst	*Lab Number*
MW-13 / ***Water***				Sampled: *08/11/99* Filtration EPA 3005A: *08/16/99* Mercury Digestion: *08/16/99*				***L12607-9***
Arsenic	0.365	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Barium	0.467	0.0010	mg/L	08/16/99	EPA 200.7/6010		CV	
Cadmium	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Chromium	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010		CV	
Copper	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Iron	0.293	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	
Lead	ND	0.025	mg/L	08/16/99	EPA 200.7/6010		CV	
Manganese	0.0060	0.0050	mg/L	08/16/99	EPA 200.7/6010	D1	CV	
Mercury	ND	0.00020	mg/L	08/17/99	EPA 245.1/7470A		JD	
Selenium	ND	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Silver	ND	0.0030	mg/L	08/16/99	EPA 200.7/6010		CV	
[redacted]c	ND	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Dissolved Metals

Sample ID	*Matrix*							*Lab Number*
Analyte	Result	Reporting Limit	Units (ppm)	Date Analyzed	Method		Comment	Analyst
WATER WELL	***Water***				**Sampled:** *08/11/99* **Filtration EPA 3005A:** *08/16/99* **Mercury Digestion:** *08/16/99*			***L12607-10***
Arsenic	ND	0.020	mg/L	08/18/99	EPA 200.9		D	GCK
Barium	0.0238	0.0010	mg/L	08/16/99	EPA 200.7/6010			CV
Cadmium	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010			CV
Chromium	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010			CV
Copper	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010			CV
Iron	0.018	0.010	mg/L	08/16/99	EPA 200.7/6010			CV
Lead	ND	0.025	mg/L	08/16/99	EPA 200.7/6010			CV
Manganese	0.014	0.0050	mg/L	08/16/99	EPA 200.7/6010		D1	CV
Mercury	ND	0.00020	mg/L	08/17/99	EPA 245.1/7470A			JD
Selenium	ND	0.020	mg/L	08/18/99	EPA 200.9		D	GCK
Silver	ND	0.0030	mg/L	08/16/99	EPA 200.7/6010			CV
Zinc	0.010	0.010	mg/L	08/16/99	EPA 200.7/6010			CV
MW-10	***Water***				**Sampled:** *08/11/99* **Filtration EPA 3005A:** *08/16/99* **Mercury Digestion:** *08/16/99*			***L12607-11***
Arsenic	0.040	0.020	mg/L	08/18/99	EPA 200.9		D	GCK
Barium	11.3	0.0010	mg/L	08/16/99	EPA 200.7/6010			CV
Cadmium	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010			CV
Chromium	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010			CV
Copper	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010			CV
Iron	0.012	0.010	mg/L	08/16/99	EPA 200.7/6010			CV
Lead	ND	0.025	mg/L	08/16/99	EPA 200.7/6010			CV
Manganese	4.37	0.0050	mg/L	08/16/99	EPA 200.7/6010		D1	CV
Mercury	ND	0.00020	mg/L	08/17/99	EPA 245.1/7470A			JD
Selenium	ND	0.020	mg/L	08/18/99	EPA 200.9		D	GCK
Silver	ND	0.0030	mg/L	08/16/99	EPA 200.7/6010			CV
Zinc	ND	0.010	mg/L	08/16/99	EPA 200.7/6010			CV

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Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Dissolved Metals

Sample ID	*Matrix*							*Lab Number*
Analyte	**Result**	**Reporting Limit**	**Units (ppm)**	**Date Analyzed**	**Method**	**Comment**	**Analyst**	
MW-8	*Water*				**Sampled:** *08/11/99* **Filtration EPA 3005A:** *08/16/99* **Mercury Digestion:** *08/16/99*			*L12607-12*
Arsenic	0.352	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Barium	0.430	0.0010	mg/L	08/16/99	EPA 200.7/6010		CV	
Cadmium	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Chromium	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010		CV	
Copper	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Iron	0.268	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	
Lead	ND	0.025	mg/L	08/16/99	EPA 200.7/6010		CV	
Manganese	0.0062	0.0050	mg/L	08/16/99	EPA 200.7/6010	D1	CV	
Mercury	ND	0.00020	mg/L	08/17/99	EPA 245.1/7470A		JD	
Selenium	ND	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Silver	ND	0.0030	mg/L	08/16/99	EPA 200.7/6010		CV	
Zinc	ND	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	
MW-9	*Water*				**Sampled:** *08/11/99* **Filtration EPA 3005A:** *08/16/99* **Mercury Digestion:** *08/16/99*			*L12607-13*
Arsenic	0.200	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Barium	7.82	0.0010	mg/L	08/16/99	EPA 200.7/6010		CV	
Cadmium	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Chromium	ND	0.0050	mg/L	08/16/99	EPA 200.7/6010		CV	
Copper	ND	0.0020	mg/L	08/16/99	EPA 200.7/6010		CV	
Iron	0.075	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	
Lead	ND	0.025	mg/L	08/16/99	EPA 200.7/6010		CV	
Manganese	0.0579	0.0050	mg/L	08/16/99	EPA 200.7/6010	D1	CV	
Mercury	ND	0.00020	mg/L	08/17/99	EPA 245.1/7470A		JD	
Selenium	ND	0.020	mg/L	08/18/99	EPA 200.9	D	GCK	
Silver	ND	0.0030	mg/L	08/16/99	EPA 200.7/6010		CV	
Zinc	ND	0.010	mg/L	08/16/99	EPA 200.7/6010		CV	

