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MONITORING REPORTS

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Report of Ground Water Monitoring Activities

**Transwestern Pipeline Company
WT-1 Compressor Station: Engine Room Drain Pit Area
Lea County, New Mexico**

**Submitted to:
New Mexico Oil Conservation Division**

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**ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION**

August 10, 1998

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Report of Ground Water Monitoring Activities

Transwestern Pipeline Company

WT-1 Compressor Station: Engine Room Drain Pit Area

I. Ground Water Monitoring Activities

Ground Water Sampling Events

Transwestern Pipeline Company (TW) has completed six sampling events since the last report of ground water monitoring activities. These events were completed on February 5, 1997, May 10, 1997, August 7, 1997, October 9, 1997, January 24, 1998 and April 17, 1998.

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. The measured depths and the corresponding water table elevation for each monitor well is presented in Table 1.

Ground water samples were collected from nine of the eleven monitor wells. Ground water samples were not collected from monitor well MW-2 due to the presence of PSH and samples were not collected from monitor well MW-3 due to an insufficient volume of water in the well casing. Ground water samples were delivered to a laboratory for analysis for volatile organic compounds (VOCs), twelve metal constituents, total dissolved solids (TDS), chloride, and sulfate. A summary of lab results for organic and inorganic constituents is presented in Table 2 and Table 3, respectively. A summary of additional halogenated organic compounds is presented in Table 5.

Results/Conclusions from Ground Water Sampling Event

Occurrence and Direction of Ground Water Flow

The water table elevations determined from information obtained in the course of the January 24, 1998 sampling event are indicated on Figure 2. The apparent direction of ground water flow is toward the north and is consistent with water table elevations previously measured at this site.

Lateral Extent of Phase Separated Hydrocarbon

The lateral extent of PSH is currently defined by the occurrence of PSH at the water table in monitor well MW-2 and the absence of PSH in all other monitor wells. The thickness of accumulated PSH in the monitor well MW-2 well casing was measured at 2.16 feet during the April 17, 1998 sampling event. However, it should be noted that a PSH/water interface was not measured in the well casing and therefore the reported PSH thickness is based on the difference between the measured depth to PSH and the total depth of the well casing.

At this time, the presence of PSH does not appear to require additional delineation or a modification of the proposed monitoring plan due to the relatively limited lateral extent of PSH and the current effort to develop a corrective action plan to address this issue.

Condition of Affected Ground Water

The condition of affected ground water, based on the recent sampling events, has not changed significantly from previous sampling events as evidenced by the information presented in Table 2 and Table 3. The primary constituents of concern continue to be benzene and 1,1-dichloroethane. Distribution maps for BTEX, selected halogenated compounds, and selected inorganic constituents are included as Figure 3, Figure 4, and Figure 5, respectively.

II. Planned Changes to the Ground Water Monitoring Program

Disposal of Monitor Well Purge Water

Transwestern proposes to continue with the approved method for disposal of monitor well purge water. Purge water will be accumulated on-site in 55-gallon drums. Based on previous experience, Transwestern anticipates that approximately 45 gallons of purge water will be generated in the course of each sampling event. Transwestern has determined that the purge water generated at this site is non-hazardous. This determination is based on laboratory analyses of ground water samples from each of the individual monitor wells which produced the purge water and based on generator knowledge. However, due to the relatively small volume of purge water generated in the course of each event, Transwestern will manage the purge water as if it were a RCRA regulated hazardous waste (although, the water will be manifested for disposal as "non-regulated").

Frequency of Ground Water Monitoring

In light of the history of ground water sampling results which has been developed for this site, Transwestern proposes to move from a schedule of quarterly sampling events to semi-annual sampling events. [Note: at least eight sampling events have been completed for each monitor well at the site.]

Sample Analysis Plan

Transwestern proposes to modify the sample analysis plan such that samples will be collected for analysis for VOCs in the course of each semiannual sampling event and samples will be collected for analysis for inorganic constituents in the course of just one semiannual sampling event (i.e., annually). Laboratory analytical methods will be as follows:

- Volatile Organic Compounds (method 8260)
- Total Dissolved Solids (method 160.1)
- Chloride (method 325.2)
- Sulfate (method 375.2)
- Nitrite & Nitrate as Nitrogen (method 353.2)
- Total Metals (method 7470 for Hg & method 6010 for all others) including Barium, Cadmium, Chromium, Lead, Mercury, Silver, Copper, Iron, Manganese, & Zinc. Arsenic will be analyzed by graphite furnace method 7060. Selenium will be analyzed by graphite furnace method 7740.

Routine Reporting of Monitoring Activities

Transwestern proposes to continue with annual reporting. The next annual report will be submitted to the OCD by September 1, 1999.

III. Status of Remediation Activities

Transwestern is in the process of evaluating corrective action alternatives for this site.

Report of Ground Water Monitoring Activities

**WT-1 Compressor Station: Engine Room Drain Pit Area
Transwestern Pipeline Company**

Figures

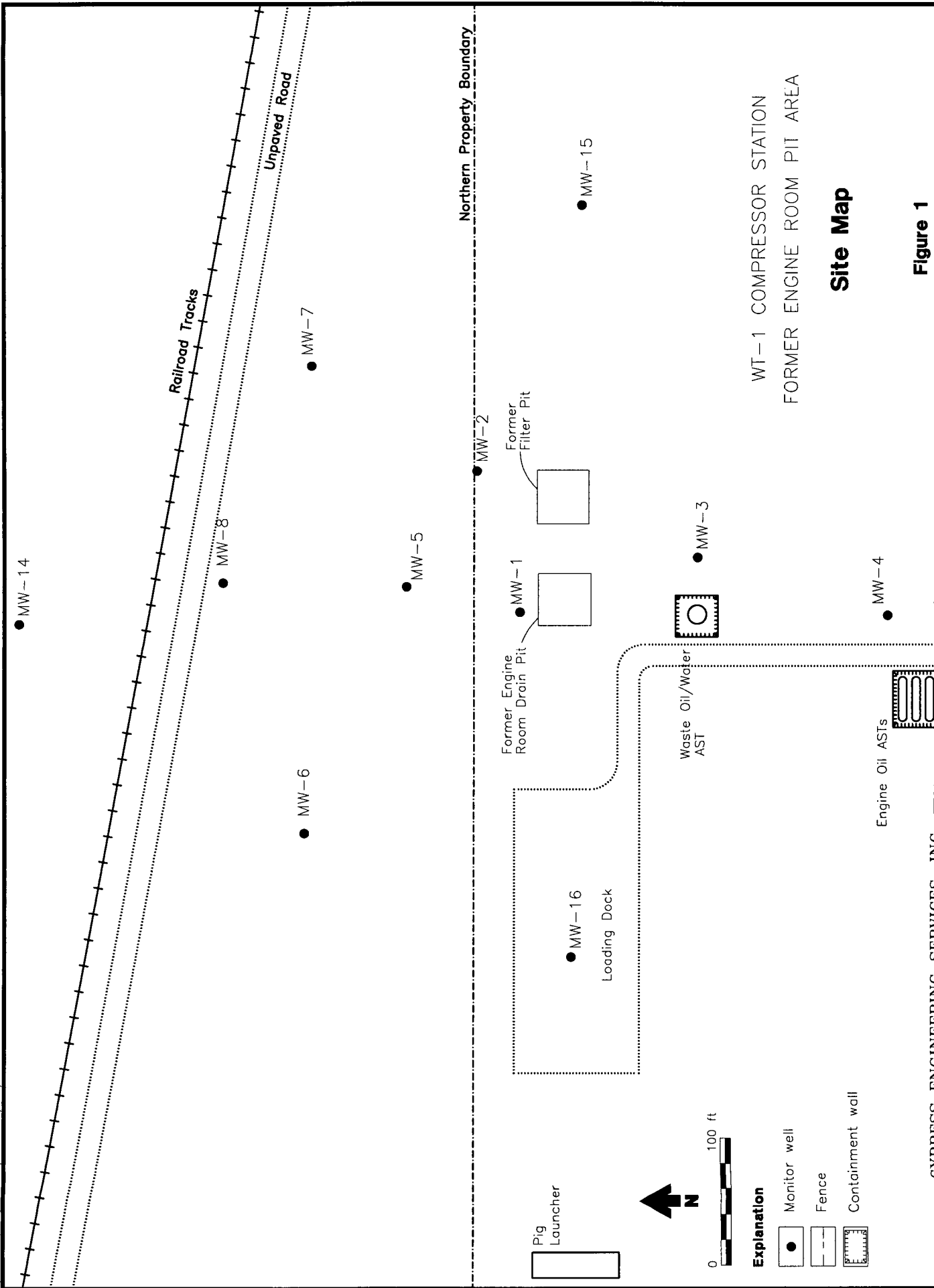
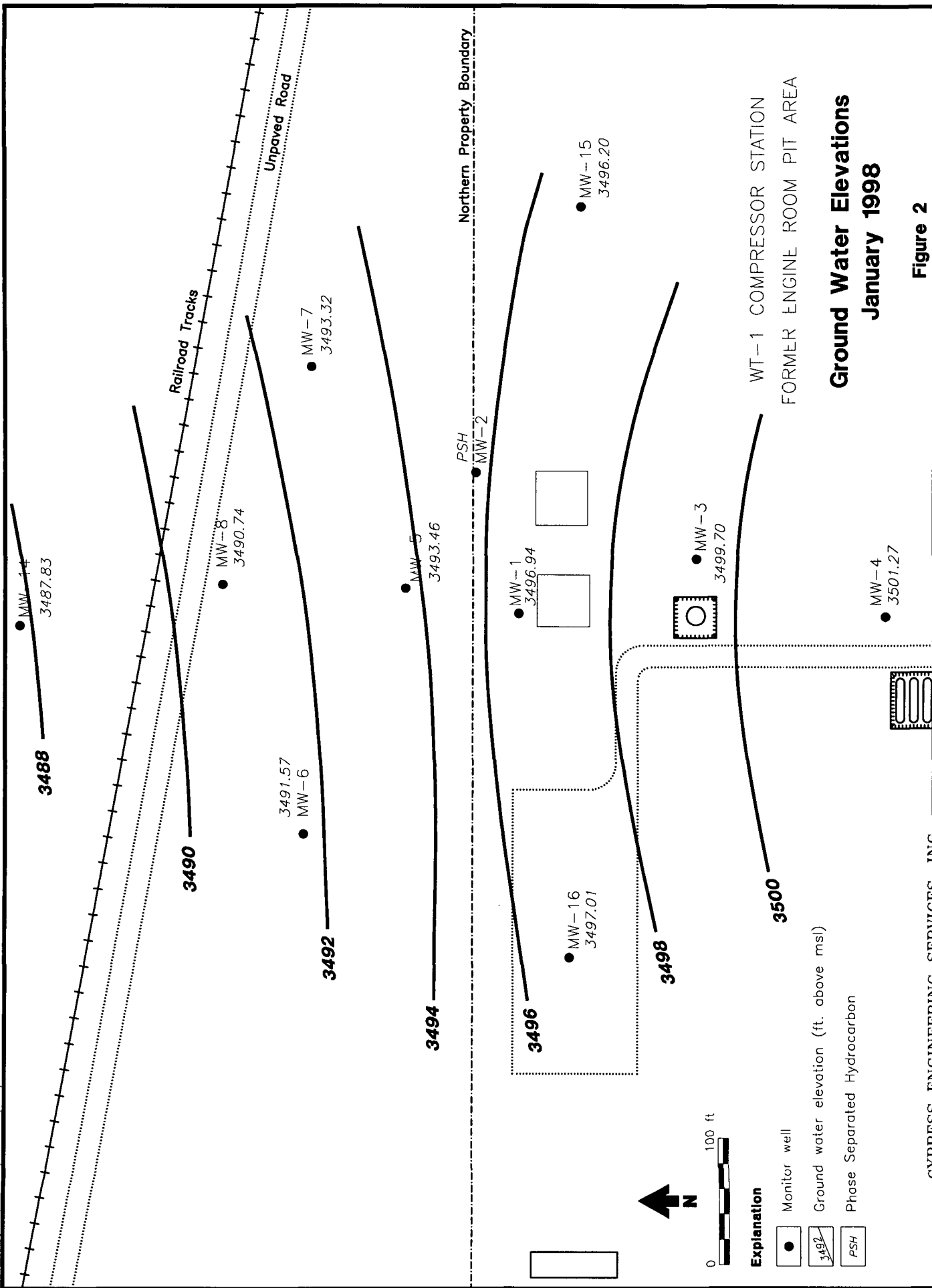
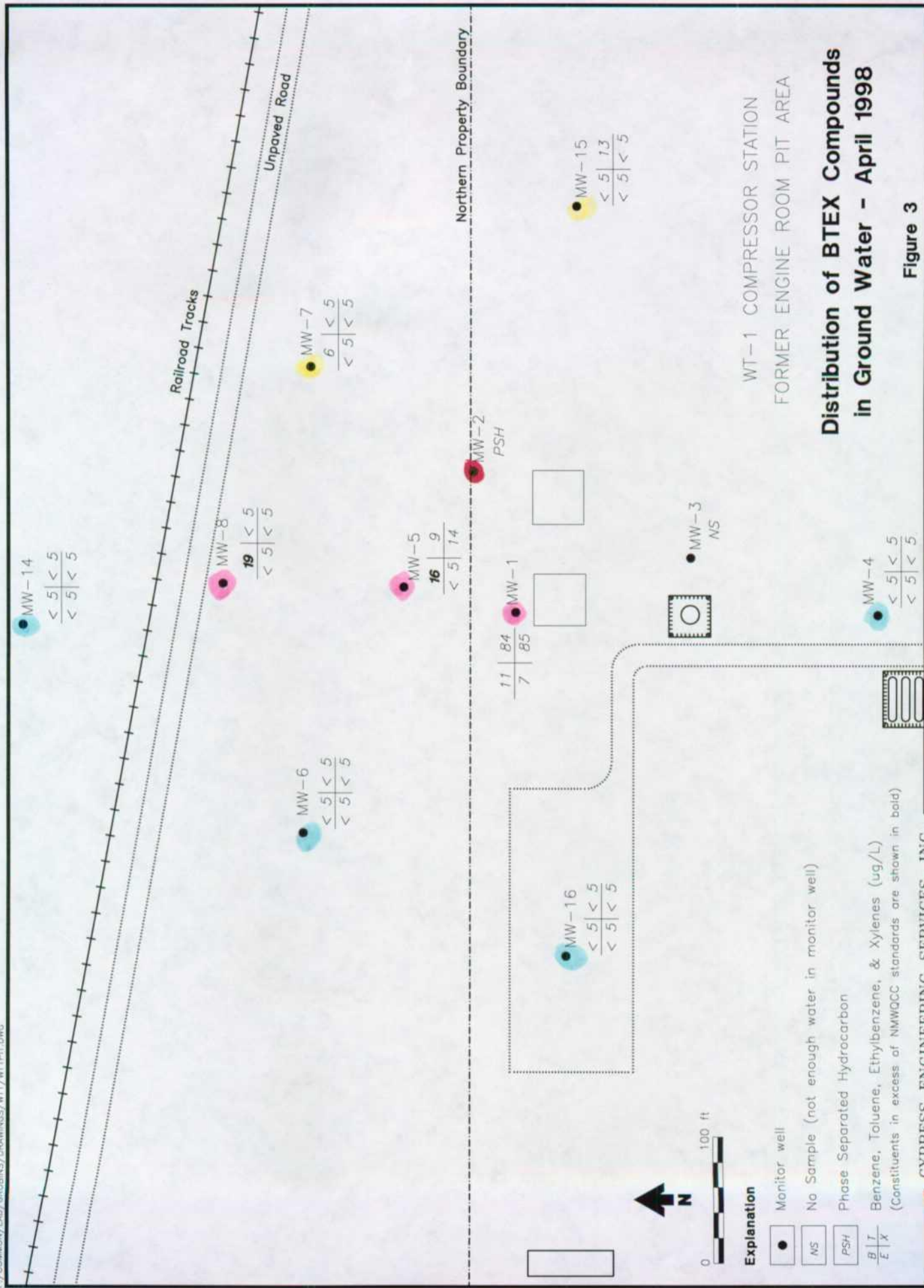


Figure 1





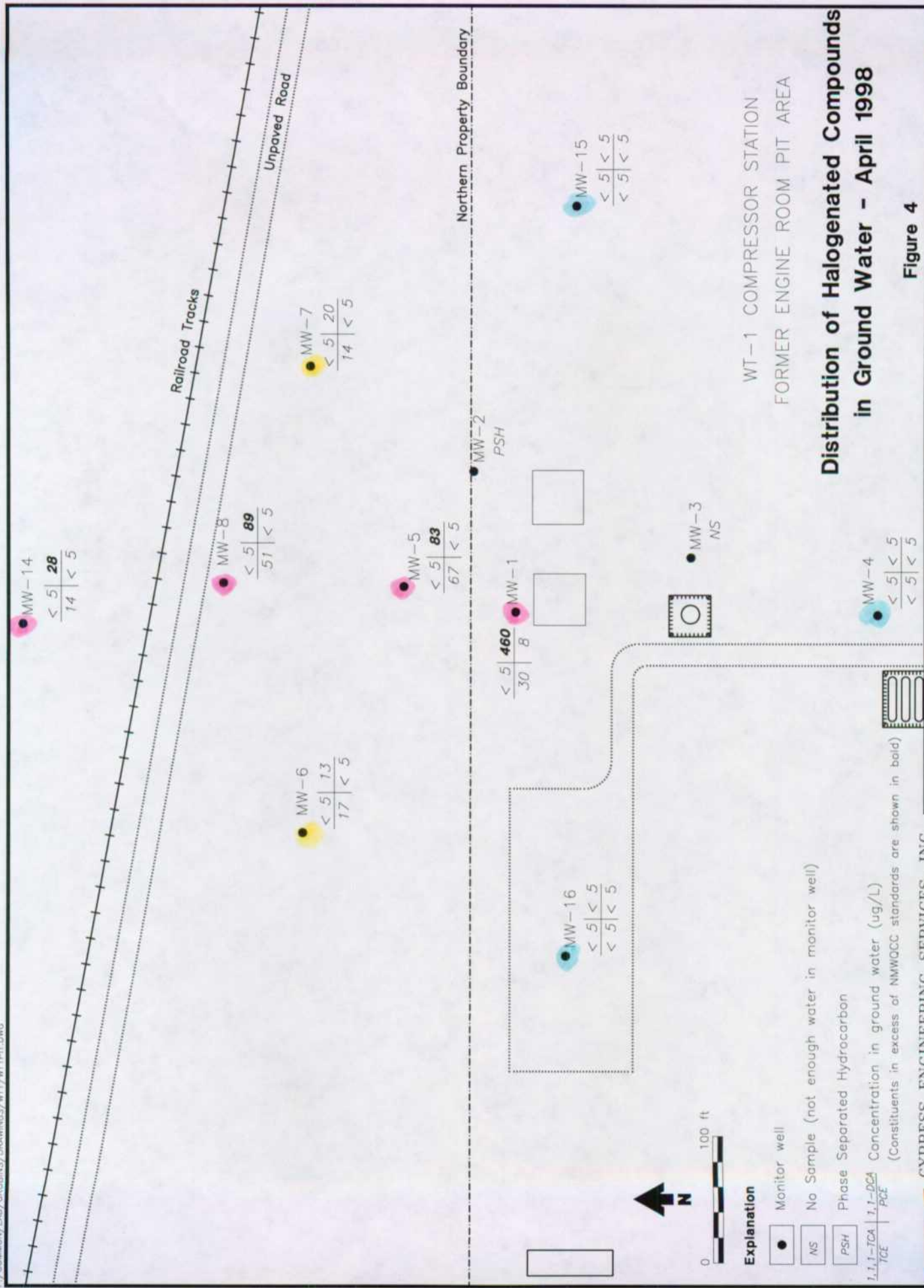
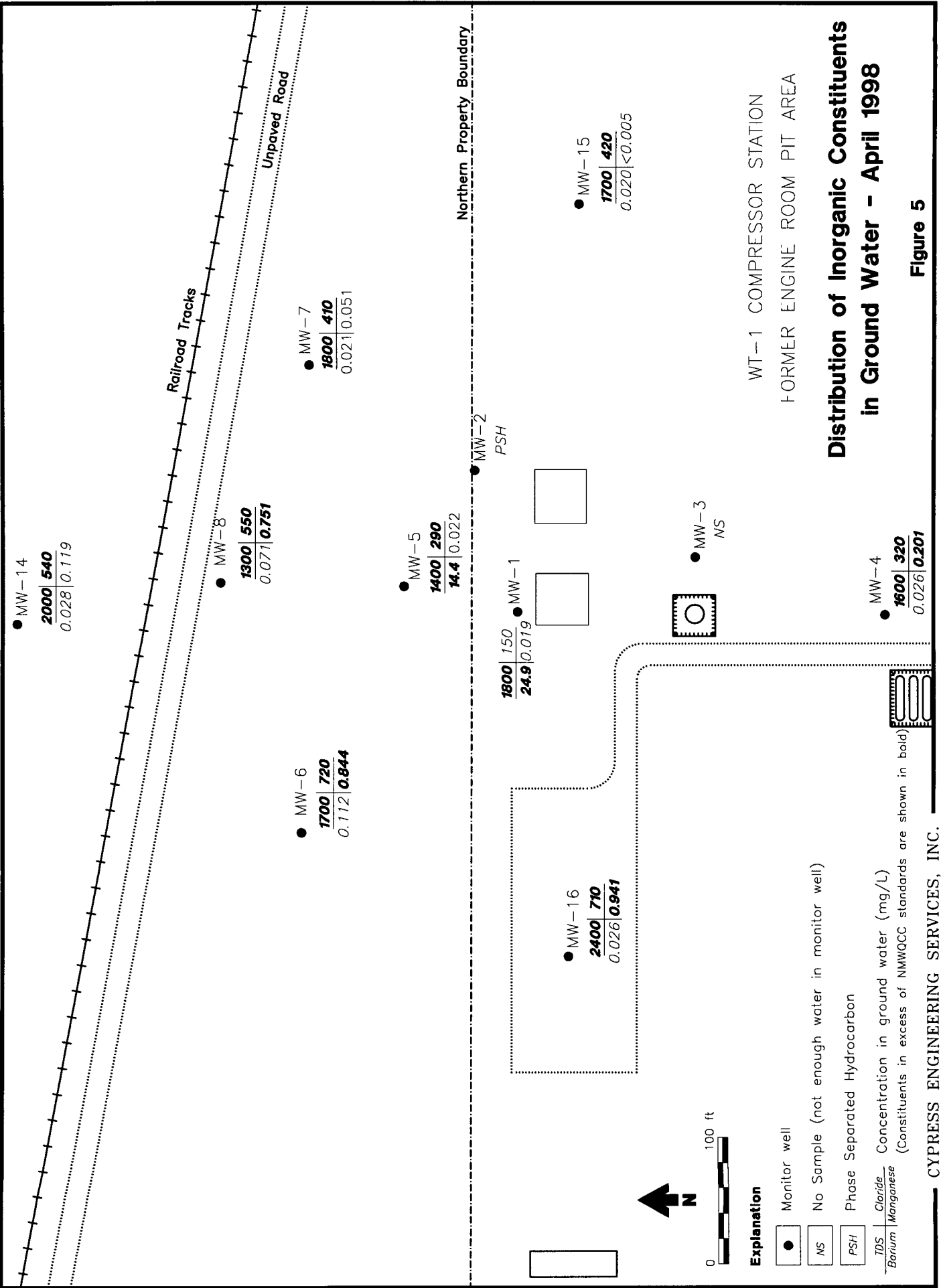


Figure 4



Report of Ground Water Monitoring Activities

**WT-1 Compressor Station: Engine Room Drain Pit Area
Transwestern Pipeline Company**

Tables

**Table 1. Summary of Ground Water Surface Elevations
TW WT-1 Station Engine Room Pit Area**

Well	Sampling Date	Top of Casing (ft)	Depth to Hydrocarbon (HC) (ft)	Depth to Water or HC/Water Interface (ft)	PSH Thickness (ft)	Groundwater Surface Elevation (ft)
MW-1	11/15/94	3547.67	(a)	47.59	(a)	3500.08
	09/14/95		(a)	48.85	(a)	3498.82
	11/12/96		(a)	49.79	(a)	3497.88
	02/04/97		(a)	49.71	(a)	3497.96
	05/10/97		(a)	49.86	(a)	3497.81
	08/06/97		(a)	49.90	(a)	3497.77
	10/08/97		(a)	49.76	(a)	3497.91
	01/21/98		(a)	50.73	(a)	3496.94
	04/15/98		(a)	49.68	(a)	3497.99
MW-2	11/15/94	3546.28	PSH	-	-	NA
	09/12/95		PSH	-	-	NA
	11/12/96		49.91	-	NA *	NA *
	02/04/97		49.90	52.15	2.25	3495.93
	05/10/97		50.09	52.18	2.09	3495.77
	08/06/97		50.20	52.17	1.97	3495.69
	10/09/97		50.27	52.22	1.95	3495.62
	01/21/98		50.08	--	NA *	NA *
	04/15/98		49.97	--	NA *	NA *
MW-3	11/16/94	3548.99	(a)	48.71	(a)	3500.28
	09/12/95		(a)	49.49	(a)	3499.50
	11/12/96		(a)	49.76	(a)	3499.23
	02/04/97		(a)	49.57	(a)	3499.42
	05/10/97		(a)	49.81	(a)	3499.18
	08/06/97		(a)	49.81	(a)	3499.18
	10/08/97		(a)	49.84	(a)	3499.15
	01/21/98		(a)	49.29	(a)	3499.70
MW-4	12/01/94	3548.29	(a)	47.18	(a)	3501.11
	09/12/95		(a)	47.50	(a)	3500.79
	11/12/96		(a)	47.50	(a)	3500.79
	02/04/97		(a)	47.51	(a)	3500.78
	05/10/97		(a)	47.51	(a)	3500.78
	08/06/97		(a)	47.49	(a)	3500.80
	10/08/97		(a)	47.43	(a)	3500.86
	01/21/98		(a)	47.02	(a)	3501.27
	04/16/98		(a)	46.81	(a)	3501.48
MW-5	12/01/94	3543.59	(a)	48.68	(a)	3494.91
	09/12/95		(a)	49.48	(a)	3494.11
	11/12/96		(a)	50.12	(a)	3493.47
	02/04/97		(a)	50.11	(a)	3493.48
	05/10/97		(a)	50.35	(a)	3493.24
	08/06/97		(a)	50.40	(a)	3493.19

**Table 1. Summary of Ground Water Surface Elevations
TW WT-1 Station Engine Room Pit Area**

Well	Sampling Date	Top of Casing (ft)	Depth to Hydrocarbon (HC) (ft)	Depth to Water or HC/Water Interface (ft)	PSH Thickness (ft)	Groundwater Surface Elevation (ft)
MW-6	10/08/97	3543.29	(a)	50.18	(a)	3493.41
	01/21/98		(a)	50.13	(a)	3493.46
	04/15/98		(a)	50.15	(a)	3493.44
	11/30/94		(a)	50.22	(a)	3493.07
	09/12/95		(a)	50.97	(a)	3492.32
	11/12/96		(a)	51.93	(a)	3491.36
	02/04/97		(a)	51.93	(a)	3491.36
	05/10/97		(a)	52.08	(a)	3491.21
	08/06/97		(a)	52.11	(a)	3491.18
	10/08/97		(a)	51.88	(a)	3491.41
	01/21/98		(a)	51.72	(a)	3491.57
	04/15/98		(a)	51.63	(a)	3491.66
MW-7	11/30/94	3541.97	(a)	47.67	(a)	3494.30
	09/12/95		(a)	48.54	(a)	3493.43
	11/12/96		(a)	48.67	(a)	3493.30
	02/04/97		(a)	48.83	(a)	3493.14
	05/10/97		(a)	49.05	(a)	3492.92
	08/06/97		(a)	48.96	(a)	3493.01
	10/08/97		(a)	48.74	(a)	3493.23
	01/21/98		(a)	48.65	(a)	3493.32
	04/15/98		(a)	48.71	(a)	3493.26
MW-8	11/30/94	3541.47	(a)	49.20	(a)	3492.27
	09/13/95		(a)	50.14	(a)	3491.33
	11/12/96		(a)	50.73	(a)	3490.74
	02/04/97		(a)	50.79	(a)	3490.68
	05/10/97		(a)	51.03	(a)	3490.44
	08/06/97		(a)	51.08	(a)	3490.39
	10/08/97		(a)	50.90	(a)	3490.57
	01/21/98		(a)	50.73	(a)	3490.74
	04/15/98		(a)	49.62	(a)	3491.85
MW-14	09/13/95	3539.71	(a)	51.53	(a)	3488.18
	11/12/96		(a)	51.96	(a)	3487.75
	02/04/97		(a)	52.00	(a)	3487.71
	05/10/97		(a)	52.12	(a)	3487.59
	08/06/97		(a)	52.11	(a)	3487.60
	10/08/97		(a)	51.95	(a)	3487.76
	01/21/98		(a)	51.88	(a)	3487.83
	04/15/98		(a)	51.83	(a)	3487.88
MW-15	09/14/95	3542.82	(a)	46.43	(a)	3496.39
	11/12/96		(a)	46.61	(a)	3496.21

**Table 1. Summary of Ground Water Surface Elevations
TW WT-1 Station Engine Room Pit Area**

Well	Sampling Date	Top of Casing (ft)	Depth to Hydrocarbon (HC) (ft)	Depth to Water or HC/Water Interface (ft)	PSH Thickness (ft)	Groundwater Surface Elevation (ft)
MW-16	02/04/97	3546.01	(a)	46.90	(a)	3495.92
	05/10/97		(a)	47.23	(a)	3495.59
	08/06/97		(a)	46.97	(a)	3495.85
	10/08/97		(a)	46.75	(a)	3496.07
	01/21/98		(a)	46.62	(a)	3496.20
	04/15/98		(a)	46.81	(a)	3496.01
	09/14/95	3546.01	(a)	48.86	(a)	3497.15
	11/12/96		(a)	49.42	(a)	3496.59
	02/04/97		(a)	49.41	(a)	3496.60
	05/10/97		(a)	49.51	(a)	3496.50
	08/06/97		(a)	49.57	(a)	3496.44
	10/08/97		(a)	49.36	(a)	3496.65
	01/21/98		(a)	49.00	(a)	3497.01
	04/15/98		(a)	48.84	(a)	3497.17

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
NA* - No PSH/water interface detected

Table 2. Summary of Ground Water Analyses - Organics
TW WT-1 Station Engine Room Pit Area

Well	Sampling Date	BTEX (ug/L)				Other VOCs (ug/L)														
		Benzene	Toluene	Ethylbenzene	Xylenes (total)	Acetone	Methyl ethyl ketone (2-butanone)	Chloroethane	Chloroform	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	Dichloromethane (Methylene chloride)	4-methyl-2-pentanone	Tetrachloroethene	1,1,1-Trichloroethane	Trichloroethene	Vinyl chloride	
NMWQCC Standard																				
		10	750	750	620	none	none	none	100.0	25.0	10.0	5	none	none	none	20	60	100	1	
MW-1	11/15/94	12 ^a	100 ^a	10 ^a	110 ^a	na	na	<2.0 ^a	<2.0 ^a	690 ^a	6.7 ^a	2.2 ^a	2.8 ^a	420 ^a	na	16 ^a	<2.0 ^a	28 ^a	<2.0 ^a	
	09/14/95	13	90	8	110	2000	400	<10	<5	730	13	9	na	170	1800	19	57	24	<10	
	11/12/96	9	66	<5	39	630	100	<10	<5	480	9	<5	na	88	1500	12	<5	20	<10	
	02/04/97	13	94	8	80	790	300	<10	<5	480	10	<5	<5	89	1700	9	<5	29	11	
	05/10/97	10	75	6	45	470	<100	<10	<5	470	9	<5	<5	<50	1000	8	9	20	<10	
	08/07/97	<50	<50	<50	<50	1100	1100	<50	<50	590	<50	<50	<50	200	1200	<50	<50	<50	<100	
	10/09/97	<50	132	<50	97	1660	<1000	<100	<50	597	<50	<50	<50	221	1650	<50	<50	<50	<100	
	01/23/98	11	82	7	85	2300	93	<10	<5	530	<5	<5	<5	230	2000	8	<5	24	<10	
	04/17/98	11	84	7	85	2100	52	<10	<5	480	8	<5	<5	<5	360	1600	6	<5	24	<10
	Dup (MW-17	04/17/98	14	93	8	96	2400	100	11	<5	460	11	<5	<5	230	2100	8	<5	30	<10
MW-3	11/16/94	5	<0.5	<0.5	0.5	na	na	na	na	na	na	na	na	na	na	na	na	na	na	
MW-4	12/01/94	<0.5	<0.5	<0.5	<0.5	na	na	<0.2	7.6	0.9	<0.2	4.7	<0.2	<2.0	na	0.5	<0.2	<0.2	<0.2	
	09/12/95	<1	<5	<5	<5	<100	<100	<10	6	<5	<5	<5	na	<5	<50	<5	<5	<5	<10	
	11/12/96	<5	<5	<5	<5	<100	<100	<10	6	<5	<5	<5	na	<5	<50	<5	<5	<5	<10	
	02/04/97	<5	<5	<5	<5	<100	<100	<10	<5	<5	<5	<5	<5	<5	100	<5	<5	<5	<10	
	05/10/97	<5	<5	<5	<5	<100	<100	<10	<5	<5	<5	<5	<5	<50	<50	<5	<5	<5	<10	
	08/06/97	<5	<5	<5	<5	<100	<100	<10	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<10	
	10/08/97	<5	<5	<5	<5	<100	<100	<10	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<10	
	01/23/98	<5	<5	<5	<5	<100	<20	<10	5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10	
	04/16/98	<5	<5	<5	<5	<100	<20	<10	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10	
	MW-5	12/01/94	20	19	8.3	26	na	na	8.9	<0.2	18	1.1	<0.2	12	43	na	0.8	<0.2	3.2	<0.2
09/12/95		12	24	<5	24	1000	200	100	<5	200	7	<5	na	190	520	<5	<5	67	<10	
11/12/96		20	44	18	44	<100	<100	31	<5	150	<5	<5	na	5	300	<5	<5	<5	11	
02/06/97		31	53	12	83	56	<100	56	<5	160	<5	5.6	140	36 ^a	280	<5	<5	120	16	

Table 2. (Page 1 of 4)

Table 2. Summary of Ground Water Analyses - Organics
TW WT-1 Station Engine Room Pit Area