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Dissolved Metals

Sample ID	*Matrix*							*Lab Number*
Analyte		**Result**	**Reporting Limit**	**Units (ppm)**	**Date Analyzed**	**Method**	**Comment**	**Analyst**

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OAL

L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Inorganics

Sample ID / *Matrix* / Analyte	Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	Analyst	*Lab Number*
MW-2 / ***Water***				Sampled: *08/10/99*				*L12607-1*
Chloride	730	5.0	mg/L	08/19/99	EPA 300.0	D	CAC	
Solids, Total Dissolved (TDS)	1,750	10.	mg/L	08/16/99	EPA 160.1 / SM 2540C		CAC	
MW-1 / ***Water***				Sampled: *08/10/99*				*L12607-2*
Chloride	2,600	10.	mg/L	08/19/99	EPA 300.0	D	CAC	
Solids, Total Dissolved (TDS)	6,670	10.	mg/L	08/16/99	EPA 160.1 / SM 2540C		CAC	
MW-7 / ***Water***				Sampled: *08/10/99*				*L12607-3*
Chloride	1,800	10.	mg/L	08/19/99	EPA 300.0	D	CAC	
Solids, Total Dissolved (TDS)	3,900	10.	mg/L	08/16/99	EPA 160.1 / SM 2540C		CAC	
MW-12 / ***Water***				Sampled: *08/10/99*				*L12607-4*
Chloride	110	0.5	mg/L	08/19/99	EPA 300.0	D	CAC	
Solids, Total Dissolved (TDS)	400.	10.	mg/L	08/16/99	EPA 160.1 / SM 2540C		CAC	
MW-11 / ***Water***				Sampled: *08/10/99*				*L12607-5*
Chloride	4,900	20.	mg/L	08/19/99	EPA 300.0	D	CAC	
Solids, Total Dissolved (TDS)	9,090	10.	mg/L	08/16/99	EPA 160.1 / SM 2540C		CAC	
MW-6 / ***Water***				Sampled: *08/10/99*				*L12607-6*
Chloride	2,500	10.	mg/L	08/19/99	EPA 300.0	D	CAC	
Solids, Total Dissolved (TDS)	5,120	10.	mg/L	08/16/99	EPA 160.1 / SM 2540C		CAC	
MW-5 / ***Water***				Sampled: *08/10/99*				*L12607-7*
Chloride	2,900	10.	mg/L	08/19/99	EPA 300.0	D	CAC	
Solids, Total Dissolved (TDS)	6,850	10.	mg/L	08/16/99	EPA 160.1 / SM 2540C		CAC	

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Inorganics

Analyte	Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	Analyst
Sample ID ***MW-13*** ***Matrix*** ***Water***				Sampled: ***08/11/99***			***Lab Number*** ***L12607-9***
Chloride	980	5.0	mg/L	08/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	3,530	10.	mg/L	08/16/99	EPA 160.1 / SM 2540C		CAC
WATER WELL ***Water***				Sampled: ***08/11/99***			***L12607-10***
Chloride	110	0.5	mg/L	08/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	830.	10.	mg/L	08/16/99	EPA 160.1 / SM 2540C		CAC
MW-10 ***Water***				Sampled: ***08/11/99***			***L12607-11***
Chloride	3,000	10.	mg/L	08/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	5,220	10.	mg/L	08/16/99	EPA 160.1 / SM 2540C		CAC
MW-8 ***Water***				Sampled: ***08/11/99***			***L12607-12***
Chloride	930	5.0	mg/L	08/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	3,580	10.	mg/L	08/16/99	EPA 160.1 / SM 2540C		CAC
MW-9 ***Water***				Sampled: ***08/11/99***			***L12607-13***
Chloride	4,600	20.	mg/L	08/19/99	EPA 300.0	D	CAC
Solids, Total Dissolved (TDS)	10,400	10.	mg/L	08/16/99	EPA 160.1 / SM 2540C		CAC

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Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

BTEX
by EPA 8021

Sample ID	*Matrix*					*Lab Number*
CAS	**Analyte**	**Result**	**Reporting Limit**	**Units (ppb)**	**Comment**	
MW-2	*Water*			Sampled: *08/10/99* Analyzed: *08/21/99 by WB*		*L12607-1*
71-43-2	**Benzene**	**2.**	**2.**	**µg/L**		
108-88-3	Toluene	ND	2.	µg/L		
100-41-4	Ethylbenzene	ND	2.	µg/L		
1330-20-7	Total Xylenes	ND	2.	µg/L		
	Surrogate			Recovery	Limit	
	Trifluorotoluene			86.%	50 - 150	
	4-Bromofluorobenzene			MI	50 - 150	
MW-1	*Water*			Sampled: *08/10/99* Analyzed: *08/21/99 by WB*		*L12607-2*
71-43-2	**Benzene**	**11.**	**2.**	**µg/L**	**P**	
108-88-3	**Toluene**	**10.**	**2.**	**µg/L**		
100-41-4	**Ethylbenzene**	**11.**	**2.**	**µg/L**		
1330-20-7	**Total Xylenes**	**7.**	**2.**	**µg/L**		
	Surrogate			Recovery	Limit	
	Trifluorotoluene			101.%	50 - 150	
	4-Bromofluorobenzene			MI	50 - 150	
MW-7	*Water*			Sampled: *08/10/99* Analyzed: *08/21/99 by WB*		*L12607-3*
71-43-2	Benzene	ND	2.	µg/L		
108-88-3	Toluene	ND	2.	µg/L		
100-41-4	Ethylbenzene	ND	2.	µg/L		
1330-20-7	Total Xylenes	ND	2.	µg/L		
	Surrogate			Recovery	Limit	
	Trifluorotoluene			87.%	50 - 150	
	4-Bromofluorobenzene			112.%	50 - 150	

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

BTEX
by EPA 8021

Sample ID	*Matrix*				*Lab Number*
CAS	**Analyte**	**Result**	**Reporting Limit**	**Units (ppb)**	**Comment**

MW-12	*Water*			Sampled: *08/10/99* Analyzed: *08/21/99 by WB*	*L12607-4*
71-43-2	Benzene	ND	2.	µg/L	
108-88-3	Toluene	ND	2.	µg/L	
100-41-4	Ethylbenzene	ND	2.	µg/L	
1330-20-7	Total Xylenes	ND	2.	µg/L	

Surrogate	Recovery	Limit
Trifluorotoluene	85.%	50 - 150
4-Bromofluorobenzene	98.%	50 - 150

MW-11	*Water*			Sampled: *08/10/99* Analyzed: *08/23/99 by WB*	*L12607-5*
71-43-2	**Benzene**	**430**	**10.**	**µg/L**	
108-88-3	**Toluene**	**370**	**10.**	**µg/L**	
100-41-4	**Ethylbenzene**	**30.**	**10.**	**µg/L**	
1330-20-7	**Total Xylenes**	**640**	**10.**	**µg/L**	

Surrogate	Recovery	Limit
Trifluorotoluene	80.%	50 - 150
4-Bromofluorobenzene	MI	50 - 150

MW-6	*Water*			Sampled: *08/10/99* Analyzed: *08/21/99 by WB*	*L12607-6*
71-43-2	**Benzene**	**110**	**2.**	**µg/L**	
108-88-3	**Toluene**	**68.**	**2.**	**µg/L**	
100-41-4	**Ethylbenzene**	**110**	**2.**	**µg/L**	
1330-20-7	**Total Xylenes**	**360**	**2.**	**µg/L**	

Surrogate	Recovery	Limit
Trifluorotoluene	87.%	50 - 150
4-Bromofluorobenzene	MI	50 - 150

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Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