Well	Sampling Date	BTEX (ug/L)				Other VOCs (ug/L)																
		Benzene	Toluene	Ethylbenzene	Xylenes (total)	Acetone	Methyl ethyl ketone (2-butanone)	Chloroethane	Chloroform	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	Dichloromethane (Methylene chloride)	4-methyl-2-pentanone	Tetrachloroethene	1,1,1-Trichloroethane	Trichloroethene	Vinyl chloride			
NMWQCC Standard					10	750	750	620	none	none	none	100.0	25.0	10.0	5	none	none	none	20	60	100	1
Dup (BS-99)	05/10/97	24	35	9	38	<100	<100	22	<5	140	<5	<5	120	<50	210	<5	<5	86	<5	86	<10	
	05/10/97	23	38	9	38	<100	<100	22	<5	130	<5	<5	111	<50	180	<5	<5	82	<5	82	<10	
	08/07/97	22	9	<5	15	<100	<100	11	<5	47	<5	<5	53	7	50	<5	<5	35	<5	35	<10	
	10/09/97	19	15	7	24	<100	<100	<10	<5	96	<5	<5	103	10	89	<5	<5	71	<5	71	<10	
	10/09/97	18	14	7	25	<100	<100	<10	<5	102	<5	<5	111	10	98	<5	<5	69	<5	69	<10	
Dup (MW-17)	01/24/98	23	18	9	33	<100	<20	<10	<5	120	<5	6	140	<5	130	<5	<5	75	<5	75	<10	
	01/24/98	25	19	9	34	<100	<20	10	<5	130	<5	7	150	<5	120	<5	<5	77	<5	77	<10	
	04/17/98	16	9	<5	14	<100	<20	<10	<5	83	<5	<5	91	<5	18	<5	<5	67	<5	67	<10	
MW-6	11/30/94	1.8	<0.5	<0.5	0.5	na	na	0.5	<0.2	13	<0.2	2.9	6.8	<2.0	na	0.4	<0.2	15	<0.2	15	<0.2	
	09/12/95	2	<5	<5	<5	<100	<100	<10	<5	17	<5	<5	na	<5	<50	<5	<5	21	<5	21	<10	
	11/12/96	<5	<5	<5	<5	<100	<100	<10	<5	12	<5	<5	na	<5	<50	<5	<5	15	<5	15	<10	
	02/04/97	<5	<5	<5	<5	<100	<100	<10	<5	11	<5	<5	6	<50	<50	<5	<5	18	<5	18	<10	
	05/10/97	<5	<5	<5	<5	<100	<100	<10	<5	10	<5	<5	<5	<50	<50	<5	<5	14	<5	14	<10	
	08/07/97	<5	<5	<5	<5	<100	<100	<10	<5	12	<5	<5	7	<5	<50	<5	<5	16	<5	16	<10	
	10/09/97	<5	<5	<5	<5	<100	<100	<10	<5	12	<5	<5	7	<5	<50	<5	<5	16	<5	16	<10	
	01/23/98	<5	<5	<5	<5	<100	<20	<10	<5	14	<5	<5	7	<5	<10	<5	<5	15	<5	15	<10	
MW-7	04/16/98	<5	<5	<5	<5	<100	<20	<10	<5	13	<5	<5	8	<5	<10	<5	<5	17	<5	17	<10	
	11/22/94	7	<0.5	<0.5	<0.5	na	na	<0.2	<0.2	23	0.3	2.3	7.3	<2.0	na	0.4	1.6	14	<0.3	14	0.3	
	09/12/95	6	<5	<5	<5	<100	<100	<10	<5	22	<5	<5	na	<5	<50	<5	<5	13	<5	13	<10	
	11/12/96	9	<5	<5	<5	<100	<100	<10	<5	22	24	<5	na	<5	<50	<5	<5	18	<5	18	<10	
	02/04/97	8	<5	<5	<5	<100	<100	<10	<5	18	<5	<5	7	<50	<50	<5	<5	15	<5	15	<10	
	05/10/97	6	<5	<5	<5	<100	<100	<10	<5	16	<5	<5	<5	<50	<50	<5	<5	13	<5	13	<10	
	08/07/97	9	<5	<5	<5	<100	<100	<10	<5	22	<5	<5	8	<5	<50	<5	<5	17	<5	17	<10	
	10/09/97	<5	<5	<5	<5	<100	<100	<10	<5	20	<5	<5	6	<5	<50	<5	<5	16	<5	16	<10	
01/23/98	6	<5	<5	<5	<100	<20	<10	<5	21	<5	<5	6	<5	<10	<5	<5	13	<5	13	<10		
04/17/98	6	<5	<5	<5	<100	<20	<10	<5	20	<5	<5	8	<5	<10	<5	<5	14	<5	14	<10		

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Table 2. Summary of Ground Water Analyses - Organics
TW WT-1 Station Engine Room Pit Area

Well	Sampling Date	BTEX (ug/L)				Other VOCs (ug/L)													
		Benzene	Toluene	Ethylbenzene	Xylenes (total)	Acetone	Methyl ethyl ketone (2-butanone)	Chloroethane	Chloroform	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	Dichloromethane (Methylene chloride)	4-methyl-2-pentanone	Tetrachloroethene	1,1,1-Trichloroethane	Trichloroethene	Vinyl chloride
NMWQCC Standard		10	750	750	620	none	none	none	100.0	25.0	10.0	5	none	none	none	20	60	100	1
MW-8	11/30/94	12	< 0.5	< 0.5	< 0.5	na	na	0.5	< 0.2	71	0.9	1.3	18	< 2.0	na	< 0.2	< 0.2	17	0.2
	09/13/95	18	< 5	< 5	< 5	< 100	< 100	< 10	< 5	92	< 5	< 5	na	< 5	< 50	< 5	< 5	45	< 10
	11/12/96	19	< 5	< 5	< 5	< 100	< 100	< 10	< 5	86	< 5	6	na	< 5	< 50	< 5	< 5	59	< 10
	02/06/97	24	< 5	< 5	< 5	< 100	< 100	< 10	< 5	80	< 5	< 5	28	5.2 ^a	< 50	< 5	< 5	52	< 10
	05/10/97	19	42	< 5	< 5	< 100	< 100	25	< 5	74	< 5	< 5	120	< 50	130	< 5	< 5	44	< 10
	08/07/97	21	< 5	< 5	< 5	< 100	< 100	25	< 5	86	< 5	7.4	30	< 5	< 50	< 5	< 5	49	< 10
	08/07/97	21	< 5	< 5	< 5	< 100	< 100	25	< 5	88	< 5	7.8	32	< 5	< 50	< 5	< 5	51	< 10
	10/09/97	25	< 5	< 5	< 5	< 100	< 100	< 10	< 5	104	< 5	< 5	34	7 ^a	< 50	< 5	< 5	67	< 10
	01/24/98	21	< 5	< 5	< 5	< 100	< 20	< 10	< 5	100	< 5	< 5	33	< 5	12	< 5	< 5	52	< 10
Dup (MW-17)	04/17/98	19	< 5	< 5	< 5	< 100	< 20	< 10	< 5	89	< 5	< 5	33	< 5	< 10	< 5	< 5	51	< 10
MW-14	09/13/95	1	< 5	< 5	< 5	< 100	< 100	< 10	< 5	24	< 10	< 5	na	< 5	< 50	< 5	< 5	11	< 10
	11/12/96	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	25	< 10	< 5	na	< 5	< 50	< 5	< 5	13	< 10
	02/04/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	21	< 5	< 5	< 5	< 50	< 50	< 5	< 5	13	< 10
	05/10/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	22	< 5	< 5	< 5	< 50	< 50	< 5	< 5	12	< 10
	08/07/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	27	< 5	< 5	< 5	< 5	< 50	< 5	< 5	14	< 10
	10/09/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	27	< 5	< 5	< 5	6 ^a	< 50	< 5	< 5	15	< 10
	01/23/98	< 5	< 5	< 5	< 5	< 100	< 20	< 10	< 5	31	< 5	< 5	5	< 5	< 10	< 5	< 5	13	< 10
	04/17/98	< 5	< 5	< 5	< 5	< 100	< 20	< 10	< 5	28	< 5	< 5	< 5	< 5	< 10	< 5	< 5	14	< 10
MW-15	09/14/95	< 1	< 5	< 5	< 5	< 100	< 100	< 10	< 5	< 5	< 5	5	na	< 5	< 50	< 5	< 5	< 5	< 10
	11/12/96	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	< 5	< 5	5	na	< 5	< 50	< 5	< 5	< 5	< 10
	02/04/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	< 5	< 5	< 5	< 5	< 50	< 50	< 5	< 5	< 5	< 10
	05/10/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	< 5	< 5	< 5	< 5	< 50	< 50	< 5	< 5	< 5	< 10
	08/07/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	< 5	< 5	< 5	< 5	< 5	< 50	< 5	< 5	< 5	< 10
	10/08/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	< 5	< 5	< 5	< 5	6 ^a	< 50	< 5	< 5	< 5	< 10

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Table 2. Summary of Ground Water Analyses - Organics
TW WT-1 Station Engine Room Pit Area

Well	Sampling Date	BTEX (ug/L)				Other VOCs (ug/L)														
		Benzene	Toluene	Ethylbenzene	Xylenes (total)	Acetone	Methyl ethyl ketone (2-butanone)	Chloroethane	Chloroform	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	Dichloromethane (Methylene chloride)	4-methyl-2-pentanone	Tetrachloroethene	1,1,1-Trichloroethane	Trichloroethene	Vinyl chloride	
NMWQCS Standard		10	750	750	620	none	none	none	100.0	25.0	10.0	5	none	none	none	none	20	60	100	1
	01/23/98	< 5	< 5	< 5	< 5	< 100	< 20	< 10	< 5	< 5	< 5	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 10	
	04/16/98	< 5	13	< 5	< 5	< 100	< 20	< 10	< 5	< 5	< 5	5	< 5	< 5	< 10	< 5	< 5	< 5	< 10	
MW-16	09/14/95	< 1	< 5	< 5	< 5	< 100	< 100	< 10	< 5	6	< 5	< 5	na	< 5	< 50	6	< 5	< 5	< 10	
	11/12/96	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	6	< 5	< 5	na	< 5	< 50	21	< 5	< 5	< 10	
	02/04/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	< 5	< 5	< 5	< 5	< 50	< 50	17	< 5	< 5	< 10	
	05/10/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	< 5	< 5	< 5	< 5	< 50	< 50	< 5	< 5	< 5	< 10	
	08/06/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	< 5	< 5	< 5	< 5	6	< 50	14	< 5	< 5	< 10	
	10/08/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	< 5	< 5	< 5	< 5	7 ^B	< 50	15	< 5	< 5	< 10	
	01/23/98	< 5	< 5	< 5	< 5	< 100	< 20	< 10	< 5	< 5	< 5	< 5	< 5	< 5	< 10	13	< 5	< 5	< 10	
	04/16/98	< 5	< 5	< 5	< 5	< 100	< 20	< 10	< 5	< 5	< 5	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 10	

NOTES:

(1) Sample analyzed at 10x dilution

na - Analysis for this constituent was not run on samples collected during this sample event

^B = Blank Contamination

Table 3. Summary of Ground Water Analyses - Inorganics
TW WT-1 Station Engine Room Pit Area

Well	Sampling Date	Major Ions (mg/L)								Metals (mg/L)												
		TDS	Chloride	Sulfate	NO ₂ /NO ₃ - N, total	Calcium	Potassium	Magnesium	Sodium	Total alkalinity (as CaCO ₃)	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Mercury	Manganese	Selenium	Silver	Zinc
NMWQCC Standard		1000	250	600	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	11/15/94	2900	190	< 5	< 0.06	485	59.1	175	216	1610	0.11	24	< 0.0005	< 0.01	< 0.01	0.325	< 0.002	< 0.0002	0.1	< 0.005	< 0.01	na
	09/14/95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	11/12/96	2370	165	< 50	na	na	na	na	na	na	0.13	22.9	< 0.01	< 0.01	na	na	< 0.03	< 0.0002	0.05	< 0.04	< 0.01	na
	02/04/97	2460	172	< 5.0	na	na	na	na	na	na	0.12	20	< 0.01	< 0.01	< 0.01	0.25	< 0.03	< 0.0002	0.03	< 0.04	< 0.01	< 0.03
	05/10/97	2840	162	< 5.0	< 0.05	na	na	na	na	na	0.13	22	< 0.01	< 0.01	< 0.01	10	< 0.03	< 0.0002	0.05	< 0.04	< 0.01	< 0.03
Dup (MW-17)	08/07/97	2910	150	< 5.0	5.4	na	na	na	na	na	0.15	22.5	< 0.01	< 0.01	< 0.01	0.21	< 0.03	< 0.0002	0.02	< 0.04	< 0.01	< 0.03
	10/09/97	2690	175	< 5.0	< 0.05	na	na	na	na	na	0.11	27	< 0.01	< 0.01	< 0.01	0.21	< 0.03	< 0.0002	0.02	< 0.04	< 0.01	0.46
	01/23/98	1890	160	9	0.15	na	na	na	na	na	0.16	26	< 0.01	< 0.01	0.04	0.11	< 0.03	< 0.0002	0.02	< 0.04	< 0.01	0.45
	04/17/98	2100	150	200	0.90	na	na	na	na	na	0.2	27.2	< 0.005	< 0.01	< 0.01	0.54	< 0.05	< 0.0002	0.020	< 0.1	< 0.01	< 0.02
	04/17/98	1800	150	7	1.29	na	na	na	na	na	0.2	26.8	< 0.005	< 0.01	< 0.01	8.42	< 0.05	< 0.0002	0.018	< 0.1	< 0.01	< 0.02
											0.1	24.9	< 0.005	< 0.01	< 0.01	8.92	< 0.05	< 0.0002	0.019	< 0.1	< 0.01	< 0.02
MW-4	12/01/94	2800	540	1000	20	332	5.9	153	353	273	0.007	0.025	< 0.0005	< 0.01	< 0.01	< 0.05	< 0.002	< 0.0002	0.024	0.02	< 0.01	na
	09/12/95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	11/12/96	2500	430	1000	na	na	na	na	na	na	< 0.03	0.03	< 0.01	< 0.01	na	na	< 0.03	< 0.0002	0.03	< 0.04	< 0.01	na
	02/04/97	2370	416	416	na	na	na	na	na	na	< 0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.0002	< 0.01	< 0.04	< 0.01	< 0.03
	05/10/97	2660	410	778	10.7	na	na	na	na	na	< 0.03	0.03	< 0.01	< 0.01	< 0.01	0.57	< 0.03	< 0.0002	0.03	< 0.04	< 0.01	< 0.03
	08/06/97	2620	435	863	12.8	na	na	na	na	na	< 0.03	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.0002	< 0.01	< 0.04	< 0.01	< 0.03
	10/08/97	2470	380	879	9.6	na	na	na	na	na	< 0.03	0.33	< 0.01	0.02	< 0.01	< 0.01	< 0.03	< 0.0002	< 0.01	0.08	< 0.01	0.25
	01/23/98	1920	300	581	< 0.05	na	na	na	na	na	< 0.03	0.92	< 0.01	< 0.01	< 0.01	0.14	< 0.03	< 0.0002	< 0.01	< 0.04	< 0.01	0.4
	04/16/98	1600	320	800	11.60	na	na	na	na	na	< 0.1	0.017	< 0.005	< 0.01	< 0.01	< 0.02	< 0.05	< 0.0002	0.188	< 0.1	< 0.01	< 0.02
											< 0.1	0.026	< 0.005	< 0.01	< 0.01	0.07	< 0.05	< 0.0002	0.201	< 0.1	< 0.01	0.03

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Table 3. Summary of Ground Water Analyses - Inorganics
TW WT-1 Station Engine Room Pit Area

Well	Sampling Date	Major Ions (mg/L)										Metals (mg/L)											
		TDS	Chloride	Sulfate	NO ₂ /NO ₃ - N, total	Calcium	Potassium	Magnesium	Sodium	Total alkalinity (as CaCO ₃)	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Mercury	Manganese	Selenium	Silver	Zinc	
NMWQCC Standard		1000	250	600	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	
MMW-5	12/01/94	2000	360	< 5	< 0.06	185	6.1	200	326	1080	0.036	17.3	< 0.0005	< 0.01	< 0.01	0.097	< 0.002	< 0.0002	0.112	< 0.005	< 0.01	na	
	09/12/95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	
	11/12/96	2610	495	< 25	na	na	na	na	na	na	0.06	25.9	< 0.01	< 0.01	na	na	< 0.03	< 0.0002	0.43	< 0.04	< 0.01	na	
	02/06/97	2300	4400	< 5.0	na	na	na	na	na	na	0.04	21	< 0.01	< 0.01	< 0.01	< 0.01	0.21	< 0.03	< 0.0002	0.02	< 0.04	< 0.01	0.04
Dup (MMW-17)	05/10/97	2340	380	< 5.0	< 0.05	na	na	na	na	na	0.12	22	< 0.01	0.02	0.02	27	0.04	< 0.0002	0.56	< 0.04	< 0.01	0.09	
	08/07/97	1870	300	< 5.0	0.09	na	na	na	na	na	< 0.03	16	< 0.01	< 0.01	< 0.01	0.08	< 0.03	< 0.0002	< 0.01	< 0.04	< 0.01	< 0.03	
	10/09/97	2090	320	< 5.0	< 0.05	na	na	na	na	na	< 0.03	23	< 0.01	< 0.01	< 0.01	0.02	< 0.03	< 0.0002	< 0.01	< 0.04	< 0.01	0.23	
	10/09/97	2100	340	< 5.0	< 0.05	na	na	na	na	na	< 0.03	16	< 0.01	< 0.01	< 0.01	0.01	< 0.03	< 0.0002	< 0.01	< 0.04	< 0.01	0.23	
Dup (MMW-17)	01/24/98	1640	300	4	< 0.05	na	na	na	na	na	< 0.05	15.5	< 0.005	< 0.01	< 0.01	0.19	< 0.05	< 0.0002	0.017	< 0.1	< 0.01	< 0.02	
	01/24/98	1680	300	4	< 0.05	na	na	na	na	na	0.1	16.4	< 0.005	< 0.01	< 0.01	0.19	< 0.05	< 0.0002	0.015	< 0.1	< 0.01	< 0.02	
	04/17/98	1400	290	200	0.88	na	na	na	na	na	< 0.1	14.4	< 0.005	< 0.01	< 0.01	1.29	< 0.05	< 0.0002	0.022	< 0.1	< 0.01	0.03	
MMW-6	11/30/94	2400	700	410	< 0.06	293	7.1	197	267	624	< 0.005	0.109	< 0.0005	< 0.01	0.014	< 0.05	< 0.002	< 0.0002	0.562	< 0.005	< 0.01	na	
	09/12/95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	
	11/12/96	2460	715	527	na	na	na	na	na	na	< 0.03	0.37	< 0.01	< 0.01	na	na	< 0.03	< 0.0002	0.95	< 0.04	< 0.01	na	
	02/04/97	2390	700	467	na	na	na	na	na	na	< 0.03	0.12	< 0.01	< 0.01	< 0.01	0.01	< 0.03	< 0.0002	0.79	< 0.04	< 0.01	< 0.03	
											< 0.03	0.55	< 0.01	0.02	0.03	14	< 0.03	< 0.0002	1.1	< 0.04	< 0.01	0.05	
	05/10/97	2550	700	463	< 0.05	na	na	na	na	na	< 0.03	0.1	< 0.01	< 0.01	< 0.01	0.01	< 0.03	< 0.0002	0.69	< 0.04	< 0.01	< 0.03	
	08/07/97	2660	720	427	0.4	na	na	na	na	na	< 0.03	0.8	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.0002	0.93	< 0.04	< 0.01	0.29	
	10/09/97	2710	710	468	< 0.05	na	na	na	na	na	< 0.03	0.95	< 0.01	< 0.01	< 0.01	0.18	< 0.03	< 0.0002	0.91	< 0.04	< 0.01	0.4	
	01/23/98	2190	700	378	< 0.05	na	na	na	na	na	< 0.1	0.121	< 0.005	< 0.01	< 0.01	< 0.02	< 0.05	< 0.0002	0.933	< 0.1	< 0.01	< 0.02	
	04/16/98	1700	720	500	0.89	na	na	na	na	na	< 0.1	0.112	< 0.005	< 0.01	< 0.01	0.7	< 0.05	< 0.0002	0.844	< 0.1	< 0.01	< 0.02	

Table 3. (Page 2 of 5)

Table 3. Summary of Ground Water Analyses - Inorganics
TW WT-1 Station Engine Room Pit Area

Well	Sampling Date	Major Ions (mg/L)										Metals (mg/L)											
		TDS	Chloride	Sulfate	NO ₂ /NO ₃ - N, total	Calcium	Potassium	Magnesium	Sodium	Total alkalinity (as CaCO ₃)	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Mercury	Manganese	Selenium	Silver	Zinc	
MW-7	NMWQCC Standard	1000	250	600	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	
		2400	400	920	6.8	323	7.9	148	244	327	0.006	0.032	<0.0005	<0.01	0.014	<0.05	<0.002	<0.0002	0.069	0.008	<0.01	na	
		na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	
		2240	400	823	na	na	na	na	na	na	<0.03	1.27	<0.01	0.01	na	na	<0.03	<0.0002	0.6	<0.04	<0.01	na	
		2100	380	779	na	na	na	na	na	na	<0.03	0.04	<0.01	<0.01	<0.01	<0.01	0.01	<0.03	<0.0002	0.04	<0.04	<0.01	<0.03
											0.12	3.2	<0.01	0.04	0.06	41	0.04	0.04	<0.0002	1.2	<0.04	<0.01	0.14
		2250	390	757	7.3	na	na	na	na	na	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.0002	0.04	<0.04	<0.01	<0.03
		2310	370	716	4.1	na	na	na	na	na	<0.03	0.61	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.0002	0.09	<0.04	<0.01	0.22
		2190	410	784	7	na	na	na	na	na	<0.03	0.81	<0.01	<0.01	<0.01	<0.01	0.19	<0.03	<0.0002	0.07	<0.04	<0.01	0.35
		1700	400	646	8.4	na	na	na	na	na	<0.1	0.018	<0.005	<0.01	<0.01	<0.01	<0.02	<0.05	<0.0002	0.042	<0.1	<0.01	<0.02
MW-8	MW-8	1800	410	900	8.38	na	na	na	na	na	<0.1	0.021	<0.005	<0.01	<0.01	<0.02	<0.05	<0.0002	0.051	<0.1	<0.01	0.02	
		1900	590	330	0.44	247	6	137	221	441	0.006	0.052	<0.0005	<0.01	0.014	<0.05	<0.002	<0.0002	0.136	<0.005	<0.01	na	
		na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	
		2010	555	395	na	na	na	na	na	na	<0.03	0.13	<0.01	<0.01	na	na	<0.03	<0.0002	0.41	<0.04	<0.01	na	
		2000	575	222	na	na	na	na	na	na	<0.03	0.08	<0.01	<0.01	<0.01	<0.01	<0.03	<0.0002	0.44	<0.04	<0.01	<0.03	
											<0.03	0.27	<0.01	0.02	0.02	8.9	<0.03	<0.0002	0.72	<0.04	<0.01	0.05	
		1990	550	263	<0.05	na	na	na	na	na	<0.03	0.06	<0.01	<0.01	<0.01	<0.01	<0.03	<0.0002	0.52	<0.04	<0.01	<0.03	
		2020	540	251	0.07	na	na	na	na	na	<0.03	0.8	<0.01	<0.01	<0.01	<0.01	<0.03	<0.0002	0.57	<0.04	<0.01	0.24	
		2100	570	242	<0.05	na	na	na	na	na	<0.03	0.7	<0.01	<0.01	<0.01	<0.01	0.18	<0.03	<0.0002	0.86	<0.04	<0.01	0.25
		1740	500	248	<0.05	na	na	na	na	na	<0.1	0.071	<0.005	<0.01	<0.01	<0.01	<0.02	<0.05	<0.0002	0.543	<0.1	<0.01	<0.02
		1300	550	400	0.88	na	na	na	na	na	<0.1	0.071	<0.005	<0.01	<0.01	0.65	<0.05	<0.0002	0.751	<0.1	<0.01	<0.02	

Table 3. (Page 3 of 5)

Table 3. Summary of Ground Water Analyses - Inorganics
TW WT-1 Station Engine Room Pit Area

Well	Sampling Date	Major Ions (mg/L)										Metals (mg/L)											
		TDS	Chloride	Sulfate	NO ₂ /NO ₃ - N, total	Calcium	Potassium	Magnesium	Sodium	Total alkalinity (as CaCO ₃)	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Mercury	Manganese	Selenium	Silver	Zinc	
NMWQCC Standard		1000	250	600	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-14	2360	515	700	1.91	276	7	147	170	444	<0.05	0.14	<0.005	<0.01	na	na	<0.05	<0.0002	na	<0.1	<0.01	na	
		2510	550	837	na	na	na	na	na	na	<0.03	0.05	<0.01	<0.01	na	na	<0.03	<0.0002	0.07	<0.04	<0.01	na	
		2510	575	757	na	na	na	na	na	na	<0.03	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.0002	0.06	<0.04	<0.01	<0.03
		2530	520	715	2.2	na	na	na	na	na	<0.03	0.13	<0.01	<0.01	<0.01	<0.01	1.9	<0.03	<0.0002	0.1	<0.04	<0.01	<0.03
MW15		2420	520	662	1.9	na	na	na	na	na	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.03	<0.0002	0.07	<0.04	<0.01	<0.03	
		2490	550	769	2.3	na	na	na	na	na	<0.03	0.73	<0.01	<0.01	<0.01	<0.01	<0.03	<0.0002	0.11	<0.04	<0.01	0.22	
		2200	500	663	2.9	na	na	na	na	na	<0.03	0.54	<0.01	<0.01	<0.01	0.18	<0.03	<0.0002	0.11	<0.04	<0.01	0.22	
		2000	540	800	3.72	na	na	na	na	na	<0.1	0.018	<0.005	<0.01	<0.01	<0.02	<0.05	<0.0002	0.080	<0.1	<0.01	<0.02	
											<0.1	0.028	<0.005	<0.01	<0.01	0.03	0.05	<0.0002	0.119	<0.1	<0.01	0.02	
		2500	442	900	13.2	291	6.5	137	206	286	<0.05	0.02	<0.005	<0.01	na	na	<0.05	<0.0002	na	<0.1	0.01	na	
		2420	435	892	na	na	na	na	na	na	<0.03	0.06	<0.01	<0.01	na	na	<0.03	<0.0002	0.02	<0.04	<0.01	na	
		2360	420	924	na	na	na	na	na	na	<0.03	0.03	<0.01	<0.01	<0.01	<0.01	<0.03	<0.0002	<0.01	<0.04	<0.01	<0.03	
											<0.03	0.17	<0.01	<0.01	<0.01	2.3	<0.03	<0.0002	0.06	<0.04	<0.01	<0.03	
		2530	860	1020	10.2	na	na	na	na	na	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.0002	<0.01	<0.04	<0.01	<0.03
	2510	410	825	10.2	na	na	na	na	na	<0.03	0.63	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.0002	<0.01	<0.04	<0.01	0.26	
	2400	420	941	5.8	na	na	na	na	na	<0.03	0.53	<0.01	<0.01	<0.01	<0.01	0.19	<0.03	<0.0002	<0.01	<0.04	<0.01	0.23	
	2150	400	766	12.54	na	na	na	na	na	<0.1	0.014	<0.005	<0.01	<0.01	<0.02	<0.02	<0.05	<0.0002	<0.005	<0.1	<0.01	<0.02	
	04/16/98	1700	420	1000	19.6	na	na	na	na	na	<0.1	0.020	<0.005	<0.01	<0.01	0.06	<0.05	<0.0002	<0.005	<0.1	<0.01	0.03	

Table 3. (Page 4 of 5)

Table 3. Summary of Ground Water Analyses - Inorganics
TW WT-1 Station Engine Room Pit Area

Well	Sampling Date	Major Ions (mg/L)										Metals (mg/L)											
		TDS	Chloride	Sulfate	NO ₂ /NO ₃ - N, total	Calcium	Potassium	Magnesium	Sodium	Total alkalinity (as CaCO ₃)	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Mercury	Manganese	Selenium	Silver	Zinc	
NMWWQC Standard		1000	250	600	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	
MW16	09/14/95	2570	624	850	2.62	320	9.7	188	211	410	< 0.05	0.22	< 0.005	0.02	na	na	< 0.05	0.0003	na	< 0.1	< 0.01	na	
	11/12/96	3550	995	1020	na	na	na	na	na	na	< 0.03	0.06	< 0.01	< 0.01	na	na	< 0.03	< 0.0002	1.21	< 0.04	< 0.01	na	
	02/04/97	3470	950	830	na	na	na	na	na	na	< 0.03	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.0002	1.1	< 0.04	< 0.01	< 0.03	
								(Unfiltered metals analysis)				0.07	0.37	< 0.01	0.02	0.04	27	0.04	< 0.0002	1.8	< 0.04	< 0.01	0.1
	05/10/97	3520	420	1110	1.6	na	na	na	na	na	< 0.03	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.0002	1.07	< 0.04	0.02	0.02	
	08/06/97	3480	860	1010	1.7	na	na	na	na	na	< 0.03	0.67	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.0002	1.1	< 0.04	0.02	0.29	
	10/08/97	3370	860	904	0.95	na	na	na	na	na	< 0.03	0.52	< 0.01	< 0.01	< 0.01	0.26	< 0.03	< 0.0002	1.14	< 0.04	< 0.01	0.25	
	01/23/98	2730	800	824	0.91	na	na	na	na	na	< 0.1	0.019	< 0.005	< 0.01	< 0.01	< 0.02	< 0.05	< 0.0002	0.971	< 0.1	< 0.01	< 0.02	
	04/16/98	2400	710	1100	1.78	na	na	na	na	na	< 0.1	0.026	< 0.005	< 0.01	< 0.01	0.04	< 0.05	< 0.0002	0.941	< 0.1	< 0.01	< 0.02	

NOTES:

na - Analysis for this constituent was not run on samples collected during this sample event

**Table 4. Summary of Field Measured Parameters
WT-1 Engine Room Pit Area**

Monitor Well	Date	pH	Temperature °C	Electrical Conductivity (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU/FTU) field / lab	Remarks
MW-1	11/12/96	6.67	22.2	--	0.0	--	strong mercaptin odor, bailed dry 1 gal
	02/04/97	6.70	17.3	3,100	0.0	39.3/127	strong odor, blk color, bailed dry 1 gal
	05/10/96	6.92	21.8	3,110	--	62.0	strong odor, blk/gry color
	08/08/97	6.88	20.3	3,260	0.0	101	clear to gray, strong odor
	10/09/97	6.89	21.6	3,080	1.2	--	gray blk, strong odor
	01/23/98	6.65	17.1	2,970	0.0	--	strong odor, amber color
	04/17/98	6.96	19.9	3,070	0.9	58.0	clear, gold tint, strong odor
MW-4	11/12/96	7.10	20.8	--	--	--	clear, no odor
	02/04/97	7.17	17.5	3,400	4.0	41.8/32	fine red silt, no odor
	05/10/97	7.09	19.7	3,400	3.0	5.46	very slight brn silt, mostly clear
	08/06/97	7.02	21.7	3,390	3.5	45.2	red silty
	10/08/97	7.05	21.5	3,060	3.0	--	slightly silty, light gold to brown
	01/23/98	7.11	18.7	2,640	0.6	--	clear
	04/16/98	7.00	21.1	2,720	1.8	2.5	clear
MW-5	11/12/96	7.00	23.1	--	--	--	strong odor, bailed dry 3.5 gal
	02/06/97	7.17	15.7	3,600	0.6	303/2040	strong odor, silty, foamy
	05/10/96	7.25	20.7	3,500	0.8	295.0	strong odor, red-yellow color, bailed dry 3.5g
	08/07/97	7.47	20.7	2,810	4.9	173	silty, red
	10/09/97	7.12	22.9	2,970	0.2	--	red silty, strong odor
	01/24/98	7.14	18.7	2,870	0.8	31.1	clear, amber color, strong odor
	04/17/98	7.16	20.2	2,840	0.6	52.0	clear, amber tint, strong odor
MW-6	11/12/96	--	21.6	--	--	--	red silty
	02/04/97	6.56	17.0	3,800	2.0	279/600	fine red silt, no odor
	05/10/97	6.96	21.7	3,800	1.8	234	red silty
	08/07/97	6.89	20.2	3,730	1.8	173	red silty
	10/09/97	6.89	19.3	3,510	1.7	--	red silty
	01/23/98	6.81	19.7	3,460	0.6	--	slightly turbid
	04/16/98	6.87	19.1	3,470	0.4	15.36	clear
MW-7	11/12/97	7.16	23.6	--	--	--	red silty
	02/04/97	6.89	--	2,900	2.0	539/2080	fine red silt, no odor
	05/10/97	7.17	21.1	2,970	2.0	>1000	red silty/sandy
	08/07/97	7.18	20.2	2,970	2.0	18.8	slight red silt
	10/09/97	7.20	19.6	2,750	2.6	--	red silty
	01/23/98	7.10	18.7	2,730	1.1	--	clear
	04/17/98	7.21	18.0	2,720	2.5	1.64	clear

**Table 4. Summary of Field Measured Parameters
WT-1 Engine Room Pit Area**

Monitor Well	Date	pH	Temperature °C	Electrical Conductivity (μs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU/FTU) field / lab	Remarks
MW-8	11/12/96	6.91	22.1	--	--	--	very fine red silt,
	02/06/97	6.95	14.1	3,000	2.0	<1000/590	red, silty, no odor
	05/10/97	7.00	22.0	3,040	1.6	193	red silt/sand
	08/07/97	6.97	20.1	3,040	1.1	237	red silt
	10/09/97	6.95	20.8	2,800	2.9	--	red silty
	01/24/98	6.90	19.0	2,810	0.0	26.17	Lt. amber color, clear
	04/17/98	6.97	19.2	2,860	0.9	25.46	clear, Lt. amber color
MW-14	11/12/96	7.07	19.9	--	--	--	mostly clear, slight silt
	02/04/97	7.06	15.3	3,600	3.0	70.1/92	clear initially, red silty, no odor
	05/10/97	7.04	21.2	3,390	2.0	16.2	slight red sand/silt
	08/07/97	7.09	20.4	3,340	1.0	2.8	clear
	10/08/97	6.74	20.7	3,170	1.5	--	clear
	01/23/98	6.97	17.5	3,150	0.7	--	clear
	04/17/98	7.08	21.1	3,180	1.2	0.79	clear
MW-15	11/12/96	7.21	24.6	--	--	--	clear
	02/04/97	6.90	18.3	3,200	8.0	34.5/133	fine red silt, no odor
	05/10/97	7.28	20.0	3,230	--	63.1	silty red sand
	08/07/97	7.13	20.5	3,160	7.4	159	red silt
	10/08/97	7.26	21.0	2,900	7.4	--	red sand/ fine silt
	01/23/98	7.24	18.8	2,930	5.2	--	turbid
	04/16/98	7.13	19.4	2,940	4.9	5.69	clear
MW-16	11/12/96	6.7	22.7	--	--	--	mostly clear, slight red silt
	02/04/97	6.49	17.2	4,900	4.0	139/830	fine red silt, no odor
	05/10/97	6.91	20.1	4,800	1.4	203	red sand/silt
	08/06/97	6.87	21.3	4,540	3.3	670	very silty, red
	10/08/97	6.88	21.3	4,190	3.3	--	red silty
	01/23/98	6.84	18.6	3,940	1.9	--	slightly turbid
	04/16/98	6.88	20.8	3,990	1.4	1.27	clear

**Table 5. Summary of Analytical Results for Additional
Halogenated Organic Compounds
WT-1 Station Engine Room Pit Area**

Well ID	Date	Compound	Concentration (µg/L)	Reporting Limit (µg/L)	
MW-1	10/09/97	1,1,2,2-Tetrchloroethane	107	50	
	01/23/98	1,2,4-Trimethylbenzene	36	5	
	01/23/98	1,3,5-Trimethylbenzene	13	5	
	01/23/98	2-Hexanone	25	10	
	04/17/98	Naphthalene	11	5	
	04/17/98	1,2,4-Trimethylbenzene	39	5	
	04/17/98	1,3,5-Trimethylbenzene	13	5	
	04/17/98	2-Hexanone	18	10	
	Dup(MW-17)	04/17/98	Naphthalene	24	5
	04/17/98	1,2,4-Trimethylbenzene	40	5	
	04/17/98	1,3,5-Trimethylbenzene	14	5	
	04/17/98	2-Hexanone	26	10	
MW-4	12/1/994	Bromodichloromethane	0.2	0.2	
MW-5	12/01/94	1,2-Dichlorobenzene	0.5	0.2	
	11/12/96	Bromodichloromethane	94	5	
	01/24/98	Naphthalene	48	5	
	01/24/98	1,2,4-Trimethylbenzene	17	5	
	01/24/98	1,3,5-Trimethylbenzene	10	5	
	Dup(MW-17)	01/24/98	Naphthalene	40	5
	01/24/98	1,2,4-Trimethylbenzene	17	5	
	01/24/98	1,3,5-Trimethylbenzene	10	5	
	04/17/98	Naphthalene	5	5	
	04/17/98	1,2,4-Trimethylbenzene	6	5	
MW-6	11/30/94	1,2-Dichlorobenzene	0.3	0.2	
MW-8	11/30/94	1,2-Dichlorobenzene	0.4	0.2	
	01/24/98	P-Isopropyltoluene	10	5	

Report of Ground Water Monitoring Activities

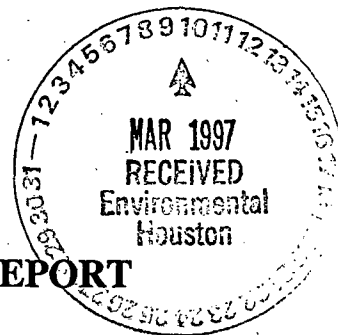
**WT-1 Compressor Station: Engine Room Drain Pit Area
Transwestern Pipeline Company**

Attachment #1

**Lab Reports for February 1997
Ground Water Sampling Event**



LABORATORIES, INC.