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Sample ID	*Matrix*					*Lab Number*
CAS	**Analyte**	**Result**	**Reporting Limit**	**Units (ppb)**	**Comment**	
MW-5	*Water*			Sampled: *08/10/99* Analyzed: *08/21/99 by WB*		*L12607-7*
71-43-2	**Benzene**	82.	2.	µg/L	P	
108-88-3	**Toluene**	76.	2.	µg/L		
100-41-4	**Ethylbenzene**	20.	2.	µg/L		
1330-20-7	**Total Xylenes**	130	2.	µg/L		
	Surrogate			Recovery	Limit	
	Trifluorotoluene			MI	50 - 150	
	4-Bromofluorobenzene			MI	50 - 150	
PURGE H2O 2/99	*Water*			Sampled: *08/10/99* Analyzed: *08/24/99 by WB*		*L12607-8*
71-43-2	Benzene	ND	2.	µg/L	P	
108-88-3	Toluene	ND	2.	µg/L		
100-41-4	Ethylbenzene	ND	2.	µg/L		
1330-20-7	Total Xylenes	ND	2.	µg/L		
	Surrogate			Recovery	Limit	
	Trifluorotoluene			94.%	50 - 150	
	4-Bromofluorobenzene			107.%	50 - 150	
MW-13	*Water*			Sampled: *08/11/99* Analyzed: *08/21/99 by WB*		*L12607-9*
71-43-2	**Benzene**	86.	2.	µg/L	P	
108-88-3	**Toluene**	110	2.	µg/L		
100-41-4	**Ethylbenzene**	10.	2.	µg/L		
1330-20-7	**Total Xylenes**	160	2.	µg/L		
	Surrogate			Recovery	Limit	
	Trifluorotoluene			74.%	50 - 150	
	4-Bromofluorobenzene			MI	50 - 150	

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Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

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Sample ID	*Matrix*					*Lab Number*
CAS	**Analyte**	**Result**	**Reporting Limit**	**Units (ppb)**	**Comment**	

WATER WELL	*Water*			**Sampled:** *08/11/99* **Analyzed:** *08/24/99 by WB*		*L12607-10*
71-43-2	Benzene	ND	2.	µg/L		
108-88-3	Toluene	ND	2.	µg/L		
100-41-4	Ethylbenzene	ND	2.	µg/L		
1330-20-7	Total Xylenes	ND	2.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	91.%	50 - 150
4-Bromofluorobenzene	125.%	50 - 150

MW-10	*Water*			**Sampled:** *08/11/99* **Analyzed:** *08/21/99 by WB*		*L12607-11*
71-43-2	**Benzene**	33.	2.	µg/L		
108-88-3	**Toluene**	7.	2.	µg/L		
100-41-4	**Ethylbenzene**	3.	2.	µg/L		
1330-20-7	**Total Xylenes**	32.	2.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	MI	50 - 150
4-Bromofluorobenzene	MI	50 - 150

MW-8	*Water*			**Sampled:** *08/11/99* **Analyzed:** *08/23/99 by WB*		*L12607-12*
71-43-2	**Benzene**	150	10.	µg/L	P	
108-88-3	**Toluene**	290	10.	µg/L		
100-41-4	**Ethylbenzene**	12.	10.	µg/L		
1330-20-7	**Total Xylenes**	310	10.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	88.%	50 - 150
4-Bromofluorobenzene	MI	50 - 150

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Contact: ***George Robinson***

Project: ***Bell Lake***

BTEX
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Sample ID	*Matrix*					*Lab Number*
CAS	**Analyte**	**Result**	**Reporting Limit**	**Units (ppb)**	**Comment**	
MW-9	*Water*			Sampled: *08/11/99* Analyzed: *08/23/99 by WB*		*L12607-13*
71-43-2	**Benzene**	**210**	**10.**	**µg/L**	**P**	
108-88-3	**Toluene**	**430**	**10.**	**µg/L**		
100-41-4	**Ethylbenzene**	**20.**	**10.**	**µg/L**		
1330-20-7	**Total Xylenes**	**560**	**10.**	**µg/L**		

Surrogate	Recovery	Limit
Trifluorotoluene	83.%	50 - 150
4-Bromofluorobenzene	MI	50 - 150

TRIP BLANK	*Water*			Sampled: *08/11/99* Analyzed: *08/24/99 by WB*		*L12607-14*
71-43-2	Benzene	ND	2.	µg/L		
108-88-3	Toluene	ND	2.	µg/L		
100-41-4	Ethylbenzene	ND	2.	µg/L		
1330-20-7	Total Xylenes	ND	2.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	89.%	50 - 150
4-Bromofluorobenzene	127.%	50 - 150

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

Blank

Inorganics - Waters (mg/L)

Analyte	Result	Reporting Limit	Q	Date Analyzed
Chloride	ND	0.1		08/19/99
Solids, Total Dissolved (TDS)	NA	10		08/16/99

Comments:

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

LCSW

Inorganics - Waters (mg/L)

Analyte	True Value	Result	% Recovery	% Limit	Date Analyzed
Chloride	10.00	9.69	97	90-110	08/19/99
Solids, Total Dissolved (TDS)	NA	NA	NA		08/16/99

Comments:

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

Duplicate

Inorganics - Waters (mg/L)

Analyte	Result	Duplicate Result	Reporting Limit	RPD	RPD Limit	Q	Date Analyzed
Chloride	730	720	5	1	20	A	08/19/99
Chloride	3000	3000	10	<1	20	B	08/19/99
Solids, Total Dissolved (TDS)	810	820	10	1	20	C	08/16/99
Solids, Total Dissolved (TDS)	3580	3600	10	1	20	D	08/16/99

Comments:
A = Chloride results for L12607-1 through -10.
B = Chloride results for L12607-11 through -13.
C = TDS results for L12607-1 through -11.
D = TDS results for L12607-12 through -13.

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

Spike

Inorganics - Waters (mg/L)

Analyte	Spike Result	Sample Result	Spike Added	% Recovery	% Limit	Q	Date Analyzed
Chloride	30	24	6	100	75-125	A	08/19/99
Chloride	NA	3000	600	NA	75-125	B, ‡	08/19/99
Solids, Total Dissolved (TDS)	NA	NA	NA	NA			08/16/99

Comments: A = Chloride results for L12607-1 through -10.
B = Chloride results for L12607-11 through -13.
‡ QC limits do not apply when the sample result is equal to or greater than 4 times the spike amount added.

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L12607

Client: *Enron Gas Pipeline Group*
Contact: *George Robinson*

Project: *Bell Lake*

Batch Q.C.

Method Blank

Metals / Dissolved (mg/L)

Analyte	Result	Reporting Limit	Q	Date Analyzed
Arsenic	ND	0.0020		08/18/99
Barium	ND	0.0010		08/16/99
Cadmium	ND	0.0020		08/16/99
Chromium	ND	0.0050		08/16/99
Copper	*ND*	*0.0020*		08/16/99
Iron	ND	0.010		08/16/99
Lead	ND	0.025		08/16/99
Manganese	ND	0.0010		08/16/99
Mercury	ND	0.00020		08/17/99
Selenium	ND	0.0020		08/18/99
Silver	ND	0.0030		08/16/99
Zinc	ND	0.010		08/16/99

Comments:

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

LCSW

Metals / Dissolved (mg/L)

Analyte	True Value	Result	% Recovery	% Limit	Date Analyzed
Arsenic	0.0400	0.0394	99	80-120	08/18/99
Barium	0.500	0.492	98	80-120	08/16/99
Cadmium	0.500	0.494	99	80-120	08/16/99
Chromium	0.500	0.489	98	80-120	08/16/99
Copper	0.500	0.486	97	80-120	08/16/99
Iron	0.500	0.491	98	80-120	08/16/99
Lead	0.500	0.491	98	80-120	08/16/99
Manganese	0.500	0.494	99	80-120	08/16/99
Mercury	0.00200	0.00231	116	80-120	08/17/99
Selenium	0.010	0.010	100	80-120	08/18/99
[illegible]er	0.500	0.491	98	80-120	08/16/99
[illegible]nc	0.500	0.482	96	80-120	08/16/99

Comments LCSW = Laboratory Control Sample: Water

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Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

Duplicate

Metals / Dissolved (mg/L)

Analyte	Result	Duplicate Result	Reporting Limit	RPD	RPD Limit	Q	Date Analyzed
Arsenic	0.056	0.057	0.020	2	20		08/18/99
Barium	0.280	0.284	0.0010	1	20		08/16/99
Cadmium	ND	ND	0.0020	NA	20		08/16/99
Chromium	ND	ND	0.0050	NA	20		08/16/99
Copper	ND	ND	0.0020	NA	20		08/16/99
Iron	ND	ND	0.010	NA	20		08/16/99
Lead	ND	ND	0.025	NA	20		08/16/99
Manganese	0.232	0.238	0.0050	3	20		08/16/99
Mercury	ND	ND	0.00020	NA	20		08/17/99
Selenium	ND	ND	0.020	NA	20		08/18/99
Silver	ND	ND	0.0030	NA	20		08/16/99
Zinc	ND	ND	0.010	NA	20		08/16/99

Comments:

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

Spike
Metals / Dissolved (mg/L)