ANALYTICAL AND QUALITY CONTROL REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

02/21/1997

EPIC Job Number: 97.00380

Page 1

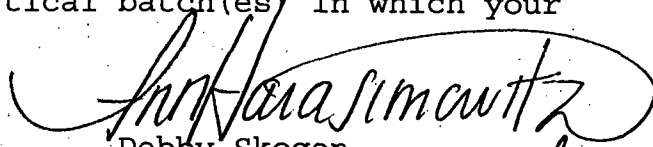
Project Description:

Job Description: WT-1 ER Pit Area

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to EPIC Laboratories, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
328282	MW-5	02/06/1997	14:15	02/08/1997
328283	MW-8	02/06/1997	13:40	02/08/1997
328284	Trip Blank			02/08/1997

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.


Debby Skogen
Project Coordinator

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

02/21/1997

EPIC Job Number: 97.00380
Sample Number: 328282

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Project Description:
Job Description: WT-1 ER Pit Area

Sample Description: MW-5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		440	mg/L	S-9252		02/13/1997	cgl		746	5.0
N-Nitrate		<0.05	mg/L	E-353.3	02/08/1997	02/12/1997	kwo	86	148	0.05
Sulfate		<5.0	mg/L	S-9038		02/13/1997	kwo		575	5.0
Turbidity		2040	NTU	E-180.1		02/10/1997	kwo		244	0.5
Arsenic		0.12	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1505	0.03
Arsenic, Dissolved, ICP		0.04	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1505	0.03
Barium		22	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1392	0.01
Barium, Dissolved, ICP		21	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1392	0.01
Cadmium		<0.01	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1567	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1567	0.01
Chromium		0.02	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1566	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1566	0.01
Copper		0.02	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1558	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1558	0.01
Iron		27	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1560	0.01
Iron, Dissolved, ICP		0.21	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1560	0.01
Lead		0.04	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1575	0.03
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1575	0.03
Manganese		0.56	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1541	0.01
Manganese, Dissolved, ICP		0.02	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1541	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		02/12/1997	bwb		1330	0.0002
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		02/12/1997	bwb		1330	0.0002
Selenium		<0.04	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1504	0.04
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1504	0.04
Silver		<0.01	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1557	0.01
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1557	0.01
Zinc		0.09	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1563	0.03
Zinc, Dissolved, ICP		0.04	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1563	0.03
Total Dissolved Solids		2300	mg/L	E-160.1		02/11/1997	cgl		683	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		56	ug/L	S-8240A		02/19/1997	zst		1368	100
Benzene		31	ug/L	S-8240A		02/19/1997	zst		1368	5
Bromodichloromethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

02/21/1997

EPIC Job Number: 97.00380
Sample Number: 328282

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Project Description:
Job Description: WT-1 ER Pit Area

Sample Description: MW-5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Bromoform		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Bromomethane		<10	ug/L	S-8240A		02/19/1997	zst		1368	10
2-Butanone (MEK)		<100	ug/L	S-8240A		02/19/1997	zst		1368	100
Carbon disulfide		<100	ug/L	S-8240A		02/19/1997	zst		1368	100
Carbon tetrachloride		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Chlorobenzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Chloroethane		56	ug/L	S-8240A		02/19/1997	zst		1368	10
Chloroethylvinyl ether		<20	ug/L	S-8240A		02/19/1997	zst		1368	20
Bromoform		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Chloromethane		<10	ug/L	S-8240A		02/19/1997	zst		1368	10
Dibromochloromethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1-Dichloroethane		160	ug/L	S-8240A		02/19/1997	zst		1368	5
1,2-Dichloroethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1-Dichloroethene		5.6	ug/L	S-8240A		02/19/1997	zst		1368	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
cis-1,2-Dichloroethene		140	ug/L	S-8240A		02/19/1997	zst		1368	5
1,2-Dichloropropane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Ethyl benzene		12	ug/L	S-8240A		02/19/1997	zst		1368	5
2-Hexanone		<50	ug/L	S-8240A		02/19/1997	zst		1368	50
Methylene chloride	B	36	ug/L	S-8240A		02/19/1997	zst		1368	5
4-Methyl-2-pentanone (MIBK)		280	ug/L	S-8240A		02/19/1997	zst		1368	50
Styrene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Tetrachloroethene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Toluene		53	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Trichloroethene		120	ug/L	S-8240A		02/19/1997	zst		1368	5
Vinyl acetate		<50	ug/L	S-8240A		02/19/1997	zst		1368	50

Blank Contamination

ANALYTICAL RESULTS REPORT

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02/21/1997

EPIC Job Number: 97.00380
Sample Number: 328282

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Project Description:
Job Description: WT-1 ER Pit Area

Sample Description: MW-5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Vinyl chloride		16	ug/L	S-8240A		02/19/1997	zst		1368	10
Xylenes, Total		83	ug/L	S-8240A		02/19/1997	zst		1368	5
SURR: 1,2-Dichloroethane-d4		92	% Rec	S-8240A		02/19/1997	zst		1368	76-114
SURR: Toluene-d8		110	% Rec	S-8240A		02/19/1997	zst		1368	88-110
SURR: 4-Bromofluorobenzene		109	% Rec	S-8240A		02/19/1997	zst		1368	86-115

ANALYTICAL RESULTS REPORT

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02/21/1997

EPIC Job Number: 97.00380
Sample Number: 328283

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Project Description:
Job Description: WT-1 ER Pit Area

Sample Description: MW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		575	mg/L	S-9252		02/13/1997	cgl		746	5.0
N-Nitrate		<0.05	mg/L	E-353.3	02/08/1997	02/12/1997	kwo	86	148	0.05
Sulfate		222	mg/L	S-9038		02/13/1997	kwo		575	5.0
Turbidity		590	NTU	E-180.1		02/10/1997	kwo		244	0.5
Arsenic		<0.03	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1505	0.03
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1505	0.03
Barium		0.27	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1392	0.01
Barium, Dissolved, ICP		0.08	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1392	0.01
Cadmium		<0.01	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1567	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1567	0.01
Chromium		0.02	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1566	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1566	0.01
Copper		0.02	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1558	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1558	0.01
Iron		8.9	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1560	0.01
Iron, Dissolved, ICP		<0.01	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1560	0.01
Lead		<0.03	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1575	0.03
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1575	0.03
Manganese		0.72	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1541	0.01
Manganese, Dissolved, ICP		0.44	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1541	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		02/12/1997	bwb		1330	0.0002
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		02/12/1997	bwb		1330	0.0002
Selenium		<0.04	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1504	0.04
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1504	0.04
Silver		<0.01	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1557	0.01
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1557	0.01
Zinc		0.05	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	1977	1563	0.03
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	02/11/1997	02/11/1997	jmc	226	1563	0.03
Total Dissolved Solids		2000	mg/L	E-160.1		02/11/1997	cgl		683	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		02/19/1997	zst		1368	100
Benzene		24	ug/L	S-8240A		02/19/1997	zst		1368	5
Bromodichloromethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5

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EPIC Job Number: 97.00380
Sample Number: 328283

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Project Description:
Job Description: WT-1 ER Pit Area

Sample Description: MW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Bromoform		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Bromomethane		<10	ug/L	S-8240A		02/19/1997	zst		1368	10
2-Butanone (MEK)		<100	ug/L	S-8240A		02/19/1997	zst		1368	100
Carbon disulfide		<100	ug/L	S-8240A		02/19/1997	zst		1368	100
Carbon tetrachloride		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Chlorobenzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Chloroethane		<10	ug/L	S-8240A		02/19/1997	zst		1368	10
Chloroethylvinyl ether		<20	ug/L	S-8240A		02/19/1997	zst		1368	20
Chloroform		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Chloromethane		<10	ug/L	S-8240A		02/19/1997	zst		1368	10
Dibromochloromethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1-Dichloroethane		80	ug/L	S-8240A		02/19/1997	zst		1368	5
1,2-Dichloroethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1-Dichloroethene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
cis-1,2-Dichloroethene		28	ug/L	S-8240A		02/19/1997	zst		1368	5
1,2-Dichloropropane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Ethyl benzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
2-Hexanone		<50	ug/L	S-8240A		02/19/1997	zst		1368	50
Methylene chloride	B	5.2	ug/L	S-8240A		02/19/1997	zst		1368	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		02/19/1997	zst		1368	50
Styrene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Tetrachloroethene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Toluene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Trichloroethene		52	ug/L	S-8240A		02/19/1997	zst		1368	5
Vinyl acetate		<50	ug/L	S-8240A		02/19/1997	zst		1368	50

Blank contamination.

ANALYTICAL RESULTS REPORT

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02/21/1997

EPIC Job Number: 97.00380
Sample Number: 328283

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Project Description:
Job Description: WT-1 ER Pit Area

Sample Description: MW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Vinyl chloride		<10	ug/L	S-8240A		02/19/1997	zst		1368	10
Xylenes, Total		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
SURR: 1,2-Dichloroethane-d4		93	% Rec	S-8240A		02/19/1997	zst		1368	76-114
SURR: Toluene-d8		108	% Rec	S-8240A		02/19/1997	zst		1368	88-110
SURR: 4-Bromofluorobenzene		108	% Rec	S-8240A		02/19/1997	zst		1368	86-115

ANALYTICAL RESULTS REPORT

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02/21/1997

EPIC Job Number: 97.00380
Sample Number: 328284

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Project Description:
Job Description: WT-1 ER Pit Area

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		02/19/1997	zst		1368	100
Benzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Bromodichloromethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Bromoform		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Bromomethane		<10	ug/L	S-8240A		02/19/1997	zst		1368	10
2-Butanone (MEK)		<100	ug/L	S-8240A		02/19/1997	zst		1368	100
Carbon disulfide		<100	ug/L	S-8240A		02/19/1997	zst		1368	100
Carbon tetrachloride		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Chlorobenzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Chloroethane		<10	ug/L	S-8240A		02/19/1997	zst		1368	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		02/19/1997	zst		1368	20
Chloroform		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Chloromethane		<10	ug/L	S-8240A		02/19/1997	zst		1368	10
Dibromochloromethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1-Dichloroethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,2-Dichloroethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1-Dichloroethene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,2-Dichloropropane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Ethyl benzene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
2-Hexanone		<50	ug/L	S-8240A		02/19/1997	zst		1368	50
Methylene chloride	B	5.9	ug/L	S-8240A		02/19/1997	zst		1368	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		02/19/1997	zst		1368	50
Styrene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Tetrachloroethene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Toluene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5

Blank contamination.

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02/21/1997

EPIC Job Number: 97.00380
Sample Number: 328284

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Project Description:
Job Description: WT-1 ER Pit Area

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,1,1-Trichloroethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Trichloroethene		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
Vinyl acetate		<50	ug/L	S-8240A		02/19/1997	zst		1368	50
Vinyl chloride		<10	ug/L	S-8240A		02/19/1997	zst		1368	10
Xylenes, Total		<5	ug/L	S-8240A		02/19/1997	zst		1368	5
SURR: 1,2-Dichloroethane-d4		95	% Rec	S-8240A		02/19/1997	zst		1368	76-114
R: Toluene-d8		108	% Rec	S-8240A		02/19/1997	zst		1368	88-110
R: 4-Bromofluorobenzene		105	% Rec	S-8240A		02/19/1997	zst		1368	86-115

QUALITY CONTROL REPORT BLANKS

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02/21/1997

EPIC Job Number: 97.00380

Project Description:
Job Description: WT-1 ER Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
Chloride		<5.0	mg/L	5.0	02/13/1997		746
N-Nitrate		<0.05	mg/L	0.05	02/12/1997	86	148
Sulfate		<5.0	mg/L	5.0	02/13/1997		575
Turbidity		<0.5	NTU	0.5	02/10/1997		244
Arsenic		<0.03	mg/L	0.03	02/11/1997	1977	1505
Arsenic, Dissolved, ICP		<0.03	mg/L	0.03	02/11/1997	1977	1505
Barium		<0.01	mg/L	0.01	02/11/1997	1977	1392
Barium, Dissolved, ICP		<0.01	mg/L	0.01	02/11/1997	226	1392
Cadmium		<0.01	mg/L	0.01	02/11/1997	1977	1567
Cadmium, Dissolved, ICP		<0.01	mg/L	0.01	02/11/1997	226	1567
Chromium		<0.01	mg/L	0.01	02/11/1997	1977	1566
Chromium, Dissolved, ICP		<0.01	mg/L	0.01	02/11/1997	226	1566
Copper		<0.01	mg/L	0.01	02/11/1997	1977	1558
Copper, Dissolved, ICP		<0.01	mg/L	0.01	02/11/1997	226	1558
Iron		<0.01	mg/L	0.01	02/11/1997	1977	1560
Iron, Dissolved, ICP		<0.01	mg/L	0.01	02/11/1997	226	1560
Lead		<0.03	mg/L	0.03	02/11/1997	1977	1575
Lead, Dissolved, ICP		<0.03	mg/L	0.03	02/11/1997	226	1575
Manganese		<0.01	mg/L	0.01	02/11/1997	1977	1541
Manganese, Dissolved, ICP		<0.01	mg/L	0.01	02/11/1997	226	1541
Mercury, CVAA		<0.0002	mg/L	0.0002	02/12/1997		1330
Mercury, Dissolved, CVAA		<0.0002	mg/L	0.0002	02/12/1997		1330
Selenium		<0.04	mg/L	0.04	02/11/1997	1977	1504
Selenium, Dissolved, ICP		<0.04	mg/L	0.04	02/11/1997	226	1504
Silver		<0.01	mg/L	0.01	02/11/1997	1977	1557
Silver, Dissolved, ICP		<0.01	mg/L	0.01	02/11/1997	226	1557
Zinc		<0.03	mg/L	0.03	02/11/1997	1977	1563
Zinc, Dissolved, ICP		<0.03	mg/L	0.03	02/11/1997	226	1563
Total Dissolved Solids		<5.0	mg/L	5	02/11/1997		683

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT BLANKS

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

02/21/1997

EPIC Job Number: 97.00380

Project Description:
Job Description: WT-1 ER Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
VOLATILES-8240 AQ (PRESERVED)							
Acetone		<100	ug/L	100	02/19/1997		1368
Benzene		<5	ug/L	5	02/19/1997		1368
Bromodichloromethane		<5	ug/L	5	02/19/1997		1368
Bromoform		<5	ug/L	5	02/19/1997		1368
Bromomethane		<10	ug/L	10	02/19/1997		1368
2-Butanone (MEK)		<100	ug/L	100	02/19/1997		1368
Carbon disulfide		<100	ug/L	100	02/19/1997		1368
Carbon tetrachloride		<5	ug/L	5	02/19/1997		1368
Chlorobenzene		<5	ug/L	5	02/19/1997		1368
Chloroethane		<10	ug/L	10	02/19/1997		1368
2-Chloroethylvinyl ether		<20	ug/L	20	02/19/1997		1368
Chloroform		<5	ug/L	5	02/19/1997		1368
Chloromethane		<10	ug/L	10	02/19/1997		1368
Dibromochloromethane		<5	ug/L	5	02/19/1997		1368
1,2-Dichlorobenzene		<5	ug/L	5	02/19/1997		1368
1,3-Dichlorobenzene		<5	ug/L	5	02/19/1997		1368
1,4-Dichlorobenzene		<5	ug/L	5	02/19/1997		1368
1,1-Dichloroethane		<5	ug/L	5	02/19/1997		1368
1,2-Dichloroethane		<5	ug/L	5	02/19/1997		1368
1,1-Dichloroethene		<5	ug/L	5	02/19/1997		1368
cis-1,2-Dichloroethene		<5	ug/L	5	02/19/1997		1368
trans-1,2-Dichloroethene		<5	ug/L	5	02/19/1997		1368
1,2-Dichloropropane		<5	ug/L	5	02/19/1997		1368
cis-1,3-Dichloropropene		<5	ug/L	5	02/19/1997		1368
trans-1,3-Dichloropropene		<5	ug/L	5	02/19/1997		1368
Ethyl benzene		<5	ug/L	5	02/19/1997		1368
2-Hexanone		<50	ug/L	50	02/19/1997		1368

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT BLANKS

George Robinson
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02/21/1997

EPIC Job Number: 97.00380

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Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
4-Methyl-2-pentanone (MIBK)		<50	ug/L	50	02/19/1997		1368
Methylene chloride		11	ug/L	5	02/19/1997		1368
Styrene		<5	ug/L	5	02/19/1997		1368
1,1,2,2-Tetrachloroethane		<5	ug/L	5	02/19/1997		1368
Tetrachloroethene		<5	ug/L	5	02/19/1997		1368
Toluene		<5	ug/L	5	02/19/1997		1368
1,1,1-Trichloroethane		<5	ug/L	5	02/19/1997		1368
1,1,2-Trichloroethane		<5	ug/L	5	02/19/1997		1368
Trichloroethene		<5	ug/L	5	02/19/1997		1368
Vinyl acetate		<50	ug/L	50	02/19/1997		1368
Vinyl chloride		<10	ug/L	10	02/19/1997		1368
Xylenes, Total		<5	ug/L	5	02/19/1997		1368

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION STANDARD

George Robinson
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Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
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02/21/1997

EPIC Job Number: 97.00380

Project Description:
Job Description: WT-1 ER Pit Area

Parameter	Flag	CCVS True Concentration	Units	CCVS Concentration Found	CCVS Percent Recovery	Date Analyzed	Run Batch Number
Sulfate		20.0	mg/L	20.2	101.0	02/13/1997	575
Turbidity		180	NTU	176	97.8	02/10/1997	244
Arsenic		1.00	mg/L	1.01	101.0	02/11/1997	1505
Arsenic		1.00	mg/L	1.01	101.0	02/11/1997	1505
Arsenic, Dissolved, ICP		1.00	mg/L	1.01	101.0	02/11/1997	1505
Barium		1.00	mg/L	0.97	97.0	02/11/1997	1392
Barium, Dissolved, ICP		1.00	mg/L	0.97	97.0	02/11/1997	1392
Cadmium		1.00	mg/L	0.99	99.0	02/11/1997	1567
Cadmium, Dissolved, ICP		1.00	mg/L	0.99	99.0	02/11/1997	1567
Chromium		1.00	mg/L	0.99	99.0	02/11/1997	1566
Chromium, Dissolved, ICP		1.00	mg/L	0.99	99.0	02/11/1997	1566
Copper		1.00	mg/L	0.97	97.0	02/11/1997	1558
Copper, Dissolved, ICP		1.00	mg/L	0.97	97.0	02/11/1997	1558
Iron		1.00	mg/L	0.99	99.0	02/11/1997	1560
Iron, Dissolved, ICP		1.00	mg/L	0.99	99.0	02/11/1997	1560
Lead		1.00	mg/L	0.99	99.0	02/11/1997	1575
Lead, Dissolved, ICP		1.00	mg/L	0.99	99.0	02/11/1997	1575
Manganese		1.00	mg/L	0.99	99.0	02/11/1997	1541
Manganese, Dissolved, ICP		1.00	mg/L	0.99	99.0	02/11/1997	1541

QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION STANDARD

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02/21/1997

EPIC Job Number: 97.00380

Project Description:
Job Description: WT-1 ER Pit Area

Parameter	Flag	CCVS		CCVS		Date Analyzed	Run Batch Number
		True Concentration	Units	Concentration Found	Percent Recovery		
Mercury, CVAA		0.50	mg/L	0.55	110.0	02/12/1997	1330
Mercury, Dissolved, CVAA		0.50	mg/L	0.55	110.0	02/12/1997	1330
Selenium		1.00	mg/L	1.01	101.0	02/11/1997	1504
Selenium, Dissolved, ICP		1.00	mg/L	1.01	101.0	02/11/1997	1504
Silver		1.00	mg/L	0.92	92.0	02/11/1997	1557
Silver, Dissolved, ICP		1.00	mg/L	0.92	92.0	02/11/1997	1557
Zinc		1.00	mg/L	1.00	100.0	02/11/1997	1563
Zinc, Dissolved, ICP		1.00	mg/L	1.00	100.0	02/11/1997	1563
VOLATILES-8240 AQ (PRESERVED)							
Chloroform		20	ug/L	20	100.0	02/19/1997	1368
1,1-Dichloroethene		20	ug/L	17	85.0	02/19/1997	1368
1,2-Dichloropropane		20	ug/L	19	95.0	02/19/1997	1368
Ethyl benzene		20	ug/L	18	90.0	02/19/1997	1368
Toluene		20	ug/L	18	90.0	02/19/1997	1368
Vinyl chloride		20	ug/L	17	85.0	02/19/1997	1368

CCVS - Continuing Calibration Verification Standard

QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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02/21/1997

EPIC Job Number: 97.00380

Project Description:
Job Description: WT-1 ER Pit Area

Parameter	Flag	Units	Sample Result	Spike Matrix		MS Percent Recovery	Duplicate Spike		MSD		Date Analyzed	Prep Batch Number	Run Batch Number
				Amount Added	Spike Result		Amount Added	MSD Result	Percent Recovery	MS/MSD RPD			
Chloride		mg/L	880	400	1260	95.0	400	1230	87.5	8.2	02/13/1997		746
Chloride		mg/L	3300	2000	5450	107.5	2000	5400	105.0	2.4	02/13/1997		746
Sulfate		mg/L	<0.05	0.20	0.197	98.5	0.20	0.208	104.0	5.3	02/12/1997	86	148
Sulfate		mg/L	757	1000	1740	98.3	1000	1800	104.3	5.8	02/13/1997		575
Arsenic		mg/L	<0.03	1.00	1.05	105.0	1.00	1.07	107.0	1.9	02/11/1997	1977	1505
Arsenic		mg/L	<0.03	1.00	1.00	100.0	1.00	1.00	100.0	0.0	02/11/1997		1505
Arsenic		mg/L	<0.03	1.00	1.05	105.0	1.00	1.07	107.0	1.9	02/11/1997	1977	1505
Arsenic, Dissolved, ICP		mg/L	<0.03	1.00	1.00	100.0	1.00	1.00	100.0	0.0	02/11/1997		1505
Arsenic, Dissolved, ICP		mg/L	0.04	1.00	1.00	96.0	1.00	1.00	96.0	0.0	02/11/1997		1505
Arsenic, Dissolved, ICP		mg/L	<0.03	1.00	0.98	98.0	1.00	1.01	101.0	2.9	02/11/1997		1505
Barium		mg/L	0.01	1.00	0.94	93.0	1.00	0.94	93.0	0.0	02/11/1997	1977	1392
Barium		mg/L	<0.01	1.00	0.94	94.0	1.00	0.94	94.0	0.0	02/11/1997	1977	1392
Barium, Dissolved, ICP		mg/L	<0.01	1.00	1.00	100.0	1.00	1.00	100.0	0.0	02/11/1997		1392
Barium, Dissolved, ICP		mg/L	0.27	1.00	1.00	73.0	1.00	1.00	73.0	0.0	02/11/1997		1392

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
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QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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02/21/1997

EPIC Job Number: 97.00380

Project Description:
Job Description: WT-1 ER Pit Area

Parameter	Flag	Units	Sample Result	Spike Matrix		MS Percent Recovery	Duplicate Spike		MSD		Date Analyzed	Prep Batch Number	Run Batch Number
				Amount Added	Spike Result		Amount Added	MSD Result	Percent Recovery	MS/MSD RPD			
Barium, Dissolved, ICP		mg/L	0.08	1.00	0.97	89.0	1.00	1.00	92.0	3.3	02/11/1997		1392
Cadmium		mg/L	<0.01	1.00	1.03	103.0	1.00	1.04	104.0	1.0	02/11/1997	1977	1567
Cadmium		mg/L	<0.01	1.00	1.03	103.0	1.00	1.04	104.0	1.0	02/11/1997	1977	1567
Cadmium, Dissolved, ICP		mg/L	<0.01	1.00	1.00	100.0	1.00	1.00	100.0	0.0	02/11/1997		1567
Cadmium, Dissolved, ICP		mg/L	<0.01	1.00	0.84	84.0	1.00	0.88	88.0	4.7	02/11/1997		1567
Cadmium, Dissolved, ICP		mg/L	<0.01	1.00	0.88	88.0	1.00	0.90	90.0	2.2	02/11/1997		1567
Chromium		mg/L	<0.01	1.00	1.01	101.0	1.00	1.01	101.0	0.0	02/11/1997	1977	1566
Chromium		mg/L	<0.01	1.00	1.01	101.0	1.00	1.01	101.0	0.0	02/11/1997	1977	1566
Chromium, Dissolved, ICP		mg/L	0.02	1.00	0.86	84.0	1.00	0.90	88.0	4.7	02/11/1997		1566
Chromium, Dissolved, ICP		mg/L	0.02	1.00	1.00	98.0	1.00	1.00	98.0	0.0	02/11/1997		1566

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QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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02/21/1997

EPIC Job Number: 97.00380

Project Description:
Job Description: WT-1 ER Pit Area

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate		MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch Number	Run Batch Number
							Spike Amount Added	MSD Result					
Chromium, Dissolved, ICP		mg/L	<0.01	1.00	0.89	89.0	1.00	0.91	91.0	2.2	02/11/1997		1566
Copper		mg/L	<0.01	1.00	0.95	95.0	1.00	0.95	95.0	0.0	02/11/1997	1977	1558
Copper		mg/L	<0.01	1.00	0.95	95.0	1.00	0.95	95.0	0.0	02/11/1997	1977	1558
Copper, Dissolved, ICP		mg/L	0.02	1.00	0.83	81.0	1.00	0.87	85.0	4.8	02/11/1997		1558
Copper, Dissolved, ICP		mg/L	0.02	1.00	1.00	98.0	1.00	1.00	98.0	0.0	02/11/1997		1558
Copper, Dissolved, ICP		mg/L	<0.01	1.00	0.88	88.0	1.00	0.89	89.0	1.1	02/11/1997		1558
Iron		mg/L	<0.01	1.00	1.09	109.0	1.00	1.10	110.0	0.9	02/11/1997	1977	1560
Iron		mg/L	<0.01	1.00	1.09	109.0	1.00	1.10	110.0	0.9	02/11/1997	1977	1560
Iron, Dissolved, ICP		mg/L	27	1.00	30	300.0	1.00	30	300.0	0.0	02/11/1997		1560
Iron, Dissolved, ICP		mg/L	0.21	1.00	1.00	79.0	1.00	1.00	79.0	0.0	02/11/1997		1560
Iron, Dissolved, ICP		mg/L	<0.01	1.00	0.88	88.0	1.00	0.91	91.0	3.4	02/11/1997		1560
Lead		mg/L	<0.03	1.00	1.03	103.0	1.00	1.03	103.0	0.0	02/11/1997	1977	1575

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
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QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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02/21/1997

EPIC Job Number: 97.00380

Project Description:
Job Description: WT-1 ER Pit Area

Parameter	Flag	Units	Sample Result	Spike Matrix		MS Percent Recovery	Duplicate		MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch Number	Run Batch Number
				Amount Added	Spike Result		Spike Amount Added	MSD Result					
Lead		mg/L	<0.03	1.00	1.03	103.0	1.00	1.03	103.0	0.0	02/11/1997	1977	1575
Lead, Dissolved, ICP		mg/L	<0.03	1.00	1.00	100.0	1.00	1.00	100.0	0.0	02/11/1997		1575
Lead, Dissolved, ICP		mg/L	0.04	1.00	0.90	86.0	1.00	0.95	91.0	5.6	02/11/1997		1575
Lead, Dissolved, ICP		mg/L	<0.03	1.00	0.90	90.0	1.00	0.92	92.0	2.2	02/11/1997		1575
Manganese		mg/L	<0.01	1.00	0.98	98.0	1.00	0.98	98.0	0.0	02/11/1997	1977	1541
Manganese, Dissolved, ICP		mg/L	0.56	1.00	1.45	89.0	1.00	1.42	86.0	3.4	02/11/1997		1541
Manganese, Dissolved, ICP		mg/L	0.02	1.00	1.00	98.0	1.00	1.00	98.0	0.0	02/11/1997		1541
Manganese, Dissolved, ICP		mg/L	0.44	1.00	1.34	90.0	1.00	1.37	93.0	3.3	02/11/1997		1541
Mercury, CVAA		mg/L	0.0004	0.50	0.51	101.9	0.50	0.51	101.9	0.0	02/12/1997		1330
Mercury, Dissolved, CVAA		mg/L	0.0004	0.50	0.51	101.9	0.50	0.51	101.9	0.0	02/12/1997		1330
Selenium		mg/L	<0.04	1.00	1.06	106.0	1.00	1.06	106.0	0.0	02/11/1997	1977	1504
Selenium		mg/L	<0.04	1.00	1.06	106.0	1.00	1.06	106.0	0.0	02/11/1997	1977	1504

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
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QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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02/21/1997

EPIC Job Number: 97.00380

Project Description:
Job Description: WT-1 ER Pit Area

Parameter	Flag	Units	Sample Result	Spike Matrix MS			Duplicate		MSD		Date Analyzed	Prep Batch Number	Run Batch Number
				Amount Added	Spike Result	Percent Recovery	Amount Added	MSD Result	Percent Recovery	MS/MSD RPD			
Selenium, Dissolved, ICP		mg/L	<0.04	1.00	1.00	100.0	1.00	1.00	100.0	0.0	02/11/1997		1504
Selenium, Dissolved, ICP		mg/L	<0.04	1.00	0.83	83.0	1.00	0.88	88.0	5.8	02/11/1997		1504
Selenium, Dissolved, ICP		mg/L	<0.04	1.00	0.89	89.0	1.00	0.92	92.0	3.3	02/11/1997		1504
Mercury		mg/L	<0.01	1.00	0.83	83.0	1.00	0.84	84.0	1.2	02/11/1997	1977	1557
Silver		mg/L	<0.01	1.00	0.83	83.0	1.00	0.84	84.0	1.2	02/11/1997	1977	1557
Silver, Dissolved, ICP		mg/L	<0.01	1.00	1.00	100.0	1.00	1.00	100.0	0.0	02/11/1997		1557
Silver, Dissolved, ICP		mg/L	<0.01	1.00	0.74	74.0	1.00	0.76	76.0	2.7	02/11/1997		1557
Silver, Dissolved, ICP		mg/L	<0.01	1.00	0.79	79.0	1.00	0.81	81.0	2.5	02/11/1997		1557
Zinc		mg/L	<0.03	1.00	1.00	100.0	1.00	1.00	100.0	0.0	02/11/1997		1563

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
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QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

02/21/1997

EPIC Job Number: 97.00380

Project Description:
Job Description: WT-1 ER Pit Area

Parameter	Flag	Units	Sample Result	Spike Matrix MS			Duplicate Spike		MSD		Date Analyzed	Prep Batch Number	Run Batch Number
				Amount Added	Spike Result	Percent Recovery	Amount Added	MSD Result	Percent Recovery	MS/MSD RPD			
Zinc, Dissolved, ICP		mg/L	0.09	1.00	0.98	89.0	1.00	1.03	94.0	5.5	02/11/1997		1563
Zinc, Dissolved, ICP		mg/L	0.05	1.00	1.00	95.0	1.00	1.00	95.0	0.0	02/11/1997		1563
Cu, Dissolved, ICP		mg/L	0.04	1.00	1.00	96.0	1.00	1.00	96.0	0.0	02/11/1997		1563
Cd, Dissolved, ICP		mg/L	<0.03	1.00	0.94	94.0	1.00	0.95	95.0	1.1	02/11/1997		1563
VOLATILES-8240 AQ (PRESERVED)													
Benzene		ug/L	57	20	80	115.0	20	81	120.0	4.3	02/19/1997		1368
Chlorobenzene		ug/L	<5	20	21	105.0	20	22	110.0	4.7	02/19/1997		1368
1,1-Dichloroethene	SSR	ug/L	1430	20	4878	17240	20	1479	245.0	194.3	02/19/1997		1368
Toluene		ug/L	34	20	67	165.0	20	55	105.0	44.4	02/19/1997		1368
Trichloroethene		ug/L	24	20	48	120.0	20	44	100.0	18.2	02/19/1997		1368

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
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SSR - Sample concentration greater than 4X spike amount, skewed recoveries exist.

QUALITY CONTROL REPORT DUPLICATES

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02/21/1997

EPIC Job Number: 97.00380

Project Description:
Job Description: WT-1 ER Pit Area

Parameter	Flag	Units	Sample Result	Duplicate Sample Result	RPD	Date Analyzed	Prep Batch Number	Run Batch Number
Turbidity		NTU	2040	2140	4.8	02/10/1997		244
Total Dissolved Solids		mg/L	1150	1150	0.0	02/11/1997		683
Total Dissolved Solids		mg/L	1150	1180	2.6	02/11/1997		683

QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

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02/21/1997

EPIC Job Number: 97.00380

Project Description:
Job Description: WT-1 ER Pit Area

Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	Units	LCS Conc Found	LCS % Rec.	LCS Dup Conc. Found	LCS Dup % Rec	LCS % RPD	Flag	Date Analyzed
Chloride		746	1000	mg/L	1020	102.0					02/13/1997
Sulfate		575	20.0	mg/L	19.4	97.0					02/13/1997
Turbidity		244	5.0	NTU	5.3	106.0					02/10/1997
Arsenic	1977	1505	1.00	mg/L	1.06	106.0					02/11/1997
Barium	1977	1392	1.00	mg/L	0.94	94.0					02/11/1997
Cadmium	1977	1567	1.00	mg/L	1.03	103.0					02/11/1997
Chromium	1977	1566	1.00	mg/L	1.01	101.0					02/11/1997
Copper	1977	1558	1.00	mg/L	0.94	94.0					02/11/1997
Iron	1977	1560	1.00	mg/L	1.00	100.0					02/11/1997
Lead	1977	1575	1.00	mg/L	1.03	103.0					02/11/1997
Manganese	1977	1541	1.00	mg/L	0.99	99.0					02/11/1997
Mercury, CVAA		1330	0.50	mg/L	0.49	98.0					02/12/1997
Selenium	1977	1504	1.00	mg/L	1.06	106.0					02/11/1997
Silver	1977	1557	1.00	mg/L	0.83	83.0					02/11/1997
Zinc	1977	1563	1.00	mg/L	1.04	104.0					02/11/1997
Total Dissolved Solids		683	2000	mg/L	2010	100.5					02/11/1997
VOLATILES-8240 AQ(PRESERVED)											
Benzene		1368	20	ug/L	21	105.0					02/19/1997
Chlorobenzene		1368	20	ug/L	23	115.0					02/19/1997
1,1-Dichloroethene		1368	20	ug/L	20	100.0					02/19/1997

LCS - Laboratory Control Standard

For samples with insufficient sample volume, an LCS/LCS duplicate is reported instead of an MS/MSD.

QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
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02/21/1997

EPIC Job Number: 97.00380

Project Description:
Job Description: WT-1 ER Pit Area

Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	Units	LCS Conc Found	LCS % Rec.	LCS Dup Conc. Found	LCS Dup % Rec	LCS RPD	Flag	Date Analyzed
Toluene		1368	20	ug/L	22	110.0					02/19/1997
Trichloroethene		1368	20	ug/L	21	105.0					02/19/1997

LCS - Laboratory Control Standard

For samples with insufficient sample volume, an LCS/LCS duplicate is reported instead of an MS/MSD.



LABORATORIES, INC.



ANALYTICAL AND QUALITY CONTROL REPORT

George Robinson
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03/18/1997

EPIC Job Number: 97.00344

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to EPIC Laboratories, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
328192	MW-1	02/04/1997	15:00	02/06/1997
328193	MW-4	02/04/1997	13:05	02/06/1997
328194	MW-6	02/04/1997	15:40	02/06/1997
328195	MW-7	02/04/1997	16:15	02/06/1997
328196	MW-14	02/04/1997	17:00	02/06/1997
328197	MW-15	02/04/1997	14:20	02/06/1997
328198	MW-16	02/04/1997	13:45	02/06/1997

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Debby Skogen

Debby Skogen
Project Coordinator

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

ANALYTICAL RESULTS REPORT

George Robinson
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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328192

Page 2

Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		172	mg/L	S-9252		02/13/1997	cgl		746	5.0
N-Nitrate		<0.05	mg/L	E-353.3	02/07/1997	02/12/1997	kwo	85	148	0.05
Sulfate		<5.0	mg/L	S-9038		02/13/1997	kwo		575	5.0
Turbidity		127	NTU	E-180.1		02/07/1997	kwo		243	0.5
Arsenic		0.13	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1503	0.03
Arsenic, Dissolved, ICP		0.12	mg/L	S-6010A	02/10/1997		jmc		1506	0.03
Barium		22	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1390	0.01
Barium, Dissolved, ICP		20	mg/L	S-6010A	02/10/1997		jmc		1393	0.01
Barium		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1565	0.01
Barium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1568	0.01
Chromium		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1564	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1567	0.01
Copper		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1556	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1559	0.01
Iron		10	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1558	0.01
Iron, Dissolved, ICP		0.25	mg/L	S-6010A	02/10/1997		jmc		1561	0.01
Lead		<0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1573	0.03
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1576	0.03
Manganese		0.05	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1539	0.01
Manganese, Dissolved, ICP		0.03	mg/L	S-6010A	02/10/1997		jmc		1542	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		02/12/1997	bwb		1329	0.0002
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		02/12/1997	bwb		1329	0.0002
Selenium		<0.04	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1502	0.04
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	02/10/1997		jmc		1505	0.04
Silver		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1555	0.01
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1558	0.01
Zinc		<0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1561	0.03
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1564	0.03
Total Dissolved Solids		2460	mg/L	E-160.1		02/07/1997	kwo		682	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		790	ug/L	S-8240A		02/13/1997	acg		1381	200
Benzene		13	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromodichloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5

ANALYTICAL RESULTS REPORT

George Robinson
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Env. Affairs, Rm 3 AC 3142
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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328192

Page 3

Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Bromoform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Butanone (MEK)		300	ug/L	S-8240A		02/13/1997	acg		1381	200
Carbon disulfide		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Carbon tetrachloride		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chloroethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		02/12/1997	acg		1367	20
Bromoform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
Dibromochloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethane		480	ug/L	S-8240A		02/13/1997	acg		1367	10
1,2-Dichloroethane		10	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1381	5
1,2-Dichloropropane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Ethyl benzene		8	ug/L	S-8240A		02/12/1997	acg		1367	5
2-Hexanone		<50	ug/L	S-8240A		02/12/1997	acg		1367	50
Methylene chloride		89	ug/L	S-8240A		02/12/1997	acg		1367	5
4-Methyl-2-pentanone (MIBK)		1700	ug/L	S-8240A		02/12/1997	acg		1381	100
Styrene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Tetrachloroethene		9	ug/L	S-8240A		02/12/1997	acg		1367	5
Toluene		94	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Trichloroethene		29	ug/L	S-8240A		02/12/1997	acg		1367	5
Vinyl acetate		<50	ug/L	S-8240A		02/12/1997	acg		1367	50

ANALYTICAL RESULTS REPORT

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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328192

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Vinyl chloride		11	ug/L	S-8240A		02/12/1997	acg		1367	10
Xylenes, Total		80	ug/L	S-8240A		02/12/1997	acg		1367	5
SURR: 1,2-Dichloroethane-d4		89	%	S-8240A		02/12/1997	acg		1367	76-114
SURR: Toluene-d8		108	%	S-8240A		02/12/1997	acg		1367	88-110
SURR: 4-Bromofluorobenzene		108	%	S-8240A		02/12/1997	acg		1367	86-115

ANALYTICAL RESULTS REPORT

George Robinson
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Env. Affairs, Rm 3 AC 3142
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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328193

Page 5

Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		416	mg/L	S-9252		02/13/1997	cgl		746	5.0
N-Nitrate		13.4	mg/L	E-353.3	02/07/1997	02/12/1997	kwo	85	148	0.05
Sulfate		416	mg/L	S-9038		02/13/1997	kwo		575	5.0
Turbidity		32	NTU	E-180.1		02/07/1997	kwo		243	0.5
Arsenic		<0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1503	0.03
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1506	0.03
Barium		0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1390	0.01
Barium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1393	0.01
Cadmium		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1565	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1568	0.01
Chromium		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1564	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1567	0.01
Copper		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1556	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1559	0.01
Iron		0.57	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1558	0.01
Iron, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1561	0.01
Lead		<0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1573	0.03
Lead, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1576	0.03
Manganese		0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1539	0.01
Manganese, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1542	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		02/12/1997	bwb		1329	0.0002
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		02/12/1997	bwb		1329	0.0002
Selenium		<0.04	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1502	0.04
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	02/10/1997		jmc		1505	0.04
Silver		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1555	0.01
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1558	0.01
Zinc		<0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1561	0.03
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1564	0.03
Total Dissolved Solids		2370	mg/L	E-160.1		02/07/1997	kwo		682	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Benzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromodichloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5

ANALYTICAL RESULTS REPORT

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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328193

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Bromoform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Butanone (MEK)		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Carbon disulfide		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Carbon tetrachloride		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chloroethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		02/12/1997	acg		1367	20
Bromoform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
Dibromochloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichloropropane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Ethyl benzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
2-Hexanone		<50	ug/L	S-8240A		02/12/1997	acg		1367	50
Methylene chloride		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
4-Methyl-2-pentanone (MIBK)		100	ug/L	S-8240A		02/12/1997	acg		1367	50
Styrene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Tetrachloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Toluene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Trichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Vinyl acetate		<50	ug/L	S-8240A		02/12/1997	acg		1367	50

ANALYTICAL RESULTS REPORT

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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328193

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Vinyl chloride		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
Xylenes, Total		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
SURR: 1,2-Dichloroethane-d4		92	%	S-8240A		02/12/1997	acg		1367	76-114
SURR: Toluene-d8		101	%	S-8240A		02/12/1997	acg		1367	88-110
SURR: 4-Bromofluorobenzene		106	%	S-8240A		02/12/1997	acg		1367	86-115

ANALYTICAL RESULTS REPORT

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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328194

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		700	mg/L	S-9252		02/13/1997	cgl		746	5.0
N-Nitrate		<0.05	mg/L	E-353.3	02/07/1997	02/12/1997	kwo	85	148	0.05
Sulfate		467	mg/L	S-9038		02/13/1997	kwo		575	5.0
Turbidity		600	NTU	E-180.1		02/07/1997	kwo		243	0.5
Arsenic		<0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1503	0.03
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1506	0.03
Barium		0.55	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1390	0.01
Barium, Dissolved, ICP		0.12	mg/L	S-6010A	02/10/1997		jmc		1393	0.01
Cadmium		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1565	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1568	0.01
Chromium		0.02	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1564	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1567	0.01
Copper		0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1556	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1559	0.01
Iron		14	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1558	0.01
Iron, Dissolved, ICP		0.01	mg/L	S-6010A	02/10/1997		jmc		1561	0.01
Lead		<0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1573	0.03
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1576	0.03
Manganese		1.1	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1539	0.01
Manganese, Dissolved, ICP		0.79	mg/L	S-6010A	02/10/1997		jmc		1542	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		02/12/1997	bwb		1329	0.0002
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		02/12/1997	bwb		1329	0.0002
Selenium		<0.04	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1502	0.04
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	02/10/1997		jmc		1505	0.04
Silver		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1555	0.01
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1558	0.01
Zinc		0.05	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1561	0.03
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1564	0.03
Total Dissolved Solids		2390	mg/L	E-160.1		02/07/1997	kwo		682	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Benzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromodichloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5

ANALYTICAL RESULTS REPORT

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03/18/1997

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Bromoform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Butanone (MEK)		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Carbon disulfide		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Carbon tetrachloride		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chloroethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		02/12/1997	acg		1367	20
Bromoform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
Dibromochloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethane		11	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,2-Dichloroethene		6	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichloropropane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Ethyl benzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
2-Hexanone		<50	ug/L	S-8240A		02/12/1997	acg		1367	50
Methylene chloride		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		02/12/1997	acg		1367	50
Styrene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Tetrachloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Toluene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Trichloroethene		18	ug/L	S-8240A		02/12/1997	acg		1367	5
Vinyl acetate		<50	ug/L	S-8240A		02/12/1997	acg		1367	50

ANALYTICAL RESULTS REPORT

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Vinyl chloride		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
Xylenes, Total		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
SURR: 1,2-Dichloroethane-d4		97	%	S-8240A		02/12/1997	acg		1367	76-114
SURR: Toluene-d8		104	%	S-8240A		02/12/1997	acg		1367	88-110
SURR: 4-Bromofluorobenzene		106	%	S-8240A		02/12/1997	acg		1367	86-115

ANALYTICAL RESULTS REPORT

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03/18/1997

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		380	mg/L	S-9252		02/13/1997	cgl		746	5.0
N-Nitrate		7.1	mg/L	E-353.3	02/07/1997	02/12/1997	kwo	85	148	0.05
Sulfate		779	mg/L	S-9038		02/13/1997	kwo		575	5.0
Turbidity		2080	NTU	E-180.1		02/07/1997	kwo		243	0.5
Arsenic		0.12	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1503	0.03
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1506	0.03
Barium		3.2	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1390	0.01
Barium, Dissolved, ICP		0.04	mg/L	S-6010A	02/10/1997		jmc		1394	0.01
Cadmium		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1565	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmr		1569	0.01
Chromium		0.04	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1564	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmr		1568	0.01
Copper		0.06	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1556	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1562	0.01
Iron		41	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1558	0.01
Iron, Dissolved, ICP		0.01	mg/L	S-6010A	02/10/1997		jmc		1564	0.01
Lead		0.04	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1573	0.03
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1579	0.03
Manganese		1.2	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1539	0.01
Manganese, Dissolved, ICP		0.04	mg/L	S-6010A	02/10/1997		jmc		1545	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		02/12/1997	bwb		1329	0.0002
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		02/13/1997	bwb		1331	0.0002
Selenium		<0.04	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1502	0.04
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	02/10/1997		jmc		1508	0.04
Silver		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1555	0.01
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1561	0.01
Zinc		0.14	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1561	0.03
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1567	0.03
Total Dissolved Solids		2100	mg/L	E-160.1		02/07/1997	kwo		682	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Benzene		8	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromodichloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5

ANALYTICAL RESULTS REPORT

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Bromoform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Butanone (MEK)		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Carbon disulfide		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Carbon tetrachloride		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chloroethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		02/12/1997	acg		1367	20
Bromoform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
Dibromochloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethane		18	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,2-Dichloroethene		7	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichloropropane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Ethyl benzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
2-Hexanone		<50	ug/L	S-8240A		02/12/1997	acg		1367	50
Methylene chloride		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		02/12/1997	acg		1367	50
Styrene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Tetrachloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Toluene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Trichloroethene		15	ug/L	S-8240A		02/12/1997	acg		1367	5
Vinyl acetate		<50	ug/L	S-8240A		02/12/1997	acg		1367	50

ANALYTICAL RESULTS REPORT

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Vinyl chloride		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
Xylenes, Total		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
SURR: 1,2-Dichloroethane-d4		95	%	S-8240A		02/12/1997	acg		1367	76-114
SURR: Toluene-d8		103	%	S-8240A		02/12/1997	acg		1367	88-110
SURR: 4-Bromofluorobenzene		108	%	S-8240A		02/12/1997	acg		1367	86-115

ANALYTICAL RESULTS REPORT

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03/18/1997

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-14

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		575	mg/L	S-9252		02/13/1997	cgl		746	5.0
N-Nitrate		3.0	mg/L	E-353.3	02/07/1997	02/12/1997	kwo	85	148	0.05
Sulfate		757	mg/L	S-9038		02/13/1997	kwo		575	5.0
Turbidity		92	NTU	E-180.1		02/07/1997	kwo		243	0.5
Arsenic		<0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1503	0.03
Arsenic, Dissolved, ICP (Filtered)		<0.03	mg/L	S-6010A	02/10/1997		jmc		1506	0.03
Barium		0.13	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1390	0.01
Barium, Dissolved, ICP		0.07	mg/L	S-6010A	02/10/1997		jmc		1393	0.01
Cadmium		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1565	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1568	0.01
Chromium		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1564	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1567	0.01
Copper		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1556	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1559	0.01
Iron		1.9	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1558	0.01
Iron, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1561	0.01
Lead		<0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1573	0.03
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1576	0.03
Manganese		0.10	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1539	0.01
Manganese, Dissolved, ICP		0.06	mg/L	S-6010A	02/10/1997		jmc		1542	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		02/13/1997	bwb		1331	0.0002
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		02/13/1997	bwb		1331	0.0002
Selenium		<0.04	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1502	0.04
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	02/10/1997		jmc		1505	0.04
Silver		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1555	0.01
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1558	0.01
Zinc		<0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1561	0.03
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1564	0.03
Total Dissolved Solids		2510	mg/L	E-160.1		02/07/1997	kwo		682	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Benzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromodichloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5

ANALYTICAL RESULTS REPORT

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03/18/1997

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Sample Number: 328196

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-14

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Bromoform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Butanone (MEK)		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Carbon disulfide		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Carbon tetrachloride		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chloroethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		02/12/1997	acg		1367	20
Bromoform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
Dibromochloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethane		21	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichloropropane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Ethyl benzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
2-Hexanone		<50	ug/L	S-8240A		02/12/1997	acg		1367	50
Methylene chloride		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		02/12/1997	acg		1367	50
Styrene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Tetrachloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Toluene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Trichloroethene		13	ug/L	S-8240A		02/12/1997	acg		1367	5
Vinyl acetate		<50	ug/L	S-8240A		02/12/1997	acg		1367	50

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328196

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-14

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Vinyl chloride		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
Xylenes, Total		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
SURR: 1,2-Dichloroethane-d4		98	%	S-8240A		02/12/1997	acg		1367	76-114
SURR: Toluene-d8		104	%	S-8240A		02/12/1997	acg		1367	88-110
SURR: 4-Bromofluorobenzene		107	%	S-8240A		02/12/1997	acg		1367	86-115

ANALYTICAL RESULTS REPORT

George Robinson
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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328197

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-15

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		420	mg/L	S-9252		02/13/1997	cgl		746	5.0
N-Nitrate		11.6	mg/L	E-353.3	02/07/1997	02/12/1997	kwo	85	148	0.05
Sulfate		924	mg/L	S-9038		02/13/1997	kwo		575	5.0
Turbidity		133	NTU	E-180.1		02/07/1997	kwo		243	0.5
Arsenic		<0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1503	0.03
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1506	0.03
Barium		0.17	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1390	0.01
Barium, Dissolved, ICP		0.03	mg/L	S-6010A	02/10/1997		jmc		1393	0.01
Cadmium		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1565	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1568	0.01
Chromium		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1564	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1567	0.01
Copper		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1556	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1559	0.01
Iron		2.3	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1558	0.01
Iron, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1561	0.01
Lead		<0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1573	0.03
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1576	0.03
Manganese		0.06	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1539	0.01
Manganese, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1542	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		02/13/1997	bwb		1331	0.0002
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		02/12/1997	bwb		1330	0.0002
Selenium		<0.04	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1502	0.04
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	02/10/1997		jmc		1505	0.04
Silver		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1555	0.01
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1558	0.01
Zinc		<0.03	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1561	0.03
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1564	0.03
Total Dissolved Solids		2360	mg/L	E-160.1		02/07/1997	kwo		682	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Benzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromodichloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5

ANALYTICAL RESULTS REPORT

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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328197

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-15

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Bromoform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Butanone (MEK)		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Carbon disulfide		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Carbon tetrachloride		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chloroethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		02/12/1997	acg		1367	20
Bromoform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
Dibromochloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichloropropane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Ethyl benzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
2-Hexanone		<50	ug/L	S-8240A		02/12/1997	acg		1367	50
Methylene chloride		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		02/12/1997	acg		1367	50
Styrene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Tetrachloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Toluene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Trichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Vinyl acetate		<50	ug/L	S-8240A		02/12/1997	acg		1367	50

ANALYTICAL RESULTS REPORT

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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328197

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-15

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Vinyl chloride		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
Xylenes, Total		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
SURR: 1,2-Dichloroethane-d4		98	%	S-8240A		02/12/1997	acg		1367	76-114
SURR: Toluene-d8		101	%	S-8240A		02/12/1997	acg		1367	88-110
SURR: 4-Bromofluorobenzene		105	%	S-8240A		02/12/1997	acg		1367	86-115

ANALYTICAL RESULTS REPORT

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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328198

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-16

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		950	mg/L	S-9252		02/13/1997	cgl		746	5.0
N-Nitrate		1.4	mg/L	E-353.3	02/07/1997	02/12/1997	kwo	85	148	0.05
Sulfate		1020	mg/L	S-9038		02/13/1997	kwo		575	5.0
Turbidity		830	NTU	E-180.1		02/07/1997	kwo		243	0.5
Arsenic		0.07	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1503	0.03
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1506	0.03
Barium		0.37	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1390	0.01
Barium, Dissolved, ICP		0.05	mg/L	S-6010A	02/10/1997		jmc		1393	0.01
Cadmium		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1565	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1568	0.01
Chromium		0.02	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1564	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1567	0.01
Copper		0.04	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1556	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1559	0.01
Iron		27	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1558	0.01
Iron, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1561	0.01
Lead		0.04	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1573	0.03
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1576	0.03
Manganese		1.8	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1539	0.01
Manganese, Dissolved, ICP		1.1	mg/L	S-6010A	02/10/1997		jmc		1542	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		02/13/1997	bwb		1331	0.0002
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		02/13/1997	bwb		1331	0.0002
Selenium		<0.04	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1502	0.04
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	02/10/1997		jmc		1505	0.04
Silver		<0.01	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1555	0.01
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	02/10/1997		jmc		1558	0.01
Zinc		0.10	mg/L	S-6010A	02/10/1997	02/10/1997	jmc	1975	1561	0.03
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	02/10/1997		jmc		1564	0.03
Total Dissolved Solids		3470	mg/L	E-160.1		02/07/1997	kwo		682	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Benzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromodichloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5

ANALYTICAL RESULTS REPORT

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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328198

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-16

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Bromoform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Butanone (MEK)		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Carbon disulfide		<100	ug/L	S-8240A		02/12/1997	acg		1367	100
Carbon tetrachloride		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Chloroethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		02/12/1997	acg		1367	20
Chloroform		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Bromomethane		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
Dibromochloromethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,2-Dichloropropane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Ethyl benzene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
2-Hexanone		<50	ug/L	S-8240A		02/12/1997	acg		1367	50
Methylene chloride		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		02/12/1997	acg		1367	50
Styrene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Tetrachloroethene		17	ug/L	S-8240A		02/12/1997	acg		1367	5
Toluene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Trichloroethene		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
Vinyl acetate		<50	ug/L	S-8240A		02/12/1997	acg		1367	50

ANALYTICAL RESULTS REPORT

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03/18/1997

EPIC Job Number: 97.00344
Sample Number: 328198

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Project Description:
Job Description: TWP WT-1 ER Pit Area

Sample Description: MW-16

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Vinyl chloride		<10	ug/L	S-8240A		02/12/1997	acg		1367	10
Xylenes, Total		<5	ug/L	S-8240A		02/12/1997	acg		1367	5
SURR: 1,2-Dichloroethane-d4		92	%	S-8240A		02/12/1997	acg		1367	76-114
SURR: Toluene-d8		104	%	S-8240A		02/12/1997	acg		1367	88-110
SURR: 4-Bromofluorobenzene		108	%	S-8240A		02/12/1997	acg		1367	86-115

QUALITY CONTROL REPORT BLANKS

George Robinson
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03/18/1997

EPIC Job Number: 97.00344

Project Description:
Job Description: TWP WT-1 ER Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
Chloride		<5.0	mg/L	5.0	02/13/1997		746
N-Nitrate		<0.05	mg/L	0.05	02/12/1997	85	148
Sulfate		<5.0	mg/L	5.0	02/13/1997		575
Turbidity		<0.5	NTU	0.5	02/07/1997		243
Arsenic		<0.03	mg/L	0.03	02/10/1997	1975	1503
Arsenic, Dissolved, ICP		<0.03	mg/L	0.03	02/10/1997		1506
Barium		<0.01	mg/L	0.01	02/10/1997	1975	1390
Barium, Dissolved ICP		<0.01	mg/L	0.01	02/10/1997		1393
Cadmium		<0.01	mg/L	0.01	02/10/1997	1975	1565
Cadmium, Dissolved ICP		<0.01	mg/L	0.01	02/10/1997		1568
Chromium		<0.01	mg/L	0.01	02/10/1997	1975	1564
Chromium, Dissolved ICP		<0.01	mg/L	0.01	02/10/1997		1567
Copper		<0.01	mg/L	0.01	02/10/1997	1975	1556
Copper, Dissolved ICP		<0.01	mg/L	0.01	02/10/1997		1559
Iron		<0.01	mg/L	0.01	02/10/1997	1975	1558
Iron, Dissolved ICP		<0.01	mg/L	0.01	02/10/1997		1561
Lead		<0.03	mg/L	0.03	02/10/1997	1975	1573
Lead, Dissolved ICP		<0.03	mg/L	0.03	02/10/1997		1576
Manganese		<0.01	mg/L	0.01	02/10/1997	1975	1539
Manganese, Dissolved ICP		<0.01	mg/L	0.01	02/10/1997		1542
Mercury, CVAA		<0.0002	mg/L	0.0002	02/12/1997		1329
Mercury, CVAA		<0.0002	mg/L	0.0002	02/13/1997		1331
Mercury, Dissolved, CVAA		<0.0002	mg/L	0.0002	02/12/1997		1329
Mercury, Dissolved, CVAA		<0.0002	mg/L	0.0002	02/12/1997		1330
Mercury, Dissolved, CVAA		<0.0002	mg/L	0.0002	02/13/1997		1331

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT BLANKS

George Robinson
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Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

03/18/1997

EPIC Job Number: 97.00344

Project Description:
Job Description: TWP WT-1 ER Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
Selenium		<0.04	mg/L	0.04	02/10/1997	1975	1502
Selenium, Dissolved ICP		<0.04	mg/L	0.04	02/10/1997		1505
Silver		<0.01	mg/L	0.01	02/10/1997	1975	1555
Silver, Dissolved ICP		<0.01	mg/L	0.01	02/10/1997		1558
Zinc		<0.03	mg/L	0.03	02/10/1997	1975	1561
Zinc, Dissolved ICP		<0.03	mg/L	0.03	02/10/1997		1564
Total Dissolved Solids		<5.0	mg/L	5	02/07/1997		682

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT BLANKS

George Robinson
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03/18/1997

EPIC Job Number: 97.00344

Project Description:
Job Description: TWP WT-1 ER Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
VOLATILES-8240 AQ (PRESERVED)							
Acetone		<100	ug/L	100	02/12/1997		1367
Benzene		<5	ug/L	5	02/12/1997		1367
Bromodichloromethane		<5	ug/L	5	02/12/1997		1367
Brom. Form		<5	ug/L	5	02/12/1997		1367
Bromomethane		<10	ug/L	10	02/12/1997		1367
2-Butanone (MEK)		<100	ug/L	100	02/12/1997		1367
Carbon disulfide		<100	ug/L	100	02/12/1997		1367
Carbon tetrachloride		<5	ug/L	5	02/12/1997		1367
Chlorobenzene		<5	ug/L	5	02/12/1997		1367
Chloroethane		<10	ug/L	10	02/12/1997		1367
2-Chloroethylvinyl ether		<20	ug/L	20	02/12/1997		1367
Chloroform		<5	ug/L	5	02/12/1997		1367
Chloromethane		<10	ug/L	10	02/12/1997		1367
Dibromochloromethane		<5	ug/L	5	02/12/1997		1367
1,2-Dichlorobenzene		<5	ug/L	5	02/12/1997		1367
1,3-Dichlorobenzene		<5	ug/L	5	02/12/1997		1367
1,4-Dichlorobenzene		<5	ug/L	5	02/12/1997		1367
1,1-Dichloroethane		<5	ug/L	5	02/12/1997		1367
1,2-Dichloroethane		<5	ug/L	5	02/12/1997		1367
1,1-Dichloroethene		<5	ug/L	5	02/12/1997		1367
cis-1,2-Dichloroethene		<5	ug/L	5	02/12/1997		1367
trans-1,2-Dichloroethene		<5	ug/L	5	02/12/1997		1367
1,2-Dichloropropane		<5	ug/L	5	02/12/1997		1367
cis-1,3-Dichloropropene		<5	ug/L	5	02/12/1997		1367
trans-1,3-Dichloropropene		<5	ug/L	5	02/12/1997		1367
Ethyl benzene		<5	ug/L	5	02/12/1997		1367
2-Hexanone		<50	ug/L	50	02/12/1997		1367

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT BLANKS

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03/18/1997

EPIC Job Number: 97.00344

Project Description:
Job Description: TWP WT-1 ER Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
4-Methyl-2-pentanone (MIBK)		<50	ug/L	50	02/12/1997		1367
Methylene chloride		<5	ug/L	5	02/12/1997		1367
Styrene		<5	ug/L	5	02/12/1997		1367
1,1,2,2-Tetrachloroethane		<5	ug/L	5	02/12/1997		1367
Tetrachloroethene		<5	ug/L	5	02/12/1997		1367
Toluene		<5	ug/L	5	02/12/1997		1367
1,1,1-Trichloroethane		<5	ug/L	5	02/12/1997		1367
1,1,2-Trichloroethane		<5	ug/L	5	02/12/1997		1367
Trichloroethene		<5	ug/L	5	02/12/1997		1367
Vinyl acetate		<50	ug/L	50	02/12/1997		1367
Vinyl chloride		<10	ug/L	10	02/12/1997		1367
Xylenes, Total		<5	ug/L	5	02/12/1997		1367

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION STANDARD

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03/18/1997

EPIC Job Number: 97.00344

Project Description:
Job Description: TWP WT-1 ER Pit Area

Parameter	Flag	CCVS True Concentration	Units	CCVS Concentration Found	CCVS Percent Recovery	Date Analyzed	Run Batch Number
N-Nitrate		0.50	mg/L	0.495	99.0	02/12/1997	148
Sulfate		20.0	mg/L	20.2	101.0	02/13/1997	575
Turbidity		180	NTU	180	100.0	02/07/1997	243
Arsenic		1.00	mg/L	0.98	98.0	02/10/1997	1503
Arsenic, Dissolved, ICP		1.00	mg/L	1.07	107.0	02/10/1997	1506
Barium		1.00	mg/L	1.01	101.0	02/10/1997	1390
Barium, Dissolved, ICP		1.00	mg/L	0.97	97.0	02/10/1997	1393
Cadmium		1.00	mg/L	1.08	108.0	02/10/1997	1565
Cadmium, Dissolved, ICP		1.00	mg/L	1.01	101.0	02/10/1997	1568
Chromium		1.00	mg/L	1.05	105.0	02/10/1997	1564
Chromium, Dissolved, ICP		1.00	mg/L	1.00	100.0	02/10/1997	1567
Copper		1.00	mg/L	0.97	97.0	02/10/1997	1556
Copper, Dissolved, ICP		1.00	mg/L	0.95	95.0	02/10/1997	1559
Iron		1.00	mg/L	1.04	104.0	02/10/1997	1558
Iron, Dissolved, ICP		1.00	mg/L	1.00	100.0	02/10/1997	1561
Lead		1.00	mg/L	1.05	105.0	02/10/1997	1573
Lead, Dissolved, ICP		1.00	mg/L	1.00	100.0	02/10/1997	1576
Manganese		1.00	mg/L	0.99	99.0	02/10/1997	1539
Manganese, Dissolved, ICP		1.00	mg/L	1.00	100.0	02/10/1997	1542
Mercury, CVAA		0.50	mg/L	0.48	96.0	02/12/1997	1329
Mercury, CVAA		0.50	mg/L	0.49	98.0	02/13/1997	1331

CCVS - Continuing Calibration Verification Standard

QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION STANDARD

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Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
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03/18/1997

EPIC Job Number: 97.00344

Project Description:
Job Description: TWP WT-1 ER Pit Area

Parameter	Flag	CCVS True Concentration	Units	CCVS Concentration Found	CCVS Percent Recovery	Date Analyzed	Run Batch Number
Mercury, Dissolved, CVAA		0.50	mg/L	0.48	96.0	02/12/1997	1329
Mercury, Dissolved, CVAA		0.50	mg/L	0.55	110.0	02/12/1997	1330
Mercury, Dissolved, CVAA		0.50	mg/L	0.49	98.0	02/13/1997	1331
Selenium		1.00	mg/L	1.10	110.0	02/10/1997	1502
Selenium, Dissolved, ICP		1.00	mg/L	1.03	103.0	02/10/1997	1505
Silver		1.00	mg/L	0.95	95.0	02/10/1997	1555
Silver, Dissolved, ICP		1.00	mg/L	0.93	93.0	02/10/1997	1558
Zinc		1.00	mg/L	1.06	106.0	02/10/1997	1561
Zinc, Dissolved, ICP		1.00	mg/L	1.03	103.0	02/10/1997	1564

CCVS - Continuing Calibration Verification Standard

QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION STANDARD

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P.O. Box 1188
Houston, TX 77251

03/18/1997

EPIC Job Number: 97.00344

Project Description:
Job Description: TWP WT-1 ER Pit Area

Parameter	Flag	CCVS True Concentration	Units	CCVS Concentration Found	CCVS Percent Recovery	Date Analyzed	Run Batch Number
VOLATILES-8240 AQ (PRESERVED)							
Chloroform		20	ug/L	16	80.0	02/12/1997	1367
1,1-Dichloroethene		20	ug/L	18	90.0	02/12/1997	1367
1,2-Dichloropropane		20	ug/L	21	105.0	02/12/1997	1367
Ethyl benzene		20	ug/L	21	105.0	02/12/1997	1367
Toluene		20	ug/L	21	105.0	02/12/1997	1367
Vinyl chloride		50	ug/L	34	68.0	02/12/1997	1367

CCVS - Continuing Calibration Verification Standard

QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

George Robinson
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03/18/1997

EPIC Job Number: 97.00344

Project Description:
Job Description: TWP WT-1 ER Pit Area

Parameter	Flag	Units	Sample Result	Spike Matrix MS			Duplicate Spike		MSD		Date Analyzed	Prep Batch Number	Run Batch Number
				Amount Added	Spike Result	Percent Recovery	Amount Added	MSD Result	Percent Recovery	MS/MSD RPD			
Chloride		mg/L	880	400	1260	95.0	400	1230	87.5	8.2	02/13/1997		746
Chloride		mg/L	3300	2000	5450	107.5	2000	5400	105.0	2.4	02/13/1997		746
N-Nitrate		mg/L	<0.05	0.20	0.197	98.5	0.20	0.208	104.0	5.3	02/12/1997	85	148
Fluoride		mg/L	757	1000	1740	98.3	1000	1800	104.3	5.8	02/13/1997		575
Benic		mg/L	<0.03	1.00	0.87	87.0	1.00	0.87	87.0	0.0	02/10/1997	1975	1503
Arsenic, Dissolved, ICP		mg/L	<0.03	1.00	0.97	97.0	1.00	0.98	98.0	1.0	02/11/1997		1506
Barium		mg/L	0.03	1.00	0.88	85.0	1.00	0.90	87.0	2.3	02/10/1997	1975	1390
Barium, Dissolved, ICP		mg/L	<0.01	1.00	0.94	94.0	1.00	0.95	95.0	1.1	02/11/1997		1393
Cadmium		mg/L	<0.01	1.00	0.88	88.0	1.00	0.90	90.0	2.2	02/10/1997	1975	1565
Cadmium, Dissolved, ICP		mg/L	<0.01	1.00	0.89	89.0	1.00	0.90	90.0	1.1	02/11/1997		1568
Chromium		mg/L	<0.01	1.00	0.87	87.0	1.00	0.89	89.0	2.3	02/10/1997	1975	1564
Chromium, Dissolved, ICP		mg/L	<0.01	1.00	0.91	91.0	1.00	0.92	92.0	1.2	02/11/1997		1567
Copper		mg/L	<0.01	1.00	0.84	84.0	1.00	0.85	85.0	1.2	02/10/1997	1975	1556
Copper, Dissolved, ICP		mg/L	<0.01	1.00	0.89	89.0	1.00	0.91	91.0	2.2	02/11/1997		1559
Iron		mg/L	0.57	1.00	1.51	94.0	1.00	1.65	108.0	13.8	02/10/1997	1975	1558
Iron, Dissolved, ICP		mg/L	<0.01	1.00	0.91	91.0	1.00	0.97	97.0	6.4	02/11/1997		1561
Lead		mg/L	<0.03	1.00	0.88	88.0	1.00	0.91	91.0	3.4	02/10/1997	1975	1573
Lead, Dissolved, ICP		mg/L	<0.03	1.00	0.92	92.0	1.00	0.93	93.0	1.2	02/11/1997		1579
Manganese		mg/L	0.03	1.00	0.84	81.0	1.00	0.86	83.0	2.4	02/10/1997	1975	1539
Manganese, Dissolved, ICP		mg/L	<0.01	1.00	0.94	94.0	1.00	0.95	95.0	1.2	02/11/1997		1542
Mercury, CVAA		mg/L	<0.02	0.50	0.57	114.0	0.50	0.55	110.0	3.6	02/12/1997		1329
Mercury, CVAA		mg/L	<0.0002	0.50	0.56	112.0	0.50	0.56	112.0	0.0	02/13/1997		1331
Mercury, CVAA		mg/L	<0.0002	0.50	0.54	108.0	0.50	0.54	108.0	0.0	02/13/1997		1331
Mercury, CVAA		mg/L	<0.0002	0.50	0.58	116.0	0.50	0.58	116.0	0.0	02/13/1997		1331
Mercury, CVAA		mg/L	<0.0002	0.50	0.52	104.0	0.50	0.53	106.0	1.9	02/13/1997		1331
Mercury, CVAA		mg/L	<0.0002	0.50	0.53	106.0	0.50	0.46	92.0	14.0	02/13/1997		1331

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
The sample selected for QA may not necessarily be your sample.

QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

George Robinson
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03/18/1997

EPIC Job Number: 97.00344

Project Description:
Job Description: TWP WT-1 ER Pit Area

Parameter	Flag	Units	Spike Matrix MS				Duplicate		MSD		Date Analyzed	Prep Batch Number	Run Batch Number
			Sample Result	Amount Added	Spike Result	Percent Recovery	Spike Amount	MSD Result	Percent Recovery	MS/MSD RPD			
Mercury, Dissolved, CVAA		mg/L	<0.02	0.50	0.57	114.0	0.50	0.55	110.0	3.6	02/12/1997		1329
Mercury, Dissolved, CVAA		mg/L	0.0004	0.50	0.51	101.9	0.50	0.51	101.9	0.0	02/12/1997		1330
Mercury, Dissolved, CVAA		mg/L	<0.0002	0.50	0.56	112.0	0.50	0.56	112.0	0.0	02/13/1997		1331
Mercury, Dissolved, CVAA		mg/L	<0.0002	0.50	0.54	108.0	0.50	0.54	108.0	0.0	02/13/1997		1331
Mercury, Dissolved, CVAA		mg/L	<0.0002	0.50	0.58	116.0	0.50	0.58	116.0	0.0	02/13/1997		1331
Mercury, Dissolved, CVAA		mg/L	<0.0002	0.50	0.52	104.0	0.50	0.53	106.0	1.9	02/13/1997		1331
Mercury, Dissolved, CVAA		mg/L	<0.0002	0.50	0.53	106.0	0.50	0.46	92.0	14.0	02/13/1997		1331
Selenium		mg/L	<0.04	1.00	0.90	90.0	1.00	0.88	88.0	2.2	02/10/1997	1975	1502
Selenium, Dissolved, ICP		mg/L	<0.04	1.00	0.92	92.0	1.00	0.89	89.0	3.3	02/11/1997		1508
Silver		mg/L	<0.01	1.00	0.79	79.0	1.00	0.81	81.0	2.5	02/10/1997	1975	1555
Silver, Dissolved, ICP		mg/L	<0.01	1.00	0.85	85.0	1.00	0.86	86.0	1.2	02/11/1997		1561
Zinc		mg/L	<0.03	1.00	0.91	91.0	1.00	0.94	94.0	3.2	02/10/1997	1975	1561
Zinc, Dissolved, ICP		mg/L	<0.03	1.00	0.95	95.0	1.00	0.97	97.0	2.1	02/11/1997		1564

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
The sample selected for QA may not necessarily be your sample.

QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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03/18/1997

EPIC Job Number: 97.00344

Project Description:
Job Description: TWP WT-1 ER Pit Area

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate				Date Analyzed	Prep Batch Number	Run Batch Number	
							Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD				
VOLATILES-8240 AQ (PRESERVED)														
Benzene		ug/L	<5	20	18	90.0	20	19	95.0	5.4	02/12/1997		1367	
Chlorobenzene		ug/L	<5	20	19	95.0	20	18	90.0	5.4	02/12/1997		1367	
Dichloroethene		ug/L	<5	20	22	110.0	20	22	110.0	0.0	02/12/1997		1367	
Buene		ug/L	<5	20	18	90.0	20	18	90.0	0.0	02/12/1997		1367	
Trichloroethene		ug/L	<5	20	17	85.0	20	18	90.0	5.7	02/12/1997		1367	

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
The sample selected for QA may not necessarily be your sample.

QUALITY CONTROL REPORT DUPLICATES

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03/18/1997

EPIC Job Number: 97.00344

Project Description:
Job Description: TWP WT-1 ER Pit Area

Parameter	Flag	Units	Sample Result	Duplicate Sample Result	RPD	Date Analyzed	Prep Batch Number	Run Batch Number
Turbidity		NTU	1.9	1.7	11.1	02/07/1997		243
Total Dissolved Solids		mg/L	3100	3090	0.3	02/07/1997		682
Total Dissolved Solids		mg/L	1240	1280	3.2	02/07/1997		682

QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

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03/18/1997

EPIC Job Number: 97.00344

Project Description:
Job Description: TWP WT-1 ER Pit Area

Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	Units	LCS Conc Found	LCS % Rec.	LCS Dup Conc. Found	LCS Dup % Rec	LCS % RPD	Flag	Date Analyzed
Chloride		746	1000	mg/L	1020	102.0					02/13/1997
N-Nitrate	85	148	0.50	mg/L	0.487	97.4					02/12/1997
Sulfate		575	20.0	mg/L	19.4	97.0					02/13/1997
Turbidity		243	5.0	NTU	5.3	106.0					02/07/1997
Arsenic	1975	1503	1.00	mg/L	0.94	94.0					02/10/1997
Arsenic, Dissolved ICP		1506	1.00	mg/L	1.07	107.0					02/11/1997
Barium	1975	1390	1.00	mg/L	0.97	97.0					02/10/1997
Barium, Dissolved ICP		1393	1.00	mg/L	0.97	97.0					02/11/1997
Cadmium	1975	1565	1.00	mg/L	1.06	106.0					02/10/1997
Cadmium, Dissolved ICP		1568	1.00	mg/L	1.01	101.0					02/11/1997
Chromium	1975	1564	1.00	mg/L	1.02	102.0					02/10/1997
Chromium, Dissolved ICP		1567	1.00	mg/L	1.00	100.0					02/11/1997
Copper	1975	1556	1.00	mg/L	0.96	96.0					02/10/1997
Copper, Dissolved ICP		1559	1.00	mg/L	0.95	95.0					02/11/1997
Iron	1975	1558	1.00	mg/L	1.03	103.0					02/10/1997
Iron, Dissolved ICP		1561	1.00	mg/L	1.00	100.0					02/11/1997
Lead	1975	1573	1.00	mg/L	1.04	104.0					02/10/1997
Lead, Dissolved ICP		1576	1.00	mg/L	1.00	100.0					02/11/1997
Manganese	1975	1539	1.00	mg/L	0.95	95.0					02/10/1997
Manganese, Dissolved ICP		1542	1.00	mg/L	1.00	100.0					02/11/1997
Mercury, CVAA		1329	0.50	mg/L	0.49	98.0					02/12/1997
Mercury, CVAA		1331	0.50	mg/L	0.56	112.0	0.52	104.0	7.4		02/13/1997
Mercury, Dissolved, CVAA		1329	0.50	mg/L	0.49	98.0					02/12/1997
Mercury, Dissolved, CVAA		1330	0.50	mg/L	0.49	98.0					02/12/1997
Mercury, Dissolved, CVAA		1331	0.50	mg/L	0.56	112.0	0.52	104.0	7.4		02/13/1997
Selenium	1975	1502	1.00	mg/L	1.06	106.0					02/10/1997
Selenium, Dissolved ICP		1505	1.00	mg/L	1.03	103.0					02/11/1997

LCS - Laboratory Control Standard

For samples with insufficient sample volume, an LCS/LCS duplicate is reported instead of an MS/MSD.

QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

03/18/1997

EPIC Job Number: 97.00344

Project Description:
Job Description: TWP WT-1 ER Pit Area

Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	Units	LCS Conc Found	LCS % Rec.	LCS Dup Conc. Found	LCS Dup % Rec	LCS % RPD	Flag	Date Analyzed
Silver	1975	1555	1.00	mg/L	0.88	88.0					02/10/1997
Silver, Dissolved ICP		1558	1.00	mg/L	0.93	93.0					02/11/1997
Zinc	1975	1561	1.00	mg/L	1.05	105.0					02/10/1997
Zinc, Dissolved ICP		1564	1.00	mg/L	1.03	103.0					02/11/1997
Total Dissolved Solids		682	1.00	mg/L	2035	101.8					02/07/1997
VOLATILES-8240 AQ (PRESERVED)											
Benzene		1367	20	ug/L	20	100.0					02/12/1997
Chlorobenzene		1367	20	ug/L	21	105.0					02/12/1997
1,1-Dichloroethene		1367	20	ug/L	19	95.0					02/12/1997
Toluene		1367	20	ug/L	21	105.0					02/12/1997
Trichloroethene		1367	20	ug/L	21	105.0					02/12/1997
VOLATILES-8240 AQ (PRESERVED)											
Benzene		1367	20	ug/L	22	110.0					02/12/1997
Chlorobenzene		1367	20	ug/L	23	115.0					02/12/1997
1,1-Dichloroethene		1367	20	ug/L	21	105.0					02/12/1997
Toluene		1367	20	ug/L	23	115.0					02/12/1997
Trichloroethene		1367	20	ug/L	22	110.0					02/12/1997

LCS - Laboratory Control Standard

For samples with insufficient sample volume, an LCS/LCS duplicate is reported instead of an MS/MSD.



LABORATORIES, INC.

1548 VALWOOD PARKWAY, SUITE 118
CARROLLTON, TEXAS 75006
DALLAS (972) 406-8100
AUSTIN (512) 928-8905

CHAIN OF CUSTODY RECORD

COMPANY Enron Operations Corp
ADDRESS 2450X 1188 Houston, TX 77251
PHONE 713/646-7327 FAX 713/646-7867
PROJECT NAME/LOCATION TWP / WT-1 ER PIT AREA
PROJECT NUMBER _____
PROJECT MANAGER _____

REPORT TO: % Enron Operations Corp
3403142
INVOICE TO: P.O. BOX 1188
Houston TX 77251
P.O. NO. _____
EPIC QUOTE NO. _____

SAMPLED BY

(PRINT NAME) _____

SIGNATURE _____

(PRINT NAME) _____

SIGNATURE _____

ANALYSES

To assist us in selecting the proper method

Is this work being conducted for regulatory compliance monitoring? Yes ☒ No ☐

Is this work being conducted for regulatory enforcement action? Yes ☐ No ☒

Which regulations apply: RCRA ☐ NPDES Wastewater ☐
UST ☐ Drinking Water ☐
Other ☒ None ☐

COMMENTS

* Run Metals Analysis For
As, Ba, Cd, Cr, Pb, Hg, Se, Ag,
Cu, Fe, Mn, Zn Method 7490 for
Hg & Lead for others.
Reference Filtered Before Metals
Analysis

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	HCl	NaOH	HNO ₃	H ₂ SO ₄	OTHER	# and Type of Containers	ANALYSES
5/10/97	1610	MW-1	X	X	X	3/4	1/4	1/4	1/4	1/4	1/4	VOC's (8240) NITRATE & NITRATE AS NITROGEN
1045		MW-4										X METALS (SEE COMMENTS)
1530		MW-5										
1335		MW-6										
1400		MW-7										
1445		MW-8										
1245		MW-14										
1445		MW-15										
1115		MW-16										
		BS-99										
		TRIP BLANK										

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO COC SEALS PRESENT AND INTACT? YES / NO
FIELD FILTERED? YES / NO VOLATILES FREE OF HEADSPACE? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA _____
REQUEST EPIC TO DISPOSE OF ALL SAMPLE REMAINDERS _____

RELINQUISHED BY: _____ DATE _____ TIME _____ RECEIVED BY: _____
RELINQUISHED BY: _____ DATE _____ TIME _____ RECEIVED FOR EPIC BY: _____

METHOD OF SHIPMENT FIDEX REMARKS: _____

1.800.4A.TODD.1.50

15548 VALWOOD PARKWAY, SUITE 118
CARROLLTON, TEXAS 75006
DALLAS (972) 406-8100
AUSTIN (512) 928-8905

CHAIN OF CUSTODY RECORD

COMPANY Enron Petroleum Corp
ADDRESS P.O. Box 1188 Houston TX 77251
PHONE 713/644-7327 FAX 644-7867
PROJECT NAME/LOCATION 7202 / WT-1 LA PIT AREA
PROJECT NUMBER _____
PROJECT MANAGER _____

George FORDMAN
REPORT TO: 3AC 3142
INVOICE TO: 770. BX 188
P.O. NO. 1808
EPIC QUOTE NO. TX 7725

EPIC QUOTE NO.

SAMPLED BY

2005.05.25
(PRINT NAME)

Signature

(PRINT NAME)

SIGNATURE

[illegible]

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / NO

COC SEALS PRESENT AND INTACT? YES / NO
VOLATILES FREE OF HEADSPACE? YES / NO

TEMPERATURE UPON RECEIPT: _____
Bottles supplied by EPIC? YES / NO

SAMPLE REMAINDER DISPOSAL:

RETURN SAMPLE REMAINDER TO CLIENT VIA _____
REQUEST EPIC TO DISPOSE OF ALL SAMPLE _____

DATE: 5/18/97

RELINQUISHED BY:

DATE:

TIME

RECEIVED BY:

RELINQUISHED BY:

DATE _____

TIME

RECEIVED FOR EPIC BY:

METHOD OF SHIPMENT

REMARKS:

Report of Ground Water Monitoring Activities

**WT-1 Compressor Station: Engine Room Drain Pit Area
Transwestern Pipeline Company**

Attachment #2

**Lab Reports for May 1997
Ground Water Sampling Event**



LABORATORIES, INC.



ANALYTICAL AND QUALITY CONTROL REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910

Page 1

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to EPIC Laboratories, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
332551	MW-1	05/10/1997	16:10	05/13/1997
332552	MW-4	05/10/1997	10:45	05/13/1997
332553	MW-5	05/10/1997	15:20	05/13/1997
332554	MW-6	05/10/1997	13:25	05/13/1997
332555	MW-7	05/10/1997	14:00	05/13/1997
332556	MW-8	05/10/1997	14:45	05/13/1997
332557	MW-14	05/10/1997	12:45	05/13/1997
332558	MW-15	05/10/1997	11:45	05/13/1997
332559	MW-16	05/10/1997	11:15	05/13/1997
332560	BS-99			05/13/1997
332561	Trip Blank			05/13/1997

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Debby Skogen

Debby Skogen
Project Coordinator

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332551

Page 2

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		162	mg/L	S-9252		05/21/1997	cgl		761	5.0
N-Nitrate/Nitrite		<0.05	mg/L	E-353.3		05/21/1997	cgl		30	0.05
Sulfate		<5.0	mg/L	S-9038		05/20/1997	cgl		585	5.0
Arsenic, Dissolved, ICP		0.15	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1609	0.03
Barium, Dissolved, ICP		22.5	mg/L	S-6010A	05/16/1997	05/22/1997	des	239	1498	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1662	0.01
Lead, Dissolved, ICP		0.21	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1665	0.01
Manganese, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1680	0.03
Mercury, Dissolved, CVAA		0.02	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1645	0.01
Selenium, Dissolved, ICP		<0.0002	mg/L	S-7470A		05/14/1997	bwb		1373	0.0002
Silver, Dissolved, ICP		<0.04	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1608	0.04
Zinc, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1661	0.01
Total Dissolved Solids		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1667	0.03
		2840	mg/L	E-160.1		05/14/1997	cgl		717	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		470	ug/L	S-8240A		05/14/1997	acg		1405	100
Benzene		10	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromodichloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromoform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromomethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Butanone (MEK)		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon disulfide		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon tetrachloride		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chlorobenzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloroethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		05/14/1997	acg		1405	20
Chloroform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloromethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Dibromochloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		05/15/1997	dtw		1406	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		05/15/1997	dtw		1406	5

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332551

Page 3

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,4-Dichlorobenzene		<5	ug/L	S-8240A		05/15/1997	dtw		1406	5
1,1-Dichloroethane		470	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichloroethane		9	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		05/15/1997	dtw		1406	5
1,2-Dichloropropane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Benzyl benzene		6	ug/L	S-8240A		05/14/1997	acg		1405	5
2-Hexanone		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Methylene chloride		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
4-Methyl-2-pentanone (MIBK)		1000	ug/L	S-8240A		05/14/1997	acg		1405	50
Styrene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Tetrachloroethene		8	ug/L	S-8240A		05/14/1997	acg		1405	5
Toluene		75	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,1-Trichloroethane		9	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Trichloroethene		20	ug/L	S-8240A		05/14/1997	acg		1405	5
Vinyl acetate		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Vinyl chloride		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Xylenes, Total		45	ug/L	S-8240A		05/14/1997	acg		1405	5
SURR: 1,2-Dichloroethane-d4		94	% Rec	S-8240A		05/14/1997	acg		1405	76-114
SURR: Toluene-d8		99	% Rec	S-8240A		05/14/1997	acg		1405	88-110
SURR: 4-Bromofluorobenzene		93	% Rec	S-8240A		05/14/1997	acg		1405	86-115

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332552

Page 4

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		410	mg/L	S-9252		05/21/1997	cgl		761	5.0
N-Nitrate/Nitrite		10.7	mg/L	E-353.3		05/21/1997	cgl		30	0.05
Sulfate		778	mg/L	S-9038		05/20/1997	cgl		585	5.0
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1609	0.03
Barium, Dissolved, ICP		0.02	mg/L	S-6010A	05/16/1997	05/22/1997	des	239	1498	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1662	0.01
Lead, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1665	0.01
Manganese, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1680	0.03
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		05/14/1997	bwb		1373	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1608	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1661	0.01
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1667	0.03
Total Dissolved Solids		2660	mg/L	E-160.1		05/14/1997	cgl		717	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromodichloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromoform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromomethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Butanone (MEK)		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon disulfide		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon tetrachloride		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chlorobenzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloroethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		05/14/1997	acg		1405	20
Chloroform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloromethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Dibromochloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332552

Page 5

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,4-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,1-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,2-Dichloropropane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Ethyl benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
2-Hexanone		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Methylene chloride		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Styrene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Tetrachloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Toluene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Trichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Vinyl acetate		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Vinyl chloride		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Xylenes, Total		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
SURR: 1,2-Dichloroethane-d4		100	% Rec	S-8240A		05/14/1997	acg		1405	76-114
SURR: Toluene-d8		93	% Rec	S-8240A		05/14/1997	acg		1405	88-110
SURR: 4-Bromofluorobenzene		97	% Rec	S-8240A		05/14/1997	acg		1405	86-115

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332553

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		380	mg/L	S-9252		05/21/1997	cgl		761	5.0
N-Nitrate/Nitrite		<0.05	mg/L	E-353.3		05/21/1997	cgl		30	0.05
Sulfate		<5.0	mg/L	S-9038		05/20/1997	cgl		585	5.0
Arsenic, Dissolved, ICP		0.05	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1609	0.03
Barium, Dissolved, ICP		22.2	mg/L	S-6010A	05/16/1997	05/22/1997	des	239	1498	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1662	0.01
Lead, Dissolved, ICP		0.12	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1665	0.01
Manganese, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1680	0.03
Manganese, Dissolved, ICP		0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1645	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		05/14/1997	bwb		1373	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1608	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1661	0.01
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1667	0.03
Total Dissolved Solids		2340	mg/L	E-160.1		05/14/1997	cgl		717	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Benzene		24	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromodichloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromoform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromomethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Butanone (MEK)		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon disulfide		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon tetrachloride		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chlorobenzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloroethane		22	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		05/14/1997	acg		1405	20
Chloroform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloromethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Dibromochloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,4-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,1-Dichloroethane		140	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,2-Dichloroethene		120	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,2-Dichloropropane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Styrene		9	ug/L	S-8240A		05/14/1997	acg		1405	5
2-Hexanone		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Methylene chloride		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
4-Methyl-2-pentanone (MIBK)		210	ug/L	S-8240A		05/14/1997	acg		1405	50
Styrene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Tetrachloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Toluene		35	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Trichloroethene		86	ug/L	S-8240A		05/14/1997	acg		1405	5
Vinyl acetate		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Vinyl chloride		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Xylenes, Total		38	ug/L	S-8240A		05/14/1997	acg		1405	5
SURR: 1,2-Dichloroethane-d4		100	% Rec	S-8240A		05/14/1997	acg		1405	76-114
SURR: Toluene-d8		95	% Rec	S-8240A		05/14/1997	acg		1405	88-110
SURR: 4-Bromofluorobenzene		96	% Rec	S-8240A		05/14/1997	acg		1405	86-115

ANALYTICAL RESULTS REPORT

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EPIC Job Number: 97.01910
Sample Number: 332554

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		700	mg/L	S-9252		05/21/1997	cgl		761	5.0
N-Nitrate/Nitrite		<0.05	mg/L	E-353.3		05/21/1997	cgl		30	0.05
Sulfate		463	mg/L	S-9038		05/20/1997	cgl		585	5.0
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1609	0.03
Barium, Dissolved, ICP		0.10	mg/L	S-6010A	05/16/1997	05/22/1997	des	239	1498	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1662	0.01
Lead, Dissolved, ICP		0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1665	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1680	0.03
Manganese, Dissolved, ICP		0.69	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1645	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		05/14/1997	bwb		1373	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1608	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1661	0.01
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1667	0.03
Total Dissolved Solids		2550	mg/L	E-160.1		05/14/1997	cgl		717	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromodichloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromoform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromomethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Butanone (MEK)		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon disulfide		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon tetrachloride		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chlorobenzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloroethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		05/14/1997	acg		1405	20
Chloroform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloromethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Dibromochloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5

ANALYTICAL RESULTS REPORT

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,4-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,1-Dichloroethane		10	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,2-Dichloropropane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Methyl benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
2-Hexanone		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Methylene chloride		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Styrene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Tetrachloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Toluene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Trichloroethene		14	ug/L	S-8240A		05/14/1997	acg		1405	5
Vinyl acetate		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Vinyl chloride		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Xylenes, Total		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
SURR: 1,2-Dichloroethane-d4		98	% Rec	S-8240A		05/14/1997	acg		1405	76-114
SURR: Toluene-d8		97	% Rec	S-8240A		05/14/1997	acg		1405	88-110
SURR: 4-Bromofluorobenzene		99	% Rec	S-8240A		05/14/1997	acg		1405	86-115

ANALYTICAL RESULTS REPORT

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EPIC Job Number: 97.01910
Sample Number: 332555

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		390	mg/L	S-9252		05/21/1997	cgl		761	5.0
N-Nitrate/Nitrite		7.3	mg/L	E-353.3		05/21/1997	cgl		30	0.05
Sulfate		757	mg/L	S-9038		05/20/1997	cgl		585	5.0
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1609	0.03
Barium, Dissolved, ICP		0.02	mg/L	S-6010A	05/16/1997	05/22/1997	des	239	1498	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1662	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1665	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1680	0.03
Manganese, Dissolved, ICP		0.04	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1645	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		05/14/1997	bwb		1373	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1608	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1661	0.01
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1667	0.03
Total Dissolved Solids		2250	mg/L	E-160.1		05/14/1997	cgl		717	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Benzene		6	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromodichloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromoform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromomethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Butanone (MEK)		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon disulfide		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon tetrachloride		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chlorobenzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloroethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		05/14/1997	acg		1405	20
Chloroform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloromethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Dibromochloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5

ANALYTICAL RESULTS REPORT

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06/26/1997

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,4-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,1-Dichloroethane		16	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,2-Dichloropropane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Ethyl benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
2-Hexanone		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Methylene chloride		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Styrene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Tetrachloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Toluene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Trichloroethene		13	ug/L	S-8240A		05/14/1997	acg		1405	5
Vinyl acetate		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Vinyl chloride		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Xylenes, Total		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
SURR: 1,2-Dichloroethane-d4		100	% Rec	S-8240A		05/14/1997	acg		1405	76-114
SURR: Toluene-d8		96	% Rec	S-8240A		05/14/1997	acg		1405	88-110
SURR: 4-Bromofluorobenzene		102	% Rec	S-8240A		05/14/1997	acg		1405	86-115

ANALYTICAL RESULTS REPORT

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06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332556

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		550	mg/L	S-9252		05/21/1997	cgl		761	5.0
N-Nitrate/Nitrite		<0.05	mg/L	E-353.3		05/21/1997	cgl		30	0.05
Sulfate		263	mg/L	S-9038		05/20/1997	cgl		585	5.0
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1609	0.03
Barium, Dissolved, ICP		0.06	mg/L	S-6010A	05/16/1997	05/22/1997	des	239	1498	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1662	0.01
Lead, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1665	0.01
Mercury, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1680	0.03
Manganese, Dissolved, ICP		0.52	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1645	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		05/14/1997	bwb		1373	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1608	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1661	0.01
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1667	0.03
Total Dissolved Solids		1990	mg/L	E-160.1		05/14/1997	cgl		717	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Benzene		19	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromodichloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromoform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromomethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Butanone (MEK)		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon disulfide		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon tetrachloride		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chlorobenzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloroethane		25	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		05/14/1997	acg		1405	20
Chloroform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloromethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Dibromochloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5

ANALYTICAL RESULTS REPORT

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06/26/1997

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Sample Number: 332556

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,4-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,1-Dichloroethane		74	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,2-Dichloroethene		120	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,2-Dichloropropane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Benzyl benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
2-Hexanone		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Methylene chloride		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
4-Methyl-2-pentanone (MIBK)		130	ug/L	S-8240A		05/14/1997	acg		1405	50
Styrene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Tetrachloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Toluene		42	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Trichloroethene		44	ug/L	S-8240A		05/14/1997	acg		1405	5
Vinyl acetate		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Vinyl chloride		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Xylenes, Total		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
SURR: 1,2-Dichloroethane-d4		99	% Rec	S-8240A		05/14/1997	acg		1405	76-114
SURR: Toluene-d8		96	% Rec	S-8240A		05/14/1997	acg		1405	88-110
SURR: 4-Bromofluorobenzene		96	% Rec	S-8240A		05/14/1997	acg		1405	86-115

ANALYTICAL RESULTS REPORT

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06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332557

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-14

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		520	mg/L	S-9252		05/21/1997	cgl		761	5.0
N-Nitrate/Nitrite		2.2	mg/L	E-353.3		05/21/1997	cgl		30	0.05
Sulfate		715	mg/L	S-9038		05/20/1997	cgl		585	5.0
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1609	0.03
Barium, Dissolved, ICP		0.02	mg/L	S-6010A	05/16/1997	05/22/1997	des	239	1498	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1662	0.01
Lead, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1665	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1680	0.03
Manganese, Dissolved, ICP		0.07	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1645	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		05/14/1997	bwb		1373	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1608	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1661	0.01
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1667	0.03
Total Dissolved Solids		2530	mg/L	E-160.1		05/14/1997	cgl		717	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromodichloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromoform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromomethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Butanone (MEK)		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon disulfide		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon tetrachloride		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chlorobenzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloroethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		05/14/1997	acg		1405	20
Chloroform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloromethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Dibromochloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5

ANALYTICAL RESULTS REPORT

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Sample Number: 332557

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-14

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,4-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,1-Dichloroethane		22	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,2-Dichloropropane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Ethyl benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
2-Hexanone		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Methylene chloride		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Styrene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Tetrachloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Toluene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Trichloroethene		12	ug/L	S-8240A		05/14/1997	acg		1405	5
Vinyl acetate		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Vinyl chloride		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Xylenes, Total		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
SURR: 1,2-Dichloroethane-d4		94	% Rec	S-8240A		05/14/1997	acg		1405	76-114
SURR: Toluene-d8		94	% Rec	S-8240A		05/14/1997	acg		1405	88-110
SURR: 4-Bromofluorobenzene		99	% Rec	S-8240A		05/14/1997	acg		1405	86-115

ANALYTICAL RESULTS REPORT

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06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332558

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-15

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		860	mg/L	S-9252		05/21/1997	cgl		761	5.0
N-Nitrate/Nitrite		10.2	mg/L	E-353.3		05/21/1997	cgl		30	0.05
Sulfate		1020	mg/L	S-9038		05/20/1997	cgl		585	5.0
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1609	0.03
Barium, Dissolved, ICP		0.02	mg/L	S-6010A	05/16/1997	05/22/1997	des	239	1498	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1662	0.01
Iron, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1665	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1680	0.03
Manganese, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1645	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		05/14/1997	bwb		1373	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1608	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1661	0.01
Zinc, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1667	0.03
Total Dissolved Solids		2530	mg/L	E-160.1		05/14/1997	cgl		717	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromodichloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromoform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromomethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Butanone (MEK)		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon disulfide		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon tetrachloride		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chlorobenzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloroethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		05/14/1997	acg		1405	20
Chloroform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloromethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Dibromochloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5

ANALYTICAL RESULTS REPORT

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06/26/1997

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Sample Number: 332558

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-15

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,4-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,1-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,2-Dichloropropane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Phenyl benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
2-Hexanone		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Methylene chloride		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Styrene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Tetrachloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Toluene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Trichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Vinyl acetate		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Vinyl chloride		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Xylenes, Total		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
SURR: 1,2-Dichloroethane-d4		99	% Rec	S-8240A		05/14/1997	acg		1405	76-114
SURR: Toluene-d8		99	% Rec	S-8240A		05/14/1997	acg		1405	88-110
SURR: 4-Bromofluorobenzene		100	% Rec	S-8240A		05/14/1997	acg		1405	86-115

ANALYTICAL RESULTS REPORT

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06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332559

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-16

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		420	mg/L	S-9252		05/21/1997	cgl		761	5.0
N-Nitrate/Nitrite		1.6	mg/L	E-353.3		05/21/1997	cgl		30	0.05
Sulfate		1110	mg/L	S-9038		05/20/1997	cgl		585	5.0
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1609	0.03
Barium, Dissolved, ICP		0.02	mg/L	S-6010A	05/16/1997	05/22/1997	des	239	1498	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1671	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1662	0.01
Lead, Dissolved, ICP		<0.01	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1665	0.01
Mercury, Dissolved, ICP		<0.03	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1680	0.03
Manganese, Dissolved, ICP		1.07	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1645	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		05/14/1997	bwb		1373	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1608	0.04
Silver, Dissolved, ICP		0.02	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1661	0.01
Zinc, Dissolved, ICP		0.02	mg/L	S-6010A	05/16/1997	05/21/1997	des	239	1667	0.03
Total Dissolved Solids		3520	mg/L	E-160.1		05/14/1997	cgl		717	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromodichloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromoform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromomethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Butanone (MEK)		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon disulfide		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon tetrachloride		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chlorobenzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloroethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		05/14/1997	acg		1405	20
Chloroform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloromethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Dibromochloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5

ANALYTICAL RESULTS REPORT

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06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332559

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: MW-16

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,4-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,1-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,2-Dichloropropane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Benzyl benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
2-Hexanone		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Methylene chloride		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Styrene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Tetrachloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Toluene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Trichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Vinyl acetate		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Vinyl chloride		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Xylenes, Total		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
SURR: 1,2-Dichloroethane-d4		94	% Rec	S-8240A		05/14/1997	acg		1405	76-114
SURR: Toluene-d8		95	% Rec	S-8240A		05/14/1997	acg		1405	88-110
SURR: 4-Bromofluorobenzene		99	% Rec	S-8240A		05/14/1997	acg		1405	86-115

ANALYTICAL RESULTS REPORT

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06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332560

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: BS-99

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Benzene		23	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromodichloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromoform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromomethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Butanone (MEK)		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon disulfide		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon tetrachloride		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chlorobenzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloroethane		22	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		05/14/1997	acg		1405	20
Chloroform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloromethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Dibromochloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,1-Dichloroethane		130	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,2-Dichloroethene		111	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,2-Dichloropropane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Ethyl benzene		9	ug/L	S-8240A		05/14/1997	acg		1405	5
2-Hexanone		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Methylene chloride		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
4-Methyl-2-pentanone (MIBK)		180	ug/L	S-8240A		05/14/1997	acg		1405	50
Styrene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Tetrachloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Toluene		38	ug/L	S-8240A		05/14/1997	acg		1405	5

ANALYTICAL RESULTS REPORT

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06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332560

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: BS-99

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,1,1-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Trichloroethene		82	ug/L	S-8240A		05/14/1997	acg		1405	5
Vinyl acetate		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Vinyl chloride		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Xylenes, Total		38	ug/L	S-8240A		05/14/1997	acg		1405	5
SURR: 1,2-Dichloroethane-d4		99	% Rec	S-8240A		05/14/1997	acg		1405	76-114
SURR: Toluene-d8		97	% Rec	S-8240A		05/14/1997	acg		1405	88-110
SURR: 4-Bromofluorobenzene		96	% Rec	S-8240A		05/14/1997	acg		1405	86-115

ANALYTICAL RESULTS REPORT

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06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332561

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromodichloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromoform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Bromomethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Butanone (MEK)		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon disulfide		<100	ug/L	S-8240A		05/14/1997	acg		1405	100
Carbon tetrachloride		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chlorobenzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloroethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		05/14/1997	acg		1405	20
Chloroform		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Chloromethane		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Dibromochloromethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,1-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,2-Dichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,2-Dichloroethene		<5	ug/L	S-8240A		05/14/1997	dtw		1405	5
1,2-Dichloropropane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Ethyl benzene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
2-Hexanone		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Methylene chloride		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Styrene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Tetrachloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Toluene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5

ANALYTICAL RESULTS REPORT

George Robinson
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06/26/1997

EPIC Job Number: 97.01910
Sample Number: 332561

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Project Description:
Job Description: TWP/WT-1 ER Pit Area

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,1,1-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Trichloroethene		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
Vinyl acetate		<50	ug/L	S-8240A		05/14/1997	acg		1405	50
Vinyl chloride		<10	ug/L	S-8240A		05/14/1997	acg		1405	10
Xylenes, Total		<5	ug/L	S-8240A		05/14/1997	acg		1405	5
SURR: 1,2-Dichloroethane-d4		92	% Rec	S-8240A		05/14/1997	acg		1405	76-114
SURR: Toluene-d8		96	% Rec	S-8240A		05/14/1997	acg		1405	88-110
: 4-Bromofluorobenzene		100	% Rec	S-8240A		05/14/1997	acg		1405	86-115