Analyte	Spike Result	Sample Result	Spike Added	% Recovery	% Limit	Q	Date Analyzed
Arsenic	0.482	0.056	0.400	107	75-125		08/18/99
Barium	2.13	0.280	2.00	93	75-125		08/16/99
Cadmium	0.0457	ND	0.0500	91	75-125		08/16/99
Chromium	0.187	ND	0.200	94	75-125		08/16/99
Copper	0.229	ND	0.250	92	75-125		08/16/99
Iron	0.925	ND	1.00	93	75-125		08/16/99
Lead	0.464	ND	0.500	93	75-125		08/16/99
Manganese	2.79	0.232	2.50	102	75-125		08/16/99
Mercury	0.0019	ND	0.00200	95	75-125		08/17/99
Selenium	0.10	ND	0.10	100	75-125		08/18/99
[illegible]er	0.0408	ND	0.0500	82	75-125		08/16/99
[illegible]c	0.455	ND	0.500	91	75-125		08/16/99

Comments:

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

Method Blank

BTEX/Water (ug/L)

Analyte	Result	Reporting Limit	Q	Date Analyzed
Benzene	ND	2		08/21/99
Toluene	ND	2		
Ethylbenzene	ND	2		
Xylenes	ND	2		

Surrogates	% Recovery
Trifluorotoluene	83
Bromofluorobenzene	95

Comments: L12607-1,2,3,4,6,7,9 & 11.

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L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

Method Blank

BTEX/Water (ug/L)

Analyte	Result	Reporting Limit	Q	Date Analyzed
Benzene	ND	2		08/23/99
Toluene	ND	2		
Ethylbenzene	ND	2		
Xylenes	ND	2		

Surrogates	% Recovery
Trifluorotoluene	100
ɒmofluorobenzene	MI

Comments: L12607-5,12 & 13.

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Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

Method Blank

BTEX/Water (ug/L)

Analyte	Result	Reporting Limit	Q	Date Analyzed
Benzene	ND	2		08/24/99
Toluene	ND	2		
Ethylbenzene	ND	2		
Xylenes	ND	2		

Surrogates	% Recovery
Trifluorotoluene	86
Bromofluorobenzene	112

Comments: L12607-8,10 & 14.

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Project: ***Bell Lake***

Batch Q.C.

LCS

BTEX/Water (ug/L)

Analyte	Result	True Value	% Recovery	Q	Date Analyzed
Benzene	9.3	10.0	93		08/10/99
Toluene	9.5	10.0	95		
Ethylbenzene	9.6	10.0	96		
Xylenes	29.5	30.0	98		

Surrogates	% Recovery
Trifluorotoluene	93
Bromofluorobenzene	97

Comments: L12607-1 through 3.

OREGON ANALYTICAL LABORATORY
A Division of Portland General Electric
14855 S.W. Scholls Ferry Road, Beaverton, OR 97007
Phone 503-590-5300 • Fax 503-590-1404
www.oalab.com/oal • Toll-Free 1-800-644-0967

Printed on recycled paper

OAL

L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

LCS

BTEX/Water (ug/L)

Analyte	Result	True Value	% Recovery	Q	Date Analyzed
Benzene	9.7	10.0	97		08/21/99
Toluene	9.8	10.0	98		
Ethylbenzene	9.8	10.0	98		
Xylenes	30.0	30.0	100		

Surrogates	% Recovery
Trifluorotoluene	90
Bromofluorobenzene	93

Comments: L12607-4 through 14.

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OAL

L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

MS

BTEX/Water (ug/L)

Analyte	Sample Result	MS Result	True Value	% Recovery	Q	Date Analyzed
Benzene	11	498	500	97		08/10/99
Toluene	481	969	500	98		
Ethylbenzene	929	1400	500	94		
Xylenes	4950	5930	1500	65		

Surrogates	% Recovery Sample	% Recovery MS
Trifluorotoluene	88	97
Bromofluorobenzene	90	92

Comments: L12607-1 through 3.

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OAL

L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

MS

BTEX/Water (ug/L)

Analyte	Sample Result	MS Result	True Value	% Recovery	Q	Date Analyzed
Benzene	ND	9.5	10.0	95		08/21/99
Toluene	ND	9.5	10.0	95		
Ethylbenzene	ND	9.5	10.0	95		
Xylenes	ND	28.9	30.0	96		

Surrogates	% Recovery Sample	% Recovery MS
Trifluorotoluene	85	89
Bromofluorobenzene	98	92

Comments: L12607-4 through 14.