QUALITY CONTROL REPORT BLANKS

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06/26/1997

EPIC Job Number: 97.01910

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
Chloride		<5.0	mg/L	5.0	05/21/1997		761
N-Nitrate/Nitrite		<0.05	mg/L		05/21/1997		30
Sulfate		<5.0	mg/L	5.0	05/20/1997		585
Barium, Dissolved, ICP		<0.01	mg/L	0.01	05/21/1997	239	1496
Barium, Dissolved, ICP		<0.01	mg/L	0.01	05/22/1997	239	1498
Cadmium, Dissolved, ICP		<0.01	mg/L	0.01	05/21/1997	239	1671
Chromium, Dissolved, ICP		<0.01	mg/L	0.01	05/21/1997	239	1671
Copper, Dissolved, ICP		<0.01	mg/L	0.01	05/21/1997	239	1662
Iron, Dissolved, ICP		<0.01	mg/L	0.01	05/21/1997	239	1665
Lead, Dissolved, ICP		<0.03	mg/L	0.03	05/21/1997	239	1680
Manganese, Dissolved, ICP		<0.01	mg/L	0.01	05/21/1997	239	1645
Mercury, Dissolved, CVAA		<0.0002	mg/L	0.0002	05/14/1997		1373
Zinc, Dissolved, ICP		<0.03	mg/L	0.03	05/21/1997	239	1667
Total Dissolved Solids		<5.0	mg/L	5	05/14/1997		717
VOLATILES-8240 AQ(PRESERVED)							
Acetone		<100	ug/L	100	05/14/1997		1405
Benzene		<5	ug/L	5	05/14/1997		1405
Bromodichloromethane		<5	ug/L	5	05/14/1997		1405
Bromoform		<5	ug/L	5	05/14/1997		1405
Bromomethane		<10	ug/L	10	05/14/1997		1405
2-Butanone (MEK)		<100	ug/L	100	05/14/1997		1405
Carbon disulfide		<100	ug/L	100	05/14/1997		1405
Carbon tetrachloride		<5	ug/L	5	05/14/1997		1405
Chlorobenzene		<5	ug/L	5	05/14/1997		1405
Chloroethane		<10	ug/L	10	05/14/1997		1405
2-Chloroethylvinyl ether		<20	ug/L	20	05/14/1997		1405
Chloroform		<5	ug/L	5	05/14/1997		1405

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT BLANKS

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06/26/1997

EPIC Job Number: 97.01910

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
Chloromethane		<10	ug/L	10	05/14/1997		1405
Dibromochloromethane		<5	ug/L	5	05/14/1997		1405
1,2-Dichlorobenzene		<5	ug/L	5	05/14/1997		1405
1,3-Dichlorobenzene		<5	ug/L	5	05/14/1997		1405
1,4-Dichlorobenzene		<5	ug/L	5	05/14/1997		1405
1,1-Dichloroethane		<5	ug/L	5	05/14/1997		1405
1,2-Dichloroethane		<5	ug/L	5	05/14/1997		1405
1,1-Dichloroethene		<5	ug/L	5	05/14/1997		1405
cis-1,2-Dichloroethene		<5	ug/L	5	05/14/1997		1405
trans-1,2-Dichloroethene		<5	ug/L	5	05/14/1997		1405
1,2-Dichloropropane		<5	ug/L	5	05/14/1997		1405
cis-1,3-Dichloropropene		<5	ug/L	5	05/14/1997		1405
trans-1,3-Dichloropropene		<5	ug/L	5	05/14/1997		1405
Ethyl benzene		<5	ug/L	5	05/14/1997		1405
2-Hexanone		<50	ug/L	50	05/14/1997		1405
4-Methyl-2-pentanone (MIBK)		<50	ug/L	50	05/14/1997		1405
Methylene chloride		<50	ug/L	5	05/14/1997		1405
Styrene		<5	ug/L	5	05/14/1997		1405
1,1,2,2-Tetrachloroethane		<5	ug/L	5	05/14/1997		1405
Tetrachloroethene		<5	ug/L	5	05/14/1997		1405
Toluene		<5	ug/L	5	05/14/1997		1405
1,1,1-Trichloroethane		<5	ug/L	5	05/14/1997		1405
1,1,2-Trichloroethane		<5	ug/L	5	05/14/1997		1405
Trichloroethene		<5	ug/L	5	05/14/1997		1405
Vinyl acetate		<50	ug/L	50	05/14/1997		1405
Vinyl chloride		<10	ug/L	10	05/14/1997		1405
Xylenes, Total		<5	ug/L	5	05/14/1997		1405

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT BLANKS

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
VOLATILES-8240 AQ(PRESERVED)							
Acetone		<100	ug/L	100	05/15/1997		1406
Benzene		<5	ug/L	5	05/15/1997		1406
Bromodichloromethane		<5	ug/L	5	05/15/1997		1406
Bromoform		<5	ug/L	5	05/15/1997		1406
Bromomethane		<10	ug/L	10	05/15/1997		1406
2-Butanone (MEK)		<100	ug/L	100	05/15/1997		1406
Carbon disulfide		<100	ug/L	100	05/15/1997		1406
Carbon tetrachloride		<5	ug/L	5	05/15/1997		1406
Chlorobenzene		<5	ug/L	5	05/15/1997		1406
Chloroethane		<10	ug/L	10	05/15/1997		1406
2-Chloroethylvinyl ether		<20	ug/L	20	05/15/1997		1406
Chloroform		<5	ug/L	5	05/15/1997		1406
Chloromethane		<10	ug/L	10	05/15/1997		1406
Dibromochloromethane		<5	ug/L	5	05/15/1997		1406
1,2-Dichlorobenzene		<5	ug/L	5	05/15/1997		1406
1,3-Dichlorobenzene		<5	ug/L	5	05/15/1997		1406
1,4-Dichlorobenzene		<5	ug/L	5	05/15/1997		1406
1,1-Dichloroethane		<5	ug/L	5	05/15/1997		1406
1,2-Dichloroethane		<5	ug/L	5	05/15/1997		1406
1,1-Dichloroethene		<5	ug/L	5	05/15/1997		1406
cis-1,2-Dichloroethene		<5	ug/L	5	05/15/1997		1406
trans-1,2-Dichloroethene		<5	ug/L	5	05/15/1997		1406
1,2-Dichloropropane		<5	ug/L	5	05/15/1997		1406
cis-1,3-Dichloropropene		<5	ug/L	5	05/15/1997		1406
trans-1,3-Dichloropropene		<5	ug/L	5	05/15/1997		1406
Ethyl benzene		<5	ug/L	5	05/15/1997		1406
2-Hexanone		<50	ug/L	50	05/15/1997		1406
4-Methyl-2-pentanone (MIBK)		<50	ug/L	50	05/15/1997		1406

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT BLANKS

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
Methylene chloride		<5	ug/L	5	05/15/1997		1406
Styrene		<5	ug/L	5	05/15/1997		1406
1,1,2,2-Tetrachloroethane		<5	ug/L	5	05/15/1997		1406
Tetrachloroethene		<5	ug/L	5	05/15/1997		1406
Toluene		<5	ug/L	5	05/15/1997		1406
1,1,1-Trichloroethane		<5	ug/L	5	05/15/1997		1406
1,1,2-Trichloroethane		<5	ug/L	5	05/15/1997		1406
Trichloroethene		<5	ug/L	5	05/15/1997		1406
Vinyl acetate		<50	ug/L	50	05/15/1997		1406
Vinyl chloride		<10	ug/L	10	05/15/1997		1406
Xylenes, Total		<5	ug/L	5	05/15/1997		1406

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION STANDARD

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Parameter	Flag	CCVS True Concentration	Units	CCVS Concentration Found	CCVS Percent Recovery	Date Analyzed	Run Batch Number
N-Nitrate/Nitrite		0.500	mg/L	0.492	98.4	05/21/1997	30
Sulfate		20.0	mg/L	19.5	97.5	05/20/1997	585
Arsenic, Dissolved, ICP		1.00	mg/L	1.07	107.0	05/21/1997	1609
Barium, Dissolved, ICP		1.00	mg/L	1.01	101.0	05/22/1997	1498
Barium, Dissolved, ICP		1.00	mg/L	0.98	98.0	05/22/1997	1498
Cadmium, Dissolved, ICP		1.00	mg/L	0.98	98.0	05/21/1997	1671
Chromium, Dissolved, ICP		1.00	mg/L	1.02	102.0	05/21/1997	1671
Copper, Dissolved, ICP		1.00	mg/L	1.01	101.0	05/21/1997	1662
Iron, Dissolved, ICP		1.00	mg/L	1.01	101.0	05/21/1997	1665
Lead, Dissolved, ICP		1.00	mg/L	1.00	100.0	05/21/1997	1680
Manganese, Dissolved, ICP		1.00	mg/L	0.98	98.0	05/21/1997	1645
Mercury, Dissolved, CVAA		0.0050	mg/L	0.0053	106.0	05/14/1997	1373
Selenium, Dissolved, ICP		1.00	mg/L	0.98	98.0	05/21/1997	1608
Silver, Dissolved, ICP		1.00	mg/L	1.02	102.0	05/21/1997	1661
Zinc, Dissolved, ICP		1.00	mg/L	0.98	98.0	05/21/1997	1667
VOLATILES-8240 AQ(PRESERVED)							
Chloroform		20	ug/L	16	80.0	05/14/1997	1405
1,1-Dichloroethene		20	ug/L	16	80.0	05/14/1997	1405
1,2-Dichloropropane		20	ug/L	17	85.0	05/14/1997	1405
Ethyl benzene		20	ug/L	18	90.0	05/14/1997	1405
Toluene		20	ug/L	19	95.0	05/14/1997	1405
Vinyl chloride		20	ug/L	20	100.0	05/14/1997	1405

CCVS - Continuing Calibration Verification Standard

QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION STANDARD

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Parameter	Flag	CCVS True Concentration	Units	CCVS Concentration Found	CCVS Percent Recovery	Date Analyzed	Run Batch Number
VOLATILES-8240 AQ(PRESERVED)							
Chloroform		20	ug/L	18	90.0	05/15/1997	1406
1,1-Dichloroethene		20	ug/L	16	80.0	05/15/1997	1406
1,2-Dichloropropane		20	ug/L	16	80.0	05/15/1997	1406
Ethyl benzene		20	ug/L	19	95.0	05/15/1997	1406
Toluene		20	ug/L	18	90.0	05/15/1997	1406
Vinyl chloride		20	ug/L	24	120.0	05/15/1997	1406

CCVS - Continuing Calibration Verification Standard

QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Parameter	Flag	Units	Sample Result	Spike Matrix MS			Duplicate			MSD	Date Analyzed	Prep Batch Number	Run Batch Number
				Amount Added	Spike Result	Percent Recovery	Amount Added	MSD Result	Percent Recovery				
Chloride		mg/L	420	400	830	102.5	400	840	105.0	2.4	05/21/1997		761
Chloride		mg/L	<50	500	550	110.0	500	525	105.0	4.7	05/21/1997		761
Nitrate/Nitrite		mg/L	1.6	5.0	5.8	84.0	5.0	5.9	86.0	2.4	05/21/1997		30
Nitrate		mg/L	1110	500	1510	80.0	500	1490	76.0	5.1	05/20/1997		585
Arsenic, Dissolved, ICP		mg/L	<0.03	1.00	1.13	113.0	1.00	1.10	110.0	2.7	05/21/1997	239	1609
Barium, Dissolved, ICP		mg/L	0.02	1.00	1.00	98.0	1.00	1.00	98.0	0.0	05/22/1997	239	1498
Cadmium, Dissolved, ICP		mg/L	<0.01	1.00	0.97	97.0	1.00	0.94	94.0	3.1	05/21/1997	239	1671
Chromium, Dissolved, ICP		mg/L	<0.01	1.00	1.03	103.0	1.00	1.00	100.0	3.0	05/21/1997	239	1671
Copper, Dissolved, ICP		mg/L	<0.01	1.00	1.03	103.0	1.00	0.99	99.0	3.9	05/21/1997	239	1662
Iron, Dissolved, ICP		mg/L	<0.01	1.00	1.04	104.0	1.00	1.00	100.0	3.9	05/21/1997	239	1665
Iron, Dissolved, ICP		mg/L	1.85	1.00	2.61	76.0	1.00	2.60	75.0	1.3	05/21/1997	239	1665
Lead, Dissolved, ICP		mg/L	<0.03	1.00	0.97	97.0	1.00	0.94	94.0	3.1	05/21/1997	239	1680
Manganese, Dissolved, ICP		mg/L	1.07	1.00	2.05	98.0	1.00	1.99	92.0	6.3	05/21/1997	239	1645
Manganese, Dissolved, ICP		mg/L	1.47	1.00	2.24	77.0	1.00	2.23	76.0	1.3	05/21/1997	239	1645
Mercury, Dissolved, CVAA		mg/L	<0.0002	0.0050	0.0053	106.0	0.0050	0.0051	102.0	3.8	05/14/1997		1373
Mercury, Dissolved, CVAA		mg/L	<0.0002	0.0050	0.0057	114.0	0.0050	0.0049	98.0	15.0	05/14/1997		1373
Mercury, Dissolved, CVAA		mg/L	<0.02	0.050	0.040	80.0	0.050	0.041	82.0	2.5	05/14/1997		1373
Selenium, Dissolved, ICP		mg/L	<0.04	1.00	1.07	107.0	1.00	1.03	103.0	3.8	05/21/1997	239	1608
Silver, Dissolved, ICP		mg/L	0.02	1.00	0.98	96.0	1.00	0.95	93.0	3.2	05/21/1997	239	1661
Zinc, Dissolved, ICP		mg/L	0.02	1.00	1.01	99.0	1.00	0.98	96.0	3.1	05/21/1997	239	1667
VOLATILES-8240 AQ(PRESERVED)													
Benzene		ug/L	<5	20	21	105.0	20	20	100.0	4.9	05/14/1997		1405
Chlorobenzene		ug/L	<5	20	20	100.0	20	22	110.0	9.5	05/14/1997		1405
1,1-Dichloroethene		ug/L	<5	20	20	100.0	20	23	115.0	14.0	05/14/1997		1405
Toluene		ug/L	<5	20	21	105.0	20	21	105.0	0.0	05/14/1997		1405
Trichloroethene		ug/L	<5	20	21	105.0	20	20	100.0	4.9	05/14/1997		1405

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
The sample selected for QA may not necessarily be your sample.

QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate		MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep	Run
							Spike	MSD				Batch	Batch
							Amount	Result				Number	Number
VOLATILES-8240 AQ (PRESERVED)													
Benzene		ug/L	<5	20	19	95.0	20	19	95.0	0.0	05/15/1997		1406
Chlorobenzene		ug/L	<5	20	21	105.0	20	20	100.0	4.9	05/15/1997		1406
Dichloroethene		ug/L	39	20	58	95.0	20	53	70.0	30.3	05/15/1997		1406
Toluene		ug/L	<5	20	20	100.0	20	19	95.0	5.0	05/15/1997		1406
Trichloroethene		ug/L	<5	20	22	110.0	20	20	100.0	9.5	05/15/1997		1406

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
The sample selected for QA may not necessarily be your sample.

QUALITY CONTROL REPORT DUPLICATES

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Parameter	Flag	Units	Sample Result	Duplicate Sample Result	RPD	Date Analyzed	Prep Batch Number	Run Batch Number
Total Dissolved Solids		mg/L	2660	2590	2.7	05/14/1997		717
Total Dissolved Solids		mg/L	964	974	1.0	05/14/1997		717

QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

06/26/1997

EPIC Job Number: 97.01910

Project Description:
Job Description: TWP/WT-1 ER Pit Area

Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	Units	LCS Conc Found	LCS % Rec.	LCS Dup Conc. Found	LCS Dup % Rec	LCS % RPD	Flag	Date Analyzed
Chloride		761	1000	mg/L	990	99.0					05/21/1997
N-Nitrate/Nitrite		30	0.200	mg/L	0.199	99.5					05/21/1997
Sulfate		585	20.0	mg/L	19.8	99.0					05/20/1997
Barium, Dissolved, ICP	239	1496	1.00	mg/L	0.91	91.0					05/21/1997
Barium, Dissolved, ICP	239	1498	1.00	mg/L	0.97	97.0					05/22/1997
Barium, Dissolved, ICP	239	1498	1.00	mg/L	1.04	104.0					05/22/1997
Cadmium, Dissolved, ICP	239	1671	1.00	mg/L	0.96	96.0					05/21/1997
Chromium, Dissolved, ICP	239	1671	1.00	mg/L	1.00	100.0					05/21/1997
Copper, Dissolved, ICP	239	1662	1.00	mg/L	0.97	97.0					05/21/1997
Iron, Dissolved, ICP	239	1665	1.00	mg/L	1.00	100.0					05/21/1997
Lead, Dissolved, ICP	239	1680	1.00	mg/L	0.97	97.0					05/21/1997
Manganese, Dissolved, ICP	239	1645	1.00	mg/L	0.98	98.0					05/21/1997
Mercury, Dissolved, CVAA		1373	0.0050	mg/L	0.0052	104.0					05/14/1997
Zinc, Dissolved, ICP	239	1667	1.00	mg/L	0.96	96.0					05/21/1997
Total Dissolved Solids		717	2000	mg/L	1980	99.0					05/14/1997
VOLATILES-8240 AQ(PRESERVED)											
Benzene		1405	20	ug/L	18	90.0	19	95.0	5.4		05/14/1997
Chlorobenzene		1405	20	ug/L	20	100.0	20	100.0	0.0		05/14/1997
1,1-Dichloroethene		1405	20	ug/L	16	80.0	17	85.0	6.1		05/14/1997
Toluene		1405	20	ug/L	19	95.0	20	100.0	5.0		05/14/1997
Trichloroethene		1405	20	ug/L	19	95.0	20	100.0	5.0		05/14/1997
VOLATILES-8240 AQ(PRESERVED)											
Benzene		1406	20	ug/L	19	95.0					05/15/1997
Chlorobenzene		1406	20	ug/L	20	100.0					05/15/1997
1,1-Dichloroethene		1406	20	ug/L	19	95.0					05/15/1997
Toluene		1406	20	ug/L	21	105.0					05/15/1997
Trichloroethene		1406	20	ug/L	20	100.0					05/15/1997

LCS - Laboratory Control Standard

For samples with insufficient sample volume, an LCS/LCS duplicate is reported instead of an MS/MSD.

LABORATORIES, INC.

1548 VALWOOD PARKWAY, SUITE 118
CARROLLTON, TEXAS 75006
DALLAS (972) 406-8100
AUSTIN (512) 928-8905

CHAIN OF CUSTODY RECORD

COMPANY Enron Operations (ed)
ADDRESS P.O. Box 1188 Houston TX 77251
PHONE (713) 646-7327 FAX 646-7867
PROJECT NAME/LOCATION TWR / WT-1 BR PIT AREA
PROJECT NUMBER _____
PROJECT MANAGER _____

REPORT TO: George Fournier
of Enean Houshold
 INVOICE TO: 3AC3142
720, Box 188
Alvaston TX 77225
 P.O. NO. _____
 EPIC QUOTE NO. _____

EPIC QUOTE NO.

SAMPLED BY
Stanley Sharp
(PRINT NAME)

SIGNATURE _____
SIGNATURE _____
SIGNATURE _____

ANALYSES

To assist me in selecting the proper method

Is this work being conducted for regulatory compliance monitoring?

Is this work being conducted for regulatory enforcement activities?

Which regulations apply: RCRA _____ NPDES _____

UST ☒ Dn

Other ☐

COMMENTS

250 ml 16 Treat

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	HCl	NaOH	HNO ₃	H ₂ SO ₄	OTHER	TOS	CHLOR	SULF
5/19/97	1610	MW-1	H	X							X	X	X
1045		MW-3 MW-4											
1520		MW-5											
1325		MW-6											
1400		MW-7											
1445		MW-8											
1245		MW-9											
1145		MW-15											
1115		MW-16											
		MW-17											

250 ml 1lb Treat

Which regulations apply: RCRA ☐ NPDES Wastewater ☐
 UST ☐ Drinking Water ☐
 Other ☒ None ☐

COMMENTS

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / NO

COC SEALS PRESENT AND INTACT? YES / NO
VOLATILES FREE OF HEADSPACE? YES / NO

TEMPERATURE UPON RECEIPT: 180 °C
Bottles supplied by EPIC? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA

I REQUEST EPIC TO DISPOSE OF ALL SAMPLE

DATE 5/18/97

RELINQUISHED BY:

DATE	TIME
✓	

RECEIVED BY:

RELINQUISHED BY:

DATE _____

TIME

RECEIVED FOR EPIC BY:

METHOD OF SHIPMENT

REMARKS:

Report of Ground Water Monitoring Activities

**WT-1 Compressor Station: Engine Room Drain Pit Area
Transwestern Pipeline Company**

Attachment #3

**Lab Reports for August 1997
Ground Water Sampling Event**



LABORATORIES, INC.



ANALYTICAL AND QUALITY CONTROL REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03351

Page 1

Project Description:
Job Description: TWP WT-1 ERP

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to EPIC Laboratories, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
337647	MW-4	08/06/1997	17:30	08/09/1997
337648	MW-16	08/06/1997	18:15	08/09/1997
337649	MW-1	08/07/1997	17:10	08/09/1997
337650	MW-5	08/07/1997	16:35	08/09/1997
337651	MW-6	08/07/1997	14:20	08/09/1997
337652	MW-7	08/07/1997	15:05	08/09/1997
337653	MW-8	08/07/1997	15:50	08/09/1997
337654	MW-14	08/07/1997	13:30	08/09/1997
337655	MW-15	08/07/1997	11:15	08/09/1997

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Debby Skogen

Debby Skogen
Project Coordinator

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03351
Sample Number: 337647

Page 2

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		12.8	mg/L	E-353.3		08/19/1997	cgl		37	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1720	0.03
Barium, Dissolved, ICP		0.33	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1606	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Chromium, Dissolved, ICP		0.02	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1772	0.01
Iron, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/21/1997	sps	244	1770	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1790	0.03
Manganese, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1756	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		08/13/1997	bwb		1422	0.0002
Selenium, Dissolved, ICP		0.08	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1718	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/13/1997	sps	244	1751	0.01
Zinc, Dissolved, ICP		0.25	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1777	0.03

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03351
Sample Number: 337648

Page 3

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-16

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		1.7	mg/L	E-353.3		08/19/1997	cgl		37	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1720	0.03
Barium, Dissolved, ICP		0.67	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1606	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1772	0.01
Iron, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/21/1997	sps	244	1770	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1790	0.03
Manganese, Dissolved, ICP		1.1	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1756	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		08/13/1997	bwb		1422	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1718	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/13/1997	sps	244	1751	0.01
Zinc, Dissolved, ICP		0.29	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1777	0.03

ANALYTICAL RESULTS REPORT

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08/28/1997

EPIC Job Number: 97.03351
Sample Number: 337649

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		5.4	mg/L	E-353.3		08/19/1997	cgl		37	0.05
Arsenic, Dissolved, ICP		0.11	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1720	0.03
Barium, Dissolved, ICP		27	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1606	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1772	0.01
Iron, Dissolved, ICP		0.21	mg/L	S-6010A	08/12/1997	08/21/1997	sps	244	1770	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1790	0.03
Manganese, Dissolved, ICP		0.02	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1756	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		08/13/1997	bwb		1422	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1718	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/13/1997	sps	244	1751	0.01
Zinc, Dissolved, ICP		0.46	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1777	0.03

ANALYTICAL RESULTS REPORT

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08/28/1997

EPIC Job Number: 97.03351
Sample Number: 337650

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		0.09	mg/L	E-353.3		08/19/1997	cgl		37	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1720	0.03
Barium, Dissolved, ICP		16	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1606	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1772	0.01
Iron, Dissolved, ICP		0.08	mg/L	S-6010A	08/12/1997	08/21/1997	sps	244	1770	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1790	0.03
Manganese, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1756	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		08/13/1997	bwb		1422	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1718	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/13/1997	sps	244	1751	0.01
Zinc, Dissolved, ICP		0.24	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1777	0.03

ANALYTICAL RESULTS REPORT

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08/28/1997

EPIC Job Number: 97.03351
Sample Number: 337651

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		0.40	mg/L	E-353.3		08/19/1997	cgl		37	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1720	0.03
Barium, Dissolved, ICP		0.80	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1606	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1772	0.01
Iron, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/21/1997	sps	244	1770	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1790	0.03
Manganese, Dissolved, ICP		0.93	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1756	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		08/13/1997	bwb		1422	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1718	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/13/1997	sps	244	1751	0.01
Zinc, Dissolved, ICP		0.29	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1777	0.03

ANALYTICAL RESULTS REPORT

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08/28/1997

EPIC Job Number: 97.03351
Sample Number: 337652

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		4.1	mg/L	E-353.3		08/19/1997	cgl		37	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1720	0.03
Barium, Dissolved, ICP		0.61	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1606	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1772	0.01
Iron, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/21/1997	sps	244	1770	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1790	0.03
Manganese, Dissolved, ICP		0.09	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1756	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		08/13/1997	bwb		1422	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1718	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/13/1997	sps	244	1751	0.01
Zinc, Dissolved, ICP		0.22	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1777	0.03

ANALYTICAL RESULTS REPORT

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08/28/1997

EPIC Job Number: 97.03351
Sample Number: 337653

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		0.07	mg/L	E-353.3		08/19/1997	cgl		37	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1720	0.03
Barium, Dissolved, ICP		0.80	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1606	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1772	0.01
Iron, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/21/1997	sps	244	1770	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1790	0.03
Manganese, Dissolved, ICP		0.67	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1756	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		08/13/1997	bwb		1422	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1718	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/13/1997	sps	244	1751	0.01
Zinc, Dissolved, ICP		0.24	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1777	0.03

ANALYTICAL RESULTS REPORT

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08/28/1997

EPIC Job Number: 97.03351
Sample Number: 337654

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-14

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		1.9	mg/L	E-353.3		08/19/1997	cgl		37	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1720	0.03
Barium, Dissolved, ICP		0.73	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1606	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1772	0.01
Iron, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/21/1997	sps	244	1770	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1790	0.03
Manganese, Dissolved, ICP		0.11	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1756	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		08/13/1997	bwb		1422	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1718	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/13/1997	sps	244	1751	0.01
Zinc, Dissolved, ICP		0.22	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1777	0.03

ANALYTICAL RESULTS REPORT

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08/28/1997

EPIC Job Number: 97.03351
Sample Number: 337655

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-15

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		10.2	mg/L	E-353.3		08/19/1997	cgl		37	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1720	0.03
Barium, Dissolved, ICP		0.63	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1606	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1781	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1772	0.01
Iron, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/21/1997	sps	244	1770	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1790	0.03
Manganese, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1756	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		08/13/1997	bwb		1422	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1718	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	08/12/1997	08/13/1997	sps	244	1751	0.01
Zinc, Dissolved, ICP		0.26	mg/L	S-6010A	08/12/1997	08/26/1997	sps	244	1777	0.03

QUALITY CONTROL REPORT BLANKS

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08/28/1997

EPIC Job Number: 97.03351

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
N-Nitrate/Nitrite		<0.05	mg/L	0.05	08/19/1997		37
Arsenic, Dissolved, ICP		<0.03	mg/L	0.03	08/26/1997	244	1720
Barium, Dissolved, ICP		<0.01	mg/L	0.01	08/26/1997	244	1606
Cadmium, Dissolved, ICP		<0.01	mg/L	0.01	08/26/1997	244	1781
Chromium, Dissolved, ICP		<0.01	mg/L	0.01	08/26/1997	244	1781
Copper, Dissolved, ICP		<0.01	mg/L	0.01	08/26/1997	244	1772
Iron, Dissolved, ICP		<0.01	mg/L	0.01	08/26/1997	244	1776
Lead, Dissolved, ICP		<0.03	mg/L	0.03	08/26/1997	244	1790
Manganese, Dissolved, ICP		<0.01	mg/L	0.01	08/26/1997	244	1756
Mercury, Dissolved, CVAA		<0.0002	mg/L	0.0002	08/13/1997		1422
Selenium, Dissolved ICP		<0.04	mg/L	0.04	08/26/1997	244	1718
Silver, Dissolved, ICP		<0.01	mg/L	0.01	08/13/1997	244	1751
Zinc, Dissolved, ICP		<0.03	mg/L	0.03	08/26/1997	244	1777

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION STANDARD

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08/28/1997

EPIC Job Number: 97.03351

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	CCVS True Concentration	Units	CCVS Concentration Found	CCVS Percent Recovery	Date Analyzed	Run Batch Number
N-Nitrate/Nitrite		0.500	mg/L	0.465	93.0	08/19/1997	37
Arsenic, Dissolved, ICP		4.00	mg/L	4.16	104.0	08/26/1997	1720
Barium, Dissolved, ICP		4.00	mg/L	4.32	108.0	08/26/1997	1606
Cadmium, Dissolved, ICP		4.00	mg/L	4.35	108.8	08/26/1997	1781
Chromium, Dissolved, ICP		4.00	mg/L	4.34	108.5	08/26/1997	1781
Copper, Dissolved, ICP		4.00	mg/L	4.38	109.5	08/26/1997	1772
Iron, Dissolved, ICP		4.00	mg/L	4.07	101.8	08/21/1997	1770
Lead, Dissolved, ICP		4.00	mg/L	4.35	108.8	08/26/1997	1790
Manganese, Dissolved, ICP		4.00	mg/L	4.35	108.8	08/26/1997	1756
Mercury, Dissolved, CVAA		0.0050	mg/L	0.0052	104.0	08/13/1997	1422
Selenium, Dissolved, ICP		4.00	mg/L	4.32	108.0	08/26/1997	1718
Silver, Dissolved, ICP		1.00	mg/L	1.05	105.0	08/13/1997	1751
Zinc, Dissolved, ICP		4.00	mg/L	4.32	108.0	08/26/1997	1777

CCVS - Continuing Calibration Verification Standard

QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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08/28/1997

EPIC Job Number: 97.03351

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	Units	Sample Result	Spike Matrix		MS Percent Recovery	Duplicate Spike		MSD		Date Analyzed	Prep Batch Number	Run Batch Number
				Amount Added	Spike Result		Amount Added	MSD Result	Percent Recovery	MS/MSD RPD			
N-Nitrate/Nitrite		mg/L	0.85	5.00	6.61	115.2	5.00	7.01	123.2	6.7	08/19/1997		37
Arsenic, Dissolved, ICP		mg/L	<0.03	1.00	1.14	114.0	1.00	1.21	121.0	6.0	08/26/1997	244	1720
Barium, Dissolved, ICP		mg/L	0.33	1.00	1.11	78.0	1.00	1.17	84.0	7.4	08/26/1997	244	1606
Cadmium, Dissolved, ICP		mg/L	<0.01	1.00	0.99	99.0	1.00	1.09	109.0	9.5	08/26/1997	244	1781
Chromium, Dissolved, ICP		mg/L	0.02	1.00	0.97	95.0	1.00	1.06	104.0	8.9	08/26/1997	244	1781
Copper, Dissolved, ICP		mg/L	<0.01	1.00	0.99	99.0	1.00	1.07	107.0	7.7	08/26/1997	244	1772
Iron, Dissolved, ICP		mg/L	<0.01	10.0	10.8	108.0	10.0	11.1	111.0	2.7	08/21/1997	244	1770
Lead, Dissolved, ICP		mg/L	<0.03	1.00	1.11	111.0	1.00	1.19	119.0	7.0	08/26/1997	244	1790
Manganese, Dissolved, ICP		mg/L	<0.01	1.00	0.99	99.0	1.00	1.07	107.0	7.7	08/26/1997	244	1756
Mercury, Dissolved, CVAA		mg/L	<0.0002	0.0050	0.0052	104.0	0.0050	0.0053	106.0	1.9	08/13/1997		1422
Mercury, Dissolved, CVAA		mg/L	<0.02	0.050	0.057	114.0	0.050	0.058	116.0	1.7	08/13/1997		1422
Selenium, Dissolved, ICP		mg/L	0.08	1.00	1.03	95.0	1.00	1.11	103.0	8.0	08/26/1997	244	1718
Silver, Dissolved, ICP		mg/L	<0.01	1.00	0.96	96.0	1.00	0.81	81.0	16.9	08/13/1997	244	1751
Zinc, Dissolved, ICP		mg/L	0.25	1.00	1.11	86.0	1.00	1.17	92.0	6.7	08/26/1997	244	1777

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
The sample selected for QA may not necessarily be your sample.

EDL - Elevated Detection Limit due to matrix interference.

QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03351

Project Description:
Job Description: TWP WT-1 ERP

Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	Units	LCS Conc Found	LCS % Rec.	LCS Dup Conc. Found	LCS Dup % Rec	LCS % RPD	Flag	Date Analyzed
N-Nitrate/Nitrite		37	0.200	mg/L	0.219	109.5					08/19/1997
Arsenic, Dissolved, ICP	244	1720	1.00	mg/L	1.15	115.0					08/26/1997
Barium, Dissolved, ICP	244	1606	1.00	mg/L	1.20	120.0					08/26/1997
Cadmium, Dissolved, ICP	244	1781	1.00	mg/L	1.19	119.0					08/26/1997
Chromium, Dissolved, ICP	244	1781	1.00	mg/L	1.17	117.0					08/26/1997
Copper, Dissolved, ICP	244	1772	1.00	mg/L	1.18	118.0					08/26/1997
Iron, Dissolved, ICP	244	1776	11.0	mg/L	11.6	105.5					08/26/1997
Lead, Dissolved, ICP	244	1790	1.00	mg/L	1.20	120.0					08/26/1997
Mercury, Dissolved, CVAA		1422	0.010	mg/L	0.010	100.0					08/13/1997
Silver, Dissolved, ICP	244	1774	1.00	mg/L	1.09	109.0					08/26/1997
Zinc, Dissolved, ICP	244	1777	1.00	mg/L	1.20	120.0					08/26/1997

LCS - Laboratory Control Standard

For samples with insufficient sample volume, an LCS/LCS duplicate is reported instead of an MS/MSD.

EPIC

LABORATORIES, INC.

1548 VALWOOD PARKWAY, SUITE 118
CARROLLTON, TEXAS 75006
DALLAS (972) 406-8100
AUSTIN (512) 928-8905

CHAIN OF CUSTODY RECORD

COMPANY ENRON
ADDRESS PO BOX 1188 Houston TX 77251
PHONE (713) 646-7327 FAX (713) 646-7867
PROJECT NAME/LOCATION POD #1-1 ELD
PROJECT NUMBER 00000002
PROJECT MANAGER 003/George Robinson

REPORT TO: George Robinson
INVOICE TO: Attn: 344 3142
P.O. NO. PO, BOX 1188
EPIC QUOTE NO. 10000000 77251

SAMPLED BY

(PRINT NAME)

SIGNATURE

(PRINT NAME)

SIGNATURE

ANALYSES

To assist us in selecting the proper method

Is this work being conducted for regulatory compliance monitoring?

Is this work being conducted for regulatory enforcement action?

Which regulations apply: RCRA, NPDES Wastewater, UST, Drinking Water, Other

COMMENTS

Attn: 344 3142, George Robinson, PO, Box 1188, Houston, TX 77251

See Analytical Report, May 2000

Metals, Gold & Silver for Ag

XX Nitrate & Nitrite AS

Nitrogen (353.2)

Filter, Metals Report

Analysis

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	HCl	NaOH	HNO ₃	H ₂ SO ₄	OTHER	# and Type of Containers	ANALYSES
8/19/97	1730	MW-4	A	X							YP/Y	XX METALS GOLD & SILVER
8/19/97	1815	MW-16										XX NITRATE & NITRITE
8/19/97	1710	MW-1										
8/19/97	1635	MW-58										
8/19/97	1400	MW-10										
8/19/97	1505	MW-7										
8/19/97	1550	MW-8										
8/19/97	1330	MW-14										
8/19/97	1115	MW-15	X	X								
8/19/97	1033											

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / NO

COC SEALS PRESENT AND INTACT? YES / NO
VOLATILES FREE OF HEADSPACE? YES / NO

TEMPERATURE UPON RECEIPT: _____
Bottles supplied by EPIC? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA
REQUEST EPIC TO DISPOSE OF ALL SAMPLE REMAINDERS

RELINQUISHED BY

DATE

TIME

RECEIVED BY:

RELINQUISHED BY:

DATE

TIME

RECEIVED FOR EPIC BY:

METHOD OF SHIPMENT

REMARKS:

DATE

TIME

RECEIVED FOR EPIC BY:

EPIC

LABORATORIES, INC.