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OAL

L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

Duplicate

BTEX/Water (ug/L)

Analyte	Result	Duplicate Result	RPD	Reporting Limit	Q	Date Analyzed
Benzene	ND	ND	NA	2		08/18/99
Toluene	ND	ND	NA	2		
Ethylbenzene	ND	ND	NA	2		
Xylenes	ND	ND	NA	2		

Surrogates	% Recovery Sample	% Recovery Duplicate
[illegible]fluorotoluene	97	101
[illegible]romofluorobenzene	115	118

Comments: L12607-1 through 3.

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OAL

L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

Duplicate

BTEX/Water (ug/L)

Analyte	Result	Duplicate Result	RPD	Reporting Limit	Q	Date Analyzed
Benzene	ND	ND	NA	2		08/21/99
Toluene	ND	ND	NA	2		
Ethylbenzene	ND	ND	NA	2		
Xylenes	ND	ND	NA	2		

Surrogates	% Recovery Sample	% Recovery Duplicate
Trifluorotoluene	85	87
Bromofluorobenzene	98	99

Comments: L12607-4 through 13.

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OAL

L12607

Client: ***Enron Gas Pipeline Group***
Contact: ***George Robinson***

Project: ***Bell Lake***

Batch Q.C.

Duplicate

BTEX/Water (ug/L)

Analyte	Result	Duplicate Result	RPD	Reporting Limit	Q	Date Analyzed
Benzene	ND	ND	NA	2		08/21/99
Toluene	ND	ND	NA	2		
Ethylbenzene	ND	ND	NA	2		
Xylenes	ND	ND	NA	2		

Surrogates	% Recovery Sample	% Recovery Duplicate
Fluorotoluene	89	85
Bromofluorobenzene	127	119

Comments: L12607-14.

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Oregon Analytical Laboratory

14655 S.W. Scholls Ferry Rd.
Beaverton, Oregon 97007
(503) 590-5300
FAX (503) 590-1404

CHAIN OF CUSTODY RECORD
LABORATORY ANALYSIS REQUEST

Sampling: [X] Grab ☐ Comp
OAL hrs. ____
ISCO ____
Page 1 of 1
Site Visit ☐

Client Information
Company CYPRESS ENGINEERING
Contact SANDY SHARP
Address 10235 WEST LITTLE YORK STE 256
HOUSTON TX 77040
Phone# 713 466 7252 Fax# X7867

Billing Information
Company ENRON
Contact c/o GEORGE ROBINSON
Address SAME
Phone # X7327 Fax# X7867

Project Information
Project Name TRANSWESTERN PIPELINE
Project # BELL LAKE
P.O. # ____
Comments 1 OF 2 COOLERS

Sampler's Name SANDY SHARP
Signature [signature]
Quote # ____
NOTE: If quote number is not referenced, standard pricing will be applied.
Provide Fax Results [X] Yes ☐ No

Remarks

Turnaround:
[N] Normal – 10 working days
[S] Special – 5 working days
[R] Rush – 24-72 hrs.
[O] Other – ____

Analyses columns: Volatiles 624 / 8260 / 8240, 8010 / 8020; Semivolatiles 625 / 8270, PAH(SIM) PAH 8310; Organochlorine 608 / 8080 / 8081, PCB Pesticide; NW TPH-HCID Quantify? ☐Yes ☐No; NW TPH Quantification G D 418.1M; BTEX 602 / 8020 8021 ☐ MTBE ☐ Naphthalene; TPH 418.1 Oil & Grease 413.1 / 1664 ☐Total ☐NP; Metals ☐Total ☐TCLP [X] Dissolved As Ba Cd Cr Pb Hg Se Ag, Other Cu, Fe, Mn, Zn FILTER IN LAB; TDS, CHLORIDE

#	Sample Identification	Date	Time	FOR LAB USE ONLY OAL Login #	# of Containers	Soil	Water	Other (Note in Remarks)	Volatiles	Semivolatiles	Organochlorine	NW TPH-HCID	NW TPH Quantification	BTEX	TPH / Oil & Grease	Metals	TDS, Chloride		Turnaround	Remarks
1	MW-2	8/10/99	1045	L12607-1	5		X							3/G		1/P	1/P		N	
2	MW-1	8/10/99	1335	-2	5		X							3/G		1/P	1/P		N	
3	MW-7	8/10/99	1425	-3	5		X							3/G		1/P	1/P		N	
4	MW-17	8/10/99	1530	-4	5		X							3/G		1/P	1/P		N	
5	MW-10	8/10/99	1630	-5	5		X							3/G		1/P	1/P		N	per Sandy Sharp ID is MW-11. 8/12/99 DGM
6	MW-6	8/10/99	1720	-6	5		X							3/G		1/P	1/P		N	
7	MW-5	8/10/99	1805	-7	5		X							3/G		1/P	1/P		N	
8	PURGE H2O 2/99	8/10/99	1845	-8	3		X							3/G					N	
9																				