ANALYTICAL AND QUALITY CONTROL REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360

Page 1

Project Description:
Job Description: TWP WT-1 ERP

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to EPIC Laboratories, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
337693	MW-4	08/06/1997	17:30	08/09/1997
337694	MW-16	08/06/1997	18:15	08/09/1997
337695	MW-1	08/07/1997	17:10	08/09/1997
337696	MW-5	08/07/1997	16:35	08/09/1997
337697	MW-6	08/07/1997	14:20	08/09/1997
337698	MW-7	08/07/1997	15:05	08/09/1997
337699	MW-8	08/07/1997	15:50	08/09/1997
337700	MW-14	08/07/1997	13:30	08/09/1997
337701	MW-15	08/07/1997	11:15	08/09/1997
337702	MW-17 DUPLICATE FOR MW-8	08/07/1997	10:33	08/09/1997
337703	Drum Sampling Event 2/4/97	08/07/1997	17:30	08/09/1997
337704	Drum Sampling Event 5/10/97	08/07/1997	17:35	08/09/1997

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Debby Skogen

Debby Skogen
Project Coordinator

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337693

Page 2

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		435	mg/L	S-9252		08/13/1997	cgl		772	5.0
Sulfate		863	mg/L	S-9038		08/14/1997	cgl		600	5.0
Total Dissolved Solids		2620	mg/L	E-160.1		08/13/1997	cgl		745	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromodichloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromoform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromomethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Butanone (MEK)		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon disulfide		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon tetrachloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		08/15/1997	dtw		1435	20
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloromethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Dibromochloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethene		5.4	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethene (total)		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloropropane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Ethyl benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
2-Hexanone		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methylene chloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337693

Page 3

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Tetrachloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Toluene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Trichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Vinyl acetate		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
1-chloride		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Arenes, Total		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
SURR: 1,2-Dichloroethane-d4		78	% Rec	S-8240A		08/15/1997	dtw		1435	76-114
SURR: Toluene-d8		100	% Rec	S-8240A		08/15/1997	dtw		1435	88-110
SURR: 4-Bromofluorobenzene		98	% Rec	S-8240A		08/15/1997	dtw		1435	86-115

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337694

Page 4

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-16

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		860	mg/L	S-9252		08/13/1997	cgl		772	5.0
Sulfate		1010	mg/L	S-9038		08/14/1997	cgl		600	5.0
Total Dissolved Solids		3480	mg/L	E-160.1		08/13/1997	cgl		745	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromodichloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloromethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Butanone (MEK)		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon disulfide		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon tetrachloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		08/15/1997	dtw		1435	20
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloromethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Dibromochloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethene (total)		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloropropane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Ethyl benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
2-Hexanone		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methylene chloride		6	ug/L	S-8240A		08/15/1997	dtw		1435	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337694

Page 5

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-16

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Tetrachloroethene		14	ug/L	S-8240A		08/15/1997	dtw		1435	5
Toluene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Trichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Methyl acetate		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methyl chloride		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Xylenes, Total		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
SURR: 1,2-Dichloroethane-d4		76	% Rec	S-8240A		08/15/1997	dtw		1435	76-114
SURR: Toluene-d8		97	% Rec	S-8240A		08/15/1997	dtw		1435	88-110
SURR: 4-Bromofluorobenzene		92	% Rec	S-8240A		08/15/1997	dtw		1435	86-115

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337695

Page 6

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		150	mg/L	S-9252		08/13/1997	cgl		772	5.0
Sulfate		<5.0	mg/L	S-9038		08/14/1997	cgl		600	5.0
Total Dissolved Solids		2910	mg/L	E-160.1		08/13/1997	cgl		745	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		1100	ug/L	S-8240A		08/15/1997	dtw		1435	1000
Benzene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Bromodichloromethane	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Chloroform	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Chloromethane	EDL	<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
2-Butanone (MEK)		1100	ug/L	S-8240A		08/15/1997	dtw		1435	1000
Carbon disulfide	EDL	<1,000	ug/L	S-8240A		08/15/1997	dtw		1435	1000
Carbon tetrachloride	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Chlorobenzene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Chloroethane	EDL	<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
2-Chloroethylvinyl ether	EDL	<200	ug/L	S-8240A		08/15/1997	dtw		1435	200
Chloroform	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Chloromethane	EDL	<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Dibromochloromethane	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
1,2-Dichlorobenzene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
1,3-Dichlorobenzene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
1,4-Dichlorobenzene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
1,1-Dichloroethane		590	ug/L	S-8240A		08/15/1997	dtw		1435	50
1,2-Dichloroethane	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
1,1-Dichloroethene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
1,2-Dichloroethene (total)	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
trans-1,2-Dichloroethene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
1,2-Dichloropropane	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
cis-1,3-Dichloropropene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
trans-1,3-Dichloropropene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Ethyl benzene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
2-Hexanone	EDL	<500	ug/L	S-8240A		08/15/1997	dtw		1435	500
Methylene chloride		200	ug/L	S-8240A		08/15/1997	dtw		1435	50
4-Methyl-2-pentanone (MIBK)		1200	ug/L	S-8240A		08/15/1997	dtw		1435	500

EDL - Elevated Detection Limit due to matrix interference.

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337695

Page 7

Project Description:
Job Description: TWP WT-1 ERP
Sample Description: MW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
1,1,2,2-Tetrachloroethane	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Tetrachloroethene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Toluene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
1,1,1-Trichloroethane	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
1,1,2-Trichloroethane	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Trichloroethene	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Vinyl acetate	EDL	<500	ug/L	S-8240A		08/15/1997	dtw		1435	500
1-chloride	EDL	<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Arenes, Total	EDL	<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
SURR: 1,2-Dichloroethane-d4		78	% Rec	S-8240A		08/15/1997	dtw		1435	76-114
SURR: Toluene-d8		99	% Rec	S-8240A		08/15/1997	dtw		1435	88-110
SURR: 4-Bromofluorobenzene		97	% Rec	S-8240A		08/15/1997	dtw		1435	86-115

EDL - Elevated Detection Limit due to matrix interference.

ANALYTICAL RESULTS REPORT

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08/28/1997

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-5.

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		300	mg/L	S-9252		08/13/1997	cgl		772	5.0
Sulfate		<5.0	mg/L	S-9038		08/14/1997	cgl		600	5.0
Total Dissolved Solids		1870	mg/L	E-160.1		08/13/1997	cgl		745	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Benzene		22	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromodichloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromoform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromomethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Butanone (MEK)		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon disulfide		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon tetrachloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroethane		11	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		08/15/1997	dtw		1435	20
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloromethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Dibromochloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethane		47	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethene (total)		53	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloropropane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Ethyl benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
2-Hexanone		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methylene chloride		7	ug/L	S-8240A		08/15/1997	dtw		1435	5
4-Methyl-2-pentanone (MIBK)		50	ug/L	S-8240A		08/15/1997	dtw		1435	50

ANALYTICAL RESULTS REPORT

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Tetrachloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Toluene		9	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Trichloroethene		35	ug/L	S-8240A		08/15/1997	dtw		1435	5
Methyl acetate		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methyl chloride		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Xylenes, Total		15	ug/L	S-8240A		08/15/1997	dtw		1435	5
SURR: 1,2-Dichloroethane-d4		79	% Rec	S-8240A		08/15/1997	dtw		1435	76-114
SURR: Toluene-d8		99	% Rec	S-8240A		08/15/1997	dtw		1435	88-110
SURR: 4-Bromofluorobenzene		96	% Rec	S-8240A		08/15/1997	dtw		1435	86-115

ANALYTICAL RESULTS REPORT

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		720	mg/L	S-9252		08/13/1997	cgl		772	5.0
Sulfate		427	mg/L	S-9038		08/14/1997	cgl		600	5.0
Total Dissolved Solids		2660	mg/L	E-160.1		08/13/1997	cgl		745	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromodichloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromoform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromomethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Butanone (MEK)		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon disulfide		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon tetrachloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		08/15/1997	dtw		1435	20
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloromethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Dibromochloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethane		12	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethene (total)		7	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloropropane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Ethyl benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
2-Hexanone		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methylene chloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50

ANALYTICAL RESULTS REPORT

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Tetrachloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Toluene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Trichloroethene		16	ug/L	S-8240A		08/15/1997	dtw		1435	5
Vinyl acetate		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
vinyl chloride		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Alkenes, Total		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
SURR: 1,2-Dichloroethane-d4		85	% Rec	S-8240A		08/15/1997	dtw		1435	76-114
SURR: Toluene-d8		101	% Rec	S-8240A		08/15/1997	dtw		1435	88-110
SURR: 4-Bromofluorobenzene		95	% Rec	S-8240A		08/15/1997	dtw		1435	86-115

ANALYTICAL RESULTS REPORT

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08/28/1997

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Sample Number: 337698

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		370	mg/L	S-9252		08/13/1997	cgl		772	5.0
Sulfate		716	mg/L	S-9038		08/14/1997	cgl		600	5.0
Total Dissolved Solids		2310	mg/L	E-160.1		08/13/1997	cgl		745	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Benzene		9	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromodichloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromoform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromomethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Butanone (MEK)		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon disulfide		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon tetrachloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		08/15/1997	dtw		1435	20
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloromethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Dibromochloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethane		22	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethene (total)		8	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloropropane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Ethyl benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
2-Hexanone		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methylene chloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50

ANALYTICAL RESULTS REPORT

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Tetrachloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Toluene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Trichloroethene		17	ug/L	S-8240A		08/15/1997	dtw		1435	5
Vinyl acetate		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Vinyl chloride		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Arenes, Total		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
SURR: 1,2-Dichloroethane-d4		78	% Rec	S-8240A		08/15/1997	dtw		1435	76-114
SURR: Toluene-d8		98	% Rec	S-8240A		08/15/1997	dtw		1435	88-110
SURR: 4-Bromofluorobenzene		99	% Rec	S-8240A		08/15/1997	dtw		1435	86-115

ANALYTICAL RESULTS REPORT

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Sample Number: 337699

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		540	mg/L	S-9252		08/13/1997	cgl		772	5.0
Sulfate		251	mg/L	S-9038		08/14/1997	cgl		600	5.0
Total Dissolved Solids		2020	mg/L	E-160.1		08/13/1997	cgl		745	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Benzene		21	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromodichloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromomethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Butanone (MEK)		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon disulfide		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon tetrachloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		08/15/1997	dtw		1435	20
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloromethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Dibromochloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethane		86	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethene		7.4	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethene (total)		30	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloropropane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Ethyl benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
2-Hexanone		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methylene chloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50

ANALYTICAL RESULTS REPORT

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Tetrachloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Toluene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Trichloroethene		49	ug/L	S-8240A		08/15/1997	dtw		1435	5
Vinyl acetate		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methyl chloride		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Arylenes, Total		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
SURR: 1,2-Dichloroethane-d4		78	% Rec	S-8240A		08/15/1997	dtw		1435	76-114
SURR: Toluene-d8		99	% Rec	S-8240A		08/15/1997	dtw		1435	88-110
SURR: 4-Bromofluorobenzene		93	% Rec	S-8240A		08/15/1997	dtw		1435	86-115

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
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08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337700

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-14

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		520	mg/L	S-9252		08/13/1997	cgl		772	5.0
Sulfate		662	mg/L	S-9038		08/14/1997	cgl		600	5.0
Total Dissolved Solids		2420	mg/L	E-160.1		08/13/1997	cgl		745	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromodichloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Dibromomethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Butanone (MEK)		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon disulfide		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon tetrachloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		08/15/1997	dtw		1435	20
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloromethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Dibromochloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethane		27	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethene (total)		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloropropane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Ethyl benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
2-Hexanone		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methylene chloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
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08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337700

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-14

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Tetrachloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Toluene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Trichloroethene		14	ug/L	S-8240A		08/15/1997	dtw		1435	5
Vinyl acetate		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Vinyl chloride		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Xylenes, Total		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
SURR: 1,2-Dichloroethane-d4		78	% Rec	S-8240A		08/15/1997	dtw		1435	76-114
SURR: Toluene-d8		97	% Rec	S-8240A		08/15/1997	dtw		1435	88-110
SURR: 4-Bromofluorobenzene		96	% Rec	S-8240A		08/15/1997	dtw		1435	86-115

ANALYTICAL RESULTS REPORT

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08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337701

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-15

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		410	mg/L	S-9252		08/13/1997	cgl		772	5.0
Sulfate		852	mg/L	S-9038		08/14/1997	cgl		600	5.0
Total Dissolved Solids		2510	mg/L	E-160.1		08/13/1997	cgl		745	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromodichloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Dibromomethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Butanone (MEK)		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon disulfide		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon tetrachloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		08/15/1997	dtw		1435	20
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloromethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Dibromochloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethene (total)		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloropropane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Ethyl benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
2-Hexanone		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methylene chloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50

ANALYTICAL RESULTS REPORT

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08/28/1997

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Sample Number: 337701

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-15

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Tetrachloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Toluene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Trichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Ethyl acetate		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Ethyl chloride		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Xylenes, Total		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
SURR: 1,2-Dichloroethane-d4		79	% Rec	S-8240A		08/15/1997	dtw		1435	76-114
SURR: Toluene-d8		95	% Rec	S-8240A		08/15/1997	dtw		1435	88-110
SURR: 4-Bromofluorobenzene		92	% Rec	S-8240A		08/15/1997	dtw		1435	86-115

ANALYTICAL RESULTS REPORT

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08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337702

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-17 (DUPLICATE FOR MW-8)

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Benzene		21	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromodichloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromoform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromomethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Butanone (MEK)		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon disulfide		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon tetrachloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		08/15/1997	dtw		1435	20
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloromethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Dibromochloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethane		88	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethene		7.8	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethene (total)		32	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloropropane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Ethyl benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
2-Hexanone		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methylene chloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Styrene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Tetrachloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Toluene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5

ANALYTICAL RESULTS REPORT

George Robinson
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08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337702

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-17

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,1,1-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Trichloroethene		51	ug/L	S-8240A		08/15/1997	dtw		1435	5
Vinyl acetate		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Vinyl chloride		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Xylenes, Total		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
SURR: 1,2-Dichloroethane-d4		84	% Rec	S-8240A		08/15/1997	dtw		1435	76-114
SURR: Toluene-d8		98	% Rec	S-8240A		08/15/1997	dtw		1435	88-110
R: 4-Bromofluorobenzene		96	% Rec	S-8240A		08/15/1997	dtw		1435	86-115

ANALYTICAL RESULTS REPORT

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08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337703

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: Drum Sampling Event 2/4/97

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Benzene		7	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromodichloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromoform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromomethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Butanone (MEK)		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon disulfide		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon tetrachloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		08/15/1997	dtw		1435	20
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloromethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Dibromochloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethane		35	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethene (total)		15	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloropropane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Ethyl benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
2-Hexanone		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methylene chloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Styrene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Tetrachloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Toluene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5

ANALYTICAL RESULTS REPORT

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08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337703

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: Drum Sampling Event 2/4/97

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,1,1-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Trichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Vinyl acetate		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Vinyl chloride		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Xylenes, Total		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
SURR: 1,2-Dichloroethane-d4		79	% Rec	S-8240A		08/15/1997	dtw		1435	76-114
SURR: Toluene-d8		99	% Rec	S-8240A		08/15/1997	dtw		1435	88-110
SURR: 4-Bromofluorobenzene		97	% Rec	S-8240A		08/15/1997	dtw		1435	86-115

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337704

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: Drum Sampling Event 5/10/97

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromodichloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromoform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromomethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Butanone (MEK)		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon disulfide		<100	ug/L	S-8240A		08/15/1997	dtw		1435	100
Carbon tetrachloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Bromobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloroethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		08/15/1997	dtw		1435	20
Chloroform		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Chloromethane		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Dibromochloromethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloroethene (total)		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,2-Dichloropropane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Ethyl benzene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
2-Hexanone		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Methylene chloride		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Styrene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Tetrachloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Toluene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360
Sample Number: 337704

Page 25

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: Drum Sampling Event 5/10/97

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,1,1-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Trichloroethene		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
Vinyl acetate		<50	ug/L	S-8240A		08/15/1997	dtw		1435	50
Vinyl chloride		<10	ug/L	S-8240A		08/15/1997	dtw		1435	10
Xylenes, Total		<5	ug/L	S-8240A		08/15/1997	dtw		1435	5
SURR: 1,2-Dichloroethane-d4		77	% Rec	S-8240A		08/15/1997	dtw		1435	76-114
SURR: Toluene-d8		98	% Rec	S-8240A		08/15/1997	dtw		1435	88-110
R: 4-Bromofluorobenzene		91	% Rec	S-8240A		08/15/1997	dtw		1435	86-115

QUALITY CONTROL REPORT BLANKS

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
Chloride		<5.0	mg/L	5.0	08/13/1997		772
Sulfate		<5.0	mg/L	5.0	08/14/1997		600
Total Dissolved Solids		<5	mg/L	5	08/13/1997		745
VOLATILES-8240 AQ(PRESERVED)							
Acetone		<100	ug/L	100	08/15/1997		1435
Benzene		<5	ug/L	5	08/15/1997		1435
Bromodichloromethane		<5	ug/L	5	08/15/1997		1435
Bromoform		<5	ug/L	5	08/15/1997		1435
Bromomethane		<10	ug/L	10	08/15/1997		1435
2-Butanone (MEK)		<100	ug/L	100	08/15/1997		1435
Carbon disulfide		<100	ug/L	100	08/15/1997		1435
Carbon tetrachloride		<5	ug/L	5	08/15/1997		1435
Chlorobenzene		<5	ug/L	5	08/15/1997		1435
Chloroethane		<10	ug/L	10	08/15/1997		1435
2-Chloroethylvinyl ether		<20	ug/L	20	08/15/1997		1435
Chloroform		<5	ug/L	5	08/15/1997		1435
Chloromethane		<10	ug/L	10	08/15/1997		1435
Dibromochloromethane		<5	ug/L	5	08/15/1997		1435
1,2-Dichlorobenzene		<5	ug/L	5	08/15/1997		1435
1,3-Dichlorobenzene		<5	ug/L	5	08/15/1997		1435
1,4-Dichlorobenzene		<5	ug/L	5	08/15/1997		1435
1,1-Dichloroethane		<5	ug/L	5	08/15/1997		1435
1,2-Dichloroethane		<5	ug/L	5	08/15/1997		1435
1,1-Dichloroethene		<5	ug/L	5	08/15/1997		1435
trans-1,2-Dichloroethene		<5	ug/L	5	08/15/1997		1435
1,2-Dichloropropane		<5	ug/L	5	08/15/1997		1435
cis-1,3-Dichloropropene		<5	ug/L	5	08/15/1997		1435
trans-1,3-Dichloropropene		<5	ug/L	5	08/15/1997		1435

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT BLANKS

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
Ethyl benzene		<5	ug/L	5	08/15/1997		1435
2-Hexanone		<50	ug/L	50	08/15/1997		1435
4-Methyl-2-pentanone (MIBK)		<50	ug/L	50	08/15/1997		1435
Methylene chloride		<5	ug/L	5	08/15/1997		1435
Styrene		<5	ug/L	5	08/15/1997		1435
1,1,2,2-Tetrachloroethane		<5	ug/L	5	08/15/1997		1435
Tetrachloroethene		<5	ug/L	5	08/15/1997		1435
Toluene		<5	ug/L	5	08/15/1997		1435
1,1,1-Trichloroethane		<5	ug/L	5	08/15/1997		1435
1,1,2-Trichloroethane		<5	ug/L	5	08/15/1997		1435
Trichloroethene		<5	ug/L	5	08/15/1997		1435
Vinyl acetate		<50	ug/L	50	08/15/1997		1435
Vinyl chloride		<10	ug/L	10	08/15/1997		1435
Xylenes, Total		<5	ug/L	5	08/15/1997		1435

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION STANDARD

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	CCVS True Concentration	Units	CCVS Concentration Found	CCVS Percent Recovery	Date Analyzed	Run Batch Number
Sulfate		20.0	mg/L	18.6	93.0	08/14/1997	600
VOLATILES-8240 AQ (PRESERVED)							
Chloroform		20	ug/L	18	90.0	08/15/1997	1435
1,1-Dichloroethene		20	ug/L	23	115.0	08/15/1997	1435
1,2-Dichloropropane		20	ug/L	21	105.0	08/15/1997	1435
Ethyl benzene		20	ug/L	17	85.0	08/15/1997	1435
Toluene		20	ug/L	21	105.0	08/15/1997	1435
Vinyl chloride		20	ug/L	15	75.0	08/15/1997	1435

CCVS - Continuing Calibration Verification Standard

QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	Units	Sample Result	Spike Matrix		MS Percent Recovery	Duplicate Spike		MSD		Date Analyzed	Prep Batch Number	Run Batch Number
				Amount Added	Spike Result		Amount Added	MSD Result	Percent Recovery	MS/MSD RPD			
Chloride		mg/L	410	400	790	95.0	400	800	97.5	2.6	08/13/1997		772
Sulfate		mg/L	863	1000	1900	103.7	1000	1870	100.7	2.9	08/14/1997		600
Sulfate		mg/L	390	200	622	116.0	200	604	107.0	8.1	08/14/1997		600
ATILES-8240 AQ (PRESERVED)													
zene		ug/L	<5	20	20	100.0	20	19	95.0	5.0	08/15/1997		1435
Chlorobenzene		ug/L	<5	20	20	100.0	20	19	95.0	5.0	08/15/1997		1435
1,1-Dichloroethene		ug/L	5.4	20	27	108.0	20	28	113.0	4.5	08/15/1997		1435
Toluene		ug/L	<5	20	20	100.0	20	18	90.0	10.4	08/15/1997		1435
Trichloroethene		ug/L	<5	20	20	100.0	20	19	95.0	5.0	08/15/1997		1435

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
The sample selected for QA may not necessarily be your sample.

QUALITY CONTROL REPORT DUPLICATES

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	Units	Sample Result	Duplicate Sample Result	RPD	Date Analyzed	Prep Batch Number	Run Batch Number
Total Dissolved Solids		mg/L	854	858	0.5	08/13/1997		745
Total Dissolved Solids		mg/L	3480	3480	0.0	08/13/1997		745

QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

08/28/1997

EPIC Job Number: 97.03360

Project Description:
Job Description: TWP WT-1 ERP

Analyte	Prep	Run	LCS		LCS	LCS	LCS	LCS	LCS		Date
	Batch	Batch	True		Conc	%	Dup Conc.	Dup	%		
	No.	No.	Conc	Units	Found	Rec.	Found	% Rec	RPD	Flag	Analyzed
Chloride		772	1000	mg/L	975	97.5					08/13/1997
Sulfate		600	20.0	mg/L	19.7	98.5					08/14/1997
Total Dissolved Solids		745	2000	mg/L	1970	98.5					08/13/1997
VOLATILES-8240 AQ (PRESERVED)											
Benzene		1435	20	ug/L	19	95.0					08/15/1997
Chlorobenzene		1435	20	ug/L	20	100.0					08/15/1997
1,1-Dichloroethene		1435	20	ug/L	21	105.0					08/15/1997
Toluene		1435	20	ug/L	19	95.0					08/15/1997
Trichloroethene		1435	20	ug/L	20	100.0					08/15/1997

LCS - Laboratory Control Standard

For samples with insufficient sample volume, an LCS/LCS duplicate is reported instead of an MS/MSD.

EPIC

LABORATORIES, INC.

1548 WALWOOD PARKWAY, SUITE 118
CARROLLTON, TEXAS 75006
DALLAS (972) 406-8100
AUSTIN (512) 928-8905

CHAIN OF CUSTODY RECORD

COMPANY ENRON
ADDRESS P.O. BOX 1188 Houston, TX 77251
PHONE (713) 644-7327 FAX (713) 644-7867
PROJECT NAME/LOCATION TWID WT-1 EEP
PROJECT NUMBER 00000001
PROJECT MANAGER DES / George Robinson

REPORT TO: George Robinson
INVOICE TO: ADD: 3HE3142
P.O. NO. P.O. Box 1188
EPIC QUOTE NO. Houston TX 77251

SAMPLED BY

(PRINT NAME)

SIGNATURE

(PRINT NAME)

SIGNATURE

ANALYSES

To assist us in selecting the proper method

Is this work being conducted for regulatory compliance monitoring? Yes ☒ No ☐

Is this work being conducted for regulatory enforcement action? Yes ☐ No ☒

Which regulations apply: RCRA ☐ NPDDES Wastewater ☐ UST ☐ Drinking Water ☐ Other ☒ None ☐

COMMENTS

* Includes 1,2-dichloroethane and o,m-p-isomers of chlorobenzene

* Detecte NO3/NO2 per George. It is reported with metals on EPIC Job 97.03351. (per George)

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	HCl	NaOH	HNO3	H2SO4	OTHER	# and Type of Containers		ANALYSES	COMMENTS
8/6/97	1730	MW-4	A	X									X VOC's 8240	
8/6/97	1815	MW-11P											STP, Chlante	
8/6/97	1720	Drum Sampling Event 2/4/97											Sulfate & Nitrate	
8/7/97	1735	Drum Sampling Event 5/10/97											analyze for NO3/NO2 per George 8/9/97	
8/7/97	1710	MW-1												
8/7/97	1035	MW-5												
8/7/97	1420	MW-6												
8/7/97	1505	MW-7												
8/7/97	1550	MW-8												
8/7/97	1330	MW-14												
8/7/97	1115	MW-15												
8/7/97	1033	MW-17												

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / NO

COC SEALS PRESENT AND INTACT? YES / NO
VOLATILES FREE OF HEADSPACE? YES / NO

TEMPERATURE UPON RECEIPT: _____
Bottles supplied by EPIC? YES / NO

SAMPLE REMAINDER DISPOSAL:

RETURN SAMPLE REMAINDER TO CLIENT VIA
REQUEST EPIC TO DISPOSE OF ALL SAMPLE REMAINDERS

DATE 8/8/97

RELINQUISHED BY:

DATE 8/8/97

TIME

RECEIVED BY:

RELINQUISHED BY:

DATE 8/9/97

TIME

RECEIVED FOR EPIC BY:

METHOD OF SHIPMENT

REMARKS:

Report of Ground Water Monitoring Activities

**WT-1 Compressor Station: Engine Room Drain Pit Area
Transwestern Pipeline Company**

Attachment #4

**Lab Reports for October 1997
Ground Water Sampling Event**



LABORATORIES, INC.

ANALYTICAL AND QUALITY CONTROL REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04087

Page 1

Project Description:
Job Description: TWP WT-1 ERP

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to EPIC Laboratories, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
340192	MW-1	10/09/1997	11:00	10/10/1997
340193	MW-4	10/08/1997	16:15	10/10/1997
340194	MW-5	10/09/1997	10:15	10/10/1997
340195	MW-6	10/09/1997	08:25	10/10/1997
340196	MW-7	10/09/1997	09:05	10/10/1997
340197	MW-8	10/09/1997	09:40	10/10/1997
340198	MW-14	10/08/1997	17:40	10/10/1997
340199	MW-15	10/08/1997	17:10	10/10/1997
340200	MW-16	10/08/1997	16:40	10/10/1997
340201	MW-17	10/09/1997	11:30	10/10/1997

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Debby Skogen

Debby Skogen
Project Coordinator

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04087
Sample Number: 340192

Page 2

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		<0.05	mg/L	E-353.3		10/22/1997	cgl		43	0.05
Arsenic, Dissolved, ICP		0.16	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1789	0.03
Barium, Dissolved, ICP		26	mg/L	S-6010A	10/12/1997	10/16/1997	sps	255	1678	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1850	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1849	0.01
Copper, Dissolved, ICP		0.04	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1840	0.01
Iron, Dissolved, ICP		0.11	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1851	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1859	0.03
Manganese, Dissolved, ICP		0.02	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1830	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		10/18/1997	bwb		1456	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1787	0.04
Silver, Dissolved, ICP	BS	<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1844	0.01
Zinc, Dissolved, ICP	BS	0.45	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1845	0.03

BS - MS/MSD outside acceptance criteria, bench spike was 85-115%.

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04087
Sample Number: 340193

Page 3

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		9.6	mg/L	E-353.3		10/22/1997	cgl		43	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1789	0.03
Barium, Dissolved, ICP		0.92	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1674	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1850	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1849	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1840	0.01
Iron, Dissolved, ICP		0.14	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1851	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1859	0.03
Manganese, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1830	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		10/18/1997	bwb		1456	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1787	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1844	0.01
Zinc, Dissolved, ICP		0.40	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1845	0.03

ANALYTICAL RESULTS REPORT

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10/23/1997

EPIC Job Number: 97.04087
Sample Number: 340194

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		<0.05	mg/L	E-353.3		10/22/1997	cgl		43	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1789	0.03
Barium, Dissolved, ICP		23.0	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1674	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1850	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1849	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1840	0.01
Iron, Dissolved, ICP		0.02	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1851	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1859	0.03
Manganese, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1830	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		10/18/1997	bwb		1456	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1787	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1844	0.01
Zinc, Dissolved, ICP		0.23	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1845	0.03

ANALYTICAL RESULTS REPORT

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10/23/1997

EPIC Job Number: 97.04087
Sample Number: 340195

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		<0.05	mg/L	E-353.3		10/22/1997	cgl		43	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1789	0.03
Barium, Dissolved, ICP		0.95	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1674	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1850	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1849	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1840	0.01
Iron, Dissolved, ICP		0.18	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1851	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1859	0.03
Manganese, Dissolved, ICP		0.91	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1830	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		10/18/1997	bwb		1456	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1787	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1844	0.01
Zinc, Dissolved, ICP		0.40	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1845	0.03

ANALYTICAL RESULTS REPORT

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10/23/1997

EPIC Job Number: 97.04087
Sample Number: 340196

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		7.0	mg/L	E-353.3		10/22/1997	cgl		43	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1789	0.03
Barium, Dissolved, ICP		0.81	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1674	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1850	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1849	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1840	0.01
Iron, Dissolved, ICP		0.19	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1851	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1859	0.03
Manganese, Dissolved, ICP		0.07	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1830	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		10/18/1997	bwb		1456	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1787	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1844	0.01
Zinc, Dissolved, ICP		0.35	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1845	0.03

ANALYTICAL RESULTS REPORT

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10/23/1997

EPIC Job Number: 97.04087
Sample Number: 340197

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		<0.05	mg/L	E-353.3		10/22/1997	cgl		43	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1789	0.03
Barium, Dissolved, ICP		0.70	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1674	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1850	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1849	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1840	0.01
Iron, Dissolved, ICP		0.18	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1851	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1859	0.03
Manganese, Dissolved, ICP		0.86	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1830	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		10/18/1997	bwb		1456	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1787	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1844	0.01
Zinc, Dissolved, ICP		0.25	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1845	0.03

ANALYTICAL RESULTS REPORT

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10/23/1997

EPIC Job Number: 97.04087
Sample Number: 340198

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-14

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		2.3	mg/L	E-353.3		10/22/1997	cgl		43	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1789	0.03
Barium, Dissolved, ICP		0.54	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1674	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1850	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1849	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1840	0.01
Iron, Dissolved, ICP		0.18	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1851	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1859	0.03
Manganese, Dissolved, ICP		0.11	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1830	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		10/18/1997	bwb		1456	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1787	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1844	0.01
Zinc, Dissolved, ICP		0.22	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1845	0.03

ANALYTICAL RESULTS REPORT

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10/23/1997

EPIC Job Number: 97.04087
Sample Number: 340199

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-15

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		5.8	mg/L	E-353.3		10/22/1997	cgl		43	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1789	0.03
Barium, Dissolved, ICP		0.53	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1674	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1850	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1849	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1840	0.01
Iron, Dissolved, ICP		0.19	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1851	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1859	0.03
Manganese, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1830	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		10/18/1997	bwb		1456	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1787	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1844	0.01
Zinc, Dissolved, ICP		0.23	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1845	0.03

ANALYTICAL RESULTS REPORT

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10/23/1997

EPIC Job Number: 97.04087
Sample Number: 340200

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-16

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		0.95	mg/L	E-353.3		10/22/1997	cgl		43	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1789	0.03
Barium, Dissolved, ICP		0.52	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1674	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1850	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1849	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1840	0.01
Iron, Dissolved, ICP		0.26	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1851	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1859	0.03
Manganese, Dissolved, ICP		1.14	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1830	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		10/18/1997	bwb		1456	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1787	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1844	0.01
Zinc, Dissolved, ICP		0.25	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1845	0.03

ANALYTICAL RESULTS REPORT

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10/23/1997

EPIC Job Number: 97.04087
Sample Number: 340201

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-17

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
N-Nitrate/Nitrite		<0.05	mg/L	E-353.3		10/22/1997	cgl		43	0.05
Arsenic, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1789	0.03
Barium, Dissolved, ICP		16.0	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1674	0.01
Cadmium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1850	0.01
Chromium, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1849	0.01
Copper, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1840	0.01
Iron, Dissolved, ICP		0.01	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1851	0.01
Lead, Dissolved, ICP		<0.03	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1859	0.03
Manganese, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/17/1997	sps	255	1830	0.01
Mercury, Dissolved, CVAA		<0.0002	mg/L	S-7470A		10/18/1997	bwb		1456	0.0002
Selenium, Dissolved, ICP		<0.04	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1787	0.04
Silver, Dissolved, ICP		<0.01	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1844	0.01
Zinc, Dissolved, ICP		0.23	mg/L	S-6010A	10/12/1997	10/15/1997	sps	255	1845	0.03

QUALITY CONTROL REPORT BLANKS

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10/23/1997

EPIC Job Number: 97.04087

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
N-Nitrate/Nitrite		<0.05	mg/L	0.05	10/22/1997		43
Arsenic, Dissolved, ICP		<0.03	mg/L	0.03	10/15/1997	255	1789
Barium, Dissolved, ICP		<0.01	mg/L	0.01	10/15/1997	255	1674
Barium, Dissolved, ICP		<0.01	mg/L	0.01	10/15/1997	255	1674
Cadmium, Dissolved, ICP		<0.01	mg/L	0.01	10/15/1997	255	1850
Chromium, Dissolved, ICP		<0.01	mg/L	0.01	10/15/1997	255	1849
Copper, Dissolved, ICP		<0.01	mg/L	0.01	10/15/1997	255	1840
Iron, Dissolved, ICP		<0.01	mg/L	0.01	10/17/1997	255	1851
Lead, Dissolved, ICP		<0.03	mg/L	0.03	10/15/1997	255	1859
Manganese, Dissolved, ICP		<0.01	mg/L	0.01	10/17/1997		1830
Mercury, Dissolved, CVAA		<0.0002	mg/L	0.0002	10/18/1997		1456
Selenium, Dissolved, ICP		<0.04	mg/L	0.04	10/15/1997	255	1787
Silver, Dissolved, ICP		<0.01	mg/L	0.01	10/15/1997	255	1844
Zinc, Dissolved, ICP		<0.03	mg/L	0.03	10/15/1997	255	1845

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION STANDARD

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10/23/1997

EPIC Job Number: 97.04087

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	CCVS		CCVS		Date Analyzed	Run Batch Number
		True Concentration	Units	Concentration Found	Percent Recovery		
N-Nitrate/Nitrite		0.500	mg/L	0.486	97.2	10/22/1997	43
Arsenic, Dissolved, ICP		1.00	mg/L	0.96	96.0	10/15/1997	1789
Barium, Dissolved, ICP		1.00	mg/L	1.00	100.0	10/15/1997	1674
Barium, Dissolved, ICP		1.00	mg/L	1.02	102.0	10/16/1997	1678
Cadmium, Dissolved, ICP		1.00	mg/L	0.93	93.0	10/15/1997	1850
Chromium, Dissolved, ICP		1.00	mg/L	0.96	96.0	10/15/1997	1849
Copper, Dissolved, ICP		1.00	mg/L	0.99	99.0	10/15/1997	1840
Iron, Dissolved, ICP		10.0	mg/L	10.6	106.0	10/17/1997	1851
Lead, Dissolved, ICP		1.00	mg/L	1.00	100.0	10/15/1997	1859
Manganese, Dissolved, ICP		10.0	mg/L	10.1	101.0	10/17/1997	1830
Mercury, Dissolved, CVAA		0.0050	mg/L	0.0052	104.0	10/18/1997	1456
Selenium, Dissolved, ICP		1.00	mg/L	0.96	96.0	10/15/1997	1787
Silver, Dissolved, ICP		1.00	mg/L	0.95	95.0	10/15/1997	1844
Zinc, Dissolved, ICP		1.00	mg/L	0.96	96.0	10/15/1997	1845

CCVS - Continuing Calibration Verification Standard

QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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10/23/1997

EPIC Job Number: 97.04087

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	Units	Sample Result	Spike Matrix MS			Duplicate		MSD		Date Analyzed	Prep Batch Number	Run Batch Number
				Amount Added	Spike Result	Percent Recovery	Amount Added	MSD Result	Percent Recovery	MS/MSD RPD			
N-Nitrate/Nitrite		mg/L	<0.05	0.200	0.206	103.0	0.200	0.202	101.0	2.0	10/22/1997		43
Arsenic, Dissolved, ICP		mg/L	0.16	1.00	1.14	98.0	1.00	1.11	95.0	3.1	10/15/1997	255	1789
Barium, Dissolved, ICP		mg/L	26	10.0	36.8	108.0	10.0	38.2	122.0	12.2	10/16/1997	255	1678
Bismuth, Dissolved, ICP		mg/L	26	10.0	36.8	108.0	10.0	38.2	122.0	12.2	10/16/1997	255	1678
Cadmium, Dissolved, ICP		mg/L	<0.01	1.00	0.92	92.0	1.00	0.92	92.0	0.0	10/15/1997	255	1850
Chromium, Dissolved, ICP		mg/L	<0.01	1.00	0.98	98.0	1.00	0.99	99.0	1.0	10/15/1997	255	1849
Copper, Dissolved, ICP		mg/L	0.04	1.00	1.03	99.0	1.00	1.03	99.0	0.0	10/15/1997	255	1840
Iron, Dissolved, ICP		mg/L	0.11	1.00	1.14	103.0	1.00	1.15	104.0	1.0	10/17/1997	255	1851
Lead, Dissolved, ICP		mg/L	<0.03	1.00	1.03	103.0	1.00	1.06	106.0	2.9	10/15/1997	255	1859
Manganese, Dissolved, ICP		mg/L	0.02	1.00	1.07	105.0	1.00	1.06	104.0	1.0	10/17/1997	255	1830
Mercury, Dissolved, CVAA		mg/L	<0.0002	0.0050	0.0052	104.0	0.0050	0.0050	100.0	3.9	10/18/1997		1456
Mercury, Dissolved, CVAA		mg/L	<0.0002	0.0050	0.0035	70.0	0.0050	0.0035	70.0	0.0	10/18/1997		1456
Selenium, Dissolved, ICP		mg/L	<0.04	1.00	1.03	103.0	1.00	0.99	99.0	3.9	10/15/1997	255	1787
Silver, Dissolved, ICP	BS	mg/L	<0.01	1.00	0.78	78.0	1.00	0.89	89.0	13.2	10/15/1997	255	1844
Zinc, Dissolved, ICP	BS	mg/L	0.45	1.00	1.50	105.0	1.00	1.54	109.0	3.7	10/15/1997	255	1845

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
The sample selected for QA may not necessarily be your sample.