Relinquished
Signature [signature] Date 8/11/99
Print Name SANDY SHARP Time 0650
Company CYPRESS

Received
Signature Cathy Evans Date 8-12-99
Print Name Time 1430
Company OAL

Relinquished
Signature Date
Print Name Time
Company

Received
Signature Date
Print Name Time
Company

Relinquished
Signature Date
Print Name Time
Company

Received
Signature Date
Print Name Time
Company

☐ Courier ☐ UPS [X] FedEx ☐ Other
Received @ 12 °C
Appropriate Containers ☐ Yes ☐ No
____ 4oz./8oz. Jars
____ VOA Vials
____ Plastic Bottles
____ Glass Bottles
____ Other ____

PGE 10650 (991

Oregon Analytical Laboratory

14855 SW Scholls Ferry Rd
Beaverton OR 97007
(503) 590-5300
FAX (503) 590-1404
1-800-644-0967

CHAIN OF CUSTODY RECORD
LABORATORY ANALYSIS REQUEST

Sampling: [X] Grab [ ] Comp
OAL Hours _____
ISCO _____
www.oalab.com/oal
Site Visit [ ]
1 of 1

Client Information
Company: CYPRESS ENGINEERING
Contact: SANDY SHARP
Address: 10235 WEST LITTLE YORK STE 250 HOUSTON TX 77040
Phone # (713) 466-7252 Fax # X7867

Billing Information
Company: ENRON
Contact: % GEORGE ROBINSON
Address: SAME
Phone # X7327 Fax # X7867

Project Information
Project Name: TRANSWESTERN PIPELINE
Project #: BELL LAKE
P.O. #: _____
Comments: 2ND COOLER (LAST ONE THIS SITE)

Sampler's Name: SANDY SHARP
Signature: Sandy Sharp
Quote # _____
NOTE: If quote number is not referenced, standard pricing will be applied.
Provide Fax Results [X] Yes [ ] No

[N] Normal – 10 working days
[S] Special – 5 working days
[R] Rush – 24-72 hrs
[O] Other – _____

	Sample Identification	Date	Time	FOR LAB USE ONLY OAL Login #	# of Containers	Matrix: Soil	Matrix: Water	Matrix: Other (Note in Remarks)	Volatiles 620 / 8260 / 8240 8010 / 8020	Semivolatiles 625 / 8270 PAH(SIM)8270 PAH8310	Organochlor Pest 608 / 8081 PCB 608 / 8082	NW TPH-HCID Quantify? [ ] Yes [ ] No	NW TPH Quantification G X DX/OIL	BTEX 602/8021 [ ] MTBE [ ] Naphthalene	Metals FILTER IN LAB [ ] Total [ ] TCLP [ ] Dissolved As Ba Cd Cr Pb Hg Se Ag Other (Ca, Fe, Mn, Zn)	TDS, Chloride-					Turnaround	Remarks
1	MW-13	8/11/99	0800	L12607-1	5		X							3/6	1/P	4P					N	L12607-9
2	WATER WELL	8/11/99	0845	-2	5		X							3/6	1/P	4P					N	-10
3	MW-10	8/11/99	0930	-3	5		X							3/6	1/P	1/P					N	-11
4	MW-8	8/11/99	1025	-4	5		X							3/6	1/P	1/P					N	-12
5	MW-9	8/11/99	1130	-5	5		X							3/6	1/P	1/P					N	-13
6	TRIP BLANK			-6	3		X							3/6							N	-14
7																						
8																						
9																						

Relinquished
Signature: [signature]
Print Name: GEORGE FRIEND
Company: CES
Date: 8-12-99
Time: 0730

Received
Signature: Cathy Evans
Print Name:
Company: OAL
Date: 8-13-99
Time: 1000

Relinquished
Signature:
Print Name:
Company:
Date:
Time:

Received
Signature:
Print Name:
Company:
Date:
Time:

Relinquished
Signature:
Print Name:
Company:
Date:
Time:

Received
Signature:
Print Name:
Company:
Date:
Time:

[ ] Courier [ ] UPS [X] FedEx [ ] Other
Received @ 6 °C
Appropriate Containers [X] Yes [ ] No
_____ 4oz./8oz. Jars
18 VOA Vials
10 Plastic Bottles 1L
_____ Glass Bottles
_____ Other _____

PGE 10650.doc (Jun 99)