BS - MS/MSD outside acceptance criteria, bench spike was 85-115%.

QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04087

Project Description:

Job Description: TWP WT-1 ERP

Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	Units	LCS Conc Found	LCS % Rec.	LCS Dup Conc. Found	LCS Dup % Rec	LCS % RPD	Flag	Date Analyzed
N-Nitrate/Nitrite		43	0.200	mg/L	0.194	97.0					10/22/1997
Arsenic, Dissolved, ICP	255	1789	1.00	mg/L	0.92	92.0					10/15/1997
Barium, Dissolved, ICP	255	1674	1.00	mg/L	1.00	100.0					10/15/1997
Barium, Dissolved, ICP	255	1674	1.00	mg/L	1.00	100.0					10/15/1997
Cadmium, Dissolved, ICP	255	1850	1.00	mg/L	0.95	95.0					10/15/1997
Chromium, Dissolved, ICP	255	1849	1.00	mg/L	1.04	104.0					10/15/1997
Copper, Dissolved, ICP	255	1840	1.00	mg/L	1.10	110.0					10/15/1997
Iron, Dissolved, ICP	255	1851	1.00	mg/L	1.11	111.0					10/17/1997
Lead, Dissolved, ICP	255	1859	1.00	mg/L	1.00	100.0					10/15/1997
Manganese, Dissolved, ICP	255	1830	1.00	mg/L	1.09	109.0					10/17/1997
Mercury, Dissolved, CVAA		1456	0.0050	mg/L	0.0054	108.0					10/18/1997
Selenium, Dissolved, ICP	255	1787	1.00	mg/L	0.97	97.0					10/15/1997
Zinc, Dissolved, ICP	255	1845	1.00	mg/L	1.11	111.0					10/15/1997

LCS - Laboratory Control Standard

For samples with insufficient sample volume, an LCS/LCS duplicate is reported instead of an MS/MSD.

LABORATORIES, INC.

1548 VALWOOD PARKWAY, SUITE 118
CARROLLTON, TEXAS 75006
DALLAS (972) 406-8100
AUSTIN (512) 928-8905

CHAIN OF CUSTODY RECORD

COMPANY ENR ON
ADDRESS PO BOX 1188 Houston TX 77251
PHONE 713/646-7327 FAX 713/646-7167
PROJECT NAME/LOCATION TWD W-1 E&P
PROJECT NUMBER _____
PROJECT MANAGER _____

REPORT TO: NEWTON COBURN
2 ENCL
 ATTN: 3423132
 INVOICE TO: P.O. BOX 1188
HOUSTON TX 772
 P.O. NO. _____
 EPIC QUOTE NO. _____

SAMPLED BY

PRINT NAME

SIGNATURE

SIGNATURE

(PRINT NAME)

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	HCl	NaOH	HNO ₃	H ₂ SO ₄	OTHER	# and type of Containers	enforcement action?	YES	NO
09/01/11	1100	MW-1	X	X										
09/01/11	1015	MW-4	X	X										
09/01/11	1015	MW-5	X	X										
10/01/11	0825	MW-6	X	X										
01/01/11	0905	MW-7	X	X										
06/01/11	0940	MW-8	X	X										
06/01/11	0940	MW-14	X	X										
06/01/11	1100	MW-15	X	X										
06/01/11	1140	MW-16	X	X										
10/01/11	1130	MW-17	X	X										
		TEMPERATURE												

COMMENTS

* INCLUDES AS, Ba, Cd, Cr, Pb, Hg, Se, Ag, Cu for MW, Zn Method 8000 & 7490 for Ag

SEE NITRATE & NITRITE AS AMMONIUM (353, 2)

7 LITER METALS BEFORE ANALYSIS

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / NO

COC SEALS PRESENT AND INTACT? YES / NO
VOLATILES FREE OF HEADSPACE? YES / NO

TEMPERATURE UPON RECEIPT: _____
Bottles supplied by EPIC? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA

I REQUEST EPIC TO DISPOSE OF ALL SAMPLE REMAINDERS

~~RELINQUISHED BY~~

DATE / / TIME

RECEIVED BY:

RELIQUISHED BY:

DATE _____

TIME

RECEIVED FOR EPIC BY

METHOD OF SHIPMENT

REMARKS

Pinball # 4871937652



LABORATORIES, INC.

ANALYTICAL AND QUALITY CONTROL REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086

Page 1

Project Description:
Job Description: TWP WT-1 ERP

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to EPIC Laboratories, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
340181	MW-1	10/09/1997	11:00	10/10/1997
340182	MW-4	10/08/1997	16:15	10/10/1997
340183	MW-5	10/09/1997	10:15	10/10/1997
340184	MW-6	10/09/1997	08:25	10/10/1997
340185	MW-7	10/09/1997	09:05	10/10/1997
340186	MW-8	10/09/1997	09:40	10/10/1997
340187	MW-14	10/08/1997	11:40	10/10/1997
340188	MW-15	10/08/1997	17:10	10/10/1997
340189	MW-16	10/08/1997	16:40	10/10/1997
340190	MW-17	10/09/1997	11:30	10/10/1997
340191	Trip Blank			10/10/1997

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Debby Skogen

Debby Skogen
Project Coordinator

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086
Sample Number: 340181

Page 2

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		175	mg/L	S-9252		10/20/1997	cgl		780	5.0
Sulfate		<5.0	mg/L	S-9038		10/20/1997	cgl		605	5.0
Total Dissolved Solids		2690	mg/L	E-160.1		10/16/1997	cgl		761	5
VOLATILES-8240 AQ(PRESERVED)										
Acetone		1660	ug/L	S-8240A		10/14/1997	zst		1447	1,000
Benzene	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Bromodichloromethane	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Chloroform	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Dibromomethane	EDL	<100	ug/L	S-8240A		10/14/1997	zst		1447	100
2-Butanone (MEK)	EDL	<1,000	ug/L	S-8240A		10/14/1997	zst		1447	1,000
Carbon disulfide	EDL	<1,000	ug/L	S-8240A		10/14/1997	zst		1447	1,000
Carbon tetrachloride	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Chlorobenzene	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Chloroethane	EDL	<100	ug/L	S-8240A		10/14/1997	zst		1447	100
2-Chloroethylvinyl ether	EDL	<200	ug/L	S-8240A		10/14/1997	zst		1447	200
Chloroform	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Chloromethane	EDL	<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Dibromochloromethane	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
1,2-Dichlorobenzene	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
1,3-Dichlorobenzene	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
1,4-Dichlorobenzene	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
1,1-Dichloroethane		597	ug/L	S-8240A		10/14/1997	zst		1447	50
1,2-Dichloroethane	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
1,1-Dichloroethene	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
1,2-Dichloroethene (total)	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
trans-1,2-Dichloroethene	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
1,2-Dichloropropane	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
cis-1,3-Dichloropropene	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
trans-1,3-Dichloropropene	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Ethyl benzene	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
2-Hexanone	EDL	<500	ug/L	S-8240A		10/14/1997	zst		1447	500
Methylene chloride		221	ug/L	S-8240A		10/14/1997	zst		1447	50
4-Methyl-2-pentanone (MIBK)		1650	ug/L	S-8240A		10/14/1997	zst		1447	500

EDL - Elevated Detection Limit due to matrix interference.

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086
Sample Number: 340181

Page 3

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
1,1,2,2-Tetrachloroethane		107	ug/L	S-8240A		10/14/1997	zst		1447	50
Tetrachloroethene	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Toluene		132	ug/L	S-8240A		10/14/1997	zst		1447	50
1,1,1-Trichloroethane	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
1,1,2-Trichloroethane	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Trichloroethene	EDL	<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Vinyl acetate	EDL	<500	ug/L	S-8240A		10/14/1997	zst		1447	500
1-chloride	EDL	<100	ug/L	S-8240A		10/14/1997	zst		1447	100
enes, Total		97	ug/L	S-8240A		10/14/1997	zst		1447	50
SURR: 1,2-Dichloroethane-d4		92	% Rec	S-8240A		10/14/1997	zst		1447	76-114
SURR: Toluene-d8		99	% Rec	S-8240A		10/14/1997	zst		1447	88-110
SURR: 4-Bromofluorobenzene		88	% Rec	S-8240A		10/14/1997	zst		1447	86-115

EDL - Elevated Detection Limit due to matrix interference.

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086
Sample Number: 340182

Page 4

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		380	mg/L	S-9252		10/20/1997	cgl		780	5.0
Sulfate		879	mg/L	S-9038		10/20/1997	cgl		605	5.0
Total Dissolved Solids		2470	mg/L	E-160.1		10/13/1997	cgl		760	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Bromodichloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Dibromomethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Butanone (MEK)		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon disulfide		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon tetrachloride		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		10/14/1997	zst		1447	20
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Dibromochloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethene (total)		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloropropane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Ethyl benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
2-Hexanone		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Methylene chloride		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		10/14/1997	zst		1447	50

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086
Sample Number: 340182

Page 5

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Tetrachloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Toluene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Trichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Vinyl acetate		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Vinyl chloride		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Arenes, Total		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
SURR: 1,2-Dichloroethane-d4		99	% Rec	S-8240A		10/14/1997	zst		1447	76-114
SURR: Toluene-d8		106	% Rec	S-8240A		10/14/1997	zst		1447	88-110
SURR: 4-Bromofluorobenzene		94	% Rec	S-8240A		10/14/1997	zst		1447	86-115

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086
Sample Number: 340183

Page 6

Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		320	mg/L	S-9252		10/20/1997	cgl		780	5.0
Sulfate		<5.0	mg/L	S-9038		10/20/1997	cgl		605	5.0
Total Dissolved Solids		2090	mg/L	E-160.1		10/16/1997	cgl		761	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		10/22/1997	zst		1447	100
Benzene		19	ug/L	S-8240A		10/22/1997	zst		1447	5
Bromodichloromethane		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Chloroform		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Dibromomethane		<10	ug/L	S-8240A		10/22/1997	zst		1447	10
2-Butanone (MEK)		<100	ug/L	S-8240A		10/22/1997	zst		1447	100
Carbon disulfide		<100	ug/L	S-8240A		10/22/1997	zst		1447	100
Carbon tetrachloride		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Chlorobenzene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Chloroethane		<10	ug/L	S-8240A		10/22/1997	zst		1447	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		10/22/1997	zst		1447	20
Chloroform		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/22/1997	zst		1447	10
Dibromochloromethane		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,1-Dichloroethane		96	ug/L	S-8240A		10/22/1997	zst		1447	5
1,2-Dichloroethane		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,1-Dichloroethene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,2-Dichloroethene (total)		103	ug/L	S-8240A		10/22/1997	zst		1447	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,2-Dichloropropene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Ethyl benzene		7	ug/L	S-8240A		10/22/1997	zst		1447	5
2-Hexanone		<50	ug/L	S-8240A		10/22/1997	zst		1447	50
Methylene chloride		10	ug/L	S-8240A		10/22/1997	zst		1447	5
4-Methyl-2-pentanone (MIBK)		89	ug/L	S-8240A		10/22/1997	zst		1447	50

ANALYTICAL RESULTS REPORT

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10/23/1997

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Sample Number: 340183

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Tetrachloroethene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Toluene		15	ug/L	S-8240A		10/22/1997	zst		1447	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Trichloroethene		71	ug/L	S-8240A		10/22/1997	zst		1447	5
Vinyl acetate		<50	ug/L	S-8240A		10/22/1997	zst		1447	50
Vinyl chloride		<10	ug/L	S-8240A		10/22/1997	zst		1447	10
Aromatics, Total		24	ug/L	S-8240A		10/22/1997	zst		1447	5
SURR: 1,2-Dichloroethane-d4		87	% Rec	S-8240A		10/22/1997	zst		1447	76-114
SURR: Toluene-d8		89	% Rec	S-8240A		10/22/1997	zst		1447	88-110
SURR: 4-Bromofluorobenzene		89	% Rec	S-8240A		10/22/1997	zst		1447	86-115

ANALYTICAL RESULTS REPORT

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10/23/1997

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Sample Number: 340184

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		710	mg/L	S-9252		10/20/1997	cgl		780	5.0
Sulfate		468	mg/L	S-9038		10/20/1997	cgl		605	5.0
Total Dissolved Solids		2710	mg/L	E-160.1		10/16/1997	cgl		761	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Bromodichloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Bromoform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Butanone (MEK)		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon disulfide		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon tetrachloride		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		10/14/1997	zst		1447	20
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Dibromochloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethane		12	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethene (total)		7	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloropropane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Ethyl benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
2-Hexanone		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Methylene chloride		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		10/14/1997	zst		1447	50

ANALYTICAL RESULTS REPORT

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10/23/1997

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Sample Number: 340184

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Tetrachloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Toluene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Trichloroethene		16	ug/L	S-8240A		10/14/1997	zst		1447	5
Vinyl acetate		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Vinyl chloride		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Aromatics, Total		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
SURR: 1,2-Dichloroethane-d4		110	% Rec	S-8240A		10/14/1997	zst		1447	76-114
SURR: Toluene-d8		103	% Rec	S-8240A		10/14/1997	zst		1447	88-110
SURR: 4-Bromofluorobenzene		94	% Rec	S-8240A		10/14/1997	zst		1447	86-115

ANALYTICAL RESULTS REPORT

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10/23/1997

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Sample Number: 340185

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		410	mg/L	S-9252		10/20/1997	cgl		780	5.0
Sulfate		784	mg/L	S-9038		10/20/1997	cgl		605	5.0
Total Dissolved Solids		2190	mg/L	E-160.1		10/16/1997	cgl		761	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Bromodichloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Butanone (MEK)		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon disulfide		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon tetrachloride		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		10/14/1997	zst		1447	20
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Dibromochloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethane		20	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethene (total)		6	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloropropane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Ethyl benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
2-Hexanone		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Methylene chloride		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		10/14/1997	zst		1447	50

ANALYTICAL RESULTS REPORT

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10/23/1997

EPIC Job Number: 97.04086
Sample Number: 340185

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Tetrachloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Toluene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Trichloroethene		16	ug/L	S-8240A		10/14/1997	zst		1447	5
Vinyl acetate		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Vinyl chloride		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Aromatics, Total		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
SURR: 1,2-Dichloroethane-d4		98	% Rec	S-8240A		10/14/1997	zst		1447	76-114
SURR: Toluene-d8		97	% Rec	S-8240A		10/14/1997	zst		1447	88-110
SURR: 4-Bromofluorobenzene		97	% Rec	S-8240A		10/14/1997	zst		1447	86-115

ANALYTICAL RESULTS REPORT

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10/23/1997

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		570	mg/L	S-9252		10/20/1997	cgl		780	5.0
Sulfate		242	mg/L	S-9038		10/20/1997	cgl		605	5.0
Total Dissolved Solids		2100	mg/L	E-160.1		10/16/1997	cgl		761	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Benzene		25	ug/L	S-8240A		10/14/1997	zst		1447	5
Bromodichloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Dichloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Butanone (MEK)		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon disulfide		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon tetrachloride		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		10/14/1997	zst		1447	20
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Dibromochloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethane		104	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethene (total)		34	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloropropane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Ethyl benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
2-Hexanone		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Methylene chloride	B	7	ug/L	S-8240A		10/14/1997	zst		1447	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		10/14/1997	zst		1447	50

B - Blank contamination.

ANALYTICAL RESULTS REPORT

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10/23/1997

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Tetrachloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Toluene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Trichloroethene		67	ug/L	S-8240A		10/14/1997	zst		1447	5
Vinyl acetate		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Vinyl chloride		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Alkenes, Total		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
SURR: 1,2-Dichloroethane-d4		104	% Rec	S-8240A		10/14/1997	zst		1447	76-114
SURR: Toluene-d8		88	% Rec	S-8240A		10/14/1997	zst		1447	88-110
SURR: 4-Bromofluorobenzene		97	% Rec	S-8240A		10/14/1997	zst		1447	86-115

ANALYTICAL RESULTS REPORT

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10/23/1997

EPIC Job Number: 97.04086
Sample Number: 340187

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-14

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		550	mg/L	S-9252		10/20/1997	cgl		780	5.0
Sulfate		769	mg/L	S-9038		10/20/1997	cgl		605	5.0
Total Dissolved Solids		2490	mg/L	E-160.1		10/13/1997	cgl		760	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Bromodichloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Butanone (MEK)		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon disulfide		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon tetrachloride		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		10/14/1997	zst		1447	20
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Dibromochloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethane		27	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethene (total)		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloropropane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Ethyl benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
2-Hexanone		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Methylene chloride	B	6	ug/L	S-8240A		10/14/1997	zst		1447	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		10/14/1997	zst		1447	50

B - Blank contamination.

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

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Sample Number: 340187

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-14

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Tetrachloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Toluene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Trichloroethene		15	ug/L	S-8240A		10/14/1997	zst		1447	5
Vinyl acetate		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Vinyl chloride		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Arenes, Total		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
SURR: 1,2-Dichloroethane-d4		107	% Rec	S-8240A		10/14/1997	zst		1447	76-114
SURR: Toluene-d8		93	% Rec	S-8240A		10/14/1997	zst		1447	88-110
SURR: 4-Bromofluorobenzene		95	% Rec	S-8240A		10/14/1997	zst		1447	86-115

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
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10/23/1997

EPIC Job Number: 97.04086
Sample Number: 340188

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-15

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		420	mg/L	S-9252		10/20/1997	cgl		780	5.0
Sulfate		941	mg/L	S-9038		10/20/1997	cgl		605	5.0
Total Dissolved Solids		2400	mg/L	E-160.1		10/13/1997	cgl		760	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Bromodichloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Butanone (MEK)		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon disulfide		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon tetrachloride		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		10/14/1997	zst		1447	20
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Dibromochloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethene (total)		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloropropane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Ethyl benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
2-Hexanone		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Methylene chloride	B	6	ug/L	S-8240A		10/14/1997	zst		1447	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		10/14/1997	zst		1447	50

B - Blank contamination.

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-15

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Tetrachloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Toluene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Trichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Vinyl acetate		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
yl chloride		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
enes, Total		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
SURR: 1,2-Dichloroethane-d4		106	% Rec	S-8240A		10/14/1997	zst		1447	76-114
SURR: Toluene-d8		107	% Rec	S-8240A		10/14/1997	zst		1447	88-110
SURR: 4-Bromofluorobenzene		110	% Rec	S-8240A		10/14/1997	zst		1447	86-115

ANALYTICAL RESULTS REPORT

George Robinson
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P.O. Box 1188
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10/23/1997

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-16

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		860	mg/L	S-9252		10/20/1997	cgl		780	5.0
Sulfate		904	mg/L	S-9038		10/20/1997	cgl		605	5.0
Total Dissolved Solids		3370	mg/L	E-160.1		10/13/1997	cgl		760	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Bromodichloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Dichloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Butanone (MEK)		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon disulfide		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon tetrachloride		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		10/14/1997	zst		1447	20
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Dibromochloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethene (total)		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloropropane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Ethyl benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
2-Hexanone		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Methylene chloride	B	7	ug/L	S-8240A		10/14/1997	zst		1447	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		10/14/1997	zst		1447	50

B - Blank contamination.

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086
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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-16

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Tetrachloroethene		15	ug/L	S-8240A		10/14/1997	zst		1447	5
Toluene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Trichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Vinyl acetate		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Vinyl chloride		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Arenes, Total		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
SURR: 1,2-Dichloroethane-d4		98	% Rec	S-8240A		10/14/1997	zst		1447	76-114
SURR: Toluene-d8		102	% Rec	S-8240A		10/14/1997	zst		1447	88-110
SURR: 4-Bromofluorobenzene		113	% Rec	S-8240A		10/14/1997	zst		1447	86-115

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
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10/23/1997

EPIC Job Number: 97.04086
Sample Number: 340190

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-17

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Chloride		340	mg/L	S-9252		10/20/1997	cgl		780	5.0
Sulfate		<5.0	mg/L	S-9038		10/20/1997	cgl		605	5.0
Total Dissolved Solids		2100	mg/L	E-160.1		10/16/1997	cgl		761	5
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		10/22/1997	zst		1447	100
Benzene		18	ug/L	S-8240A		10/22/1997	zst		1447	5
Bromodichloromethane		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Bromoform		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Dimethylmethane		<10	ug/L	S-8240A		10/22/1997	zst		1447	10
2-Butanone (MEK)		<100	ug/L	S-8240A		10/22/1997	zst		1447	100
Carbon disulfide		<100	ug/L	S-8240A		10/22/1997	zst		1447	100
Carbon tetrachloride		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Chlorobenzene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Chloroethane		<10	ug/L	S-8240A		10/22/1997	zst		1447	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		10/22/1997	zst		1447	20
Chloroform		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/22/1997	zst		1447	10
Dibromochloromethane		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,1-Dichloroethane		102	ug/L	S-8240A		10/22/1997	zst		1447	5
1,2-Dichloroethane		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,1-Dichloroethene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,2-Dichloroethene (total)		111	ug/L	S-8240A		10/22/1997	zst		1447	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,2-Dichloropropane		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Ethyl benzene		7	ug/L	S-8240A		10/22/1997	zst		1447	5
2-Hexanone		<50	ug/L	S-8240A		10/22/1997	zst		1447	50
Methylene chloride		10	ug/L	S-8240A		10/22/1997	zst		1447	5
4-Methyl-2-pentanone (MIBK)		98	ug/L	S-8240A		10/22/1997	zst		1447	50

ANALYTICAL RESULTS REPORT

George Robinson
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10/23/1997

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Sample Number: 340190

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: MW-17

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
Styrene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Tetrachloroethene		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Toluene		14	ug/L	S-8240A		10/22/1997	zst		1447	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		10/22/1997	zst		1447	5
Trichloroethene		69	ug/L	S-8240A		10/22/1997	zst		1447	5
Vinyl acetate		<50	ug/L	S-8240A		10/22/1997	zst		1447	50
Vinyl chloride		<10	ug/L	S-8240A		10/22/1997	zst		1447	10
Arenes, Total		25	ug/L	S-8240A		10/22/1997	zst		1447	5
SURR: 1,2-Dichloroethane-d4		76	% Rec	S-8240A		10/22/1997	zst		1447	76-114
SURR: Toluene-d8		87	% Rec	S-8240A		10/22/1997	zst		1447	88-110
SURR: 4-Bromofluorobenzene		96	% Rec	S-8240A		10/22/1997	zst		1447	86-115

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
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10/23/1997

EPIC Job Number: 97.04086
Sample Number: 340191

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
VOLATILES-8240 AQ (PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Bromodichloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Bromoform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Bromomethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Butanone (MEK)		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon disulfide		<100	ug/L	S-8240A		10/14/1997	zst		1447	100
Carbon tetrachloride		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
o-Cresol		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloroethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		10/14/1997	zst		1447	20
Chloroform		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Chloromethane		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Dibromochloromethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,3-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,4-Dichlorobenzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloroethene (total)		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,2-Dichloropropane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Ethyl benzene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
2-Hexanone		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Methylene chloride		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Styrene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Tetrachloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Toluene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086
Sample Number: 340191

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Project Description:
Job Description: TWP WT-1 ERP

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
1,1,1-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Trichloroethene		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
Vinyl acetate		<50	ug/L	S-8240A		10/14/1997	zst		1447	50
Vinyl chloride		<10	ug/L	S-8240A		10/14/1997	zst		1447	10
Xylenes, Total		<5	ug/L	S-8240A		10/14/1997	zst		1447	5
SURR: 1,2-Dichloroethane-d4		93	% Rec	S-8240A		10/14/1997	zst		1447	76-114
SURR: Toluene-d8		99	% Rec	S-8240A		10/14/1997	zst		1447	88-110
SURR: 4-Bromofluorobenzene		103	% Rec	S-8240A		10/14/1997	zst		1447	86-115

QUALITY CONTROL REPORT BLANKS

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
Chloride		<5.0	mg/L	5.0	10/20/1997		780
Sulfate		<5.0	mg/L	5.0	10/20/1997		605
Total Dissolved Solids		<5	mg/L	5	10/13/1997		760
Total Dissolved Solids		<5	mg/L	5	10/16/1997		761
VOLATILES-8240 AQ (PRESERVED)							
Acetone		<100	ug/L	100	10/14/1997		1447
Benzene		<5	ug/L	5	10/14/1997		1447
Bromodichloromethane		<5	ug/L	5	10/14/1997		1447
Bromoform		<5	ug/L	5	10/14/1997		1447
Bromomethane		<10	ug/L	10	10/14/1997		1447
2-Butanone (MEK)		<100	ug/L	100	10/14/1997		1447
Carbon disulfide		<100	ug/L	100	10/14/1997		1447
Carbon tetrachloride		<5	ug/L	5	10/14/1997		1447
Chlorobenzene		<5	ug/L	5	10/14/1997		1447
Chloroethane		<10	ug/L	10	10/14/1997		1447
2-Chloroethylvinyl ether		<20	ug/L	20	10/14/1997		1447
Chloroform		<5	ug/L	5	10/14/1997		1447
Chloromethane		<10	ug/L	10	10/14/1997		1447
Dibromochloromethane		<5	ug/L	5	10/14/1997		1447
1,2-Dichlorobenzene		<5	ug/L	5	10/14/1997		1447
1,3-Dichlorobenzene		<5	ug/L	5	10/14/1997		1447
1,4-Dichlorobenzene		<5	ug/L	5	10/14/1997		1447
1,1-Dichloroethane		<5	ug/L	5	10/14/1997		1447
1,2-Dichloroethane		<5	ug/L	5	10/14/1997		1447
1,1-Dichloroethene		<5	ug/L	5	10/14/1997		1447
trans-1,2-Dichloroethene		<5	ug/L	5	10/14/1997		1447
1,2-Dichloropropane		<5	ug/L	5	10/14/1997		1447
cis-1,3-Dichloropropene		<5	ug/L	5	10/14/1997		1447

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT BLANKS

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
trans-1,3-Dichloropropene		<5	ug/L	5	10/14/1997		1447
Ethyl benzene		<5	ug/L	5	10/14/1997		1447
2-Hexanone		<50	ug/L	50	10/14/1997		1447
4-Methyl-2-pentanone (MIBK)		<50	ug/L	50	10/14/1997		1447
Methylene chloride	B	6	ug/L	5	10/14/1997		1447
Styrene		<5	ug/L	5	10/14/1997		1447
1,1,2,2-Tetrachloroethane		<5	ug/L	5	10/14/1997		1447
Tetrachloroethene		<5	ug/L	5	10/14/1997		1447
Toluene		<5	ug/L	5	10/14/1997		1447
1,1,1-Trichloroethane		<5	ug/L	5	10/14/1997		1447
1,1,2-Trichloroethane		<5	ug/L	5	10/14/1997		1447
Trichloroethene		<5	ug/L	5	10/14/1997		1447
Vinyl acetate		<50	ug/L	50	10/14/1997		1447
Vinyl chloride		<10	ug/L	10	10/14/1997		1447
Xylenes, Total		<5	ug/L	5	10/14/1997		1447
VOLATILES-8240 AQ (PRESERVED)							
Acetone		<100	ug/L	100	10/22/1997		1447
Benzene		<5	ug/L	5	10/22/1997		1447
Bromodichloromethane		<5	ug/L	5	10/22/1997		1447
Bromoform		<5	ug/L	5	10/22/1997		1447
Bromomethane		<10	ug/L	10	10/22/1997		1447
2-Butanone (MEK)		<100	ug/L	100	10/22/1997		1447
Carbon disulfide		<100	ug/L	100	10/22/1997		1447
Carbon tetrachloride		<5	ug/L	5	10/22/1997		1447
Chlorobenzene		<5	ug/L	5	10/22/1997		1447
Chloroethane		<10	ug/L	10	10/22/1997		1447
2-Chloroethylvinyl ether		<20	ug/L	20	10/22/1997		1447
Chloroform		<5	ug/L	5	10/22/1997		1447

All parameters should be less than the reporting limit.

B - Blank contamination.

QUALITY CONTROL REPORT BLANKS

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
Chloromethane		<10	ug/L	10	10/22/1997		1447
Dibromochloromethane		<5	ug/L	5	10/22/1997		1447
1,2-Dichlorobenzene		<5	ug/L	5	10/22/1997		1447
1,3-Dichlorobenzene		<5	ug/L	5	10/22/1997		1447
1,4-Dichlorobenzene		<5	ug/L	5	10/22/1997		1447
1,1-Dichloroethane		<5	ug/L	5	10/22/1997		1447
1,2-Dichloroethane		<5	ug/L	5	10/22/1997		1447
1,1-Dichloroethene		<5	ug/L	5	10/22/1997		1447
trans-1,2-Dichloroethene		<5	ug/L	5	10/22/1997		1447
1,2-Dichloropropane		<5	ug/L	5	10/22/1997		1447
cis-1,3-Dichloropropene		<5	ug/L	5	10/22/1997		1447
trans-1,3-Dichloropropene		<5	ug/L	5	10/22/1997		1447
Ethyl benzene		<5	ug/L	5	10/22/1997		1447
2-Hexanone		<50	ug/L	50	10/22/1997		1447
4-Methyl-2-pentanone (MIBK)		<50	ug/L	50	10/22/1997		1447
Methylene chloride		<5	ug/L	5	10/22/1997		1447
Styrene		<5	ug/L	5	10/22/1997		1447
1,1,2,2-Tetrachloroethane		<5	ug/L	5	10/22/1997		1447
Tetrachloroethene		<5	ug/L	5	10/22/1997		1447
Toluene		<5	ug/L	5	10/22/1997		1447
1,1,1-Trichloroethane		<5	ug/L	5	10/22/1997		1447
1,1,2-Trichloroethane		<5	ug/L	5	10/22/1997		1447
Trichloroethene		<5	ug/L	5	10/22/1997		1447
Vinyl acetate		<50	ug/L	50	10/22/1997		1447
Vinyl chloride		<10	ug/L	10	10/22/1997		1447
Xylenes, Total		<5	ug/L	5	10/22/1997		1447

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION STANDARD

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	CCVS True Concentration	Units	CCVS Concentration Found	CCVS Percent Recovery	Date Analyzed	Run Batch Number
Sulfate		20.0	mg/L	19.8	99.0	10/20/1997	605
VOLATILES-8240 AQ (PRESERVED)							
Chloroform		20	ug/L	18.2	91.0	10/14/1997	1447
1,1-Dichloroethene		20	ug/L	19.2	96.0	10/14/1997	1447
1,2-Dichloropropane		20	ug/L	20.9	104.5	10/14/1997	1447
Ethyl benzene		20	ug/L	20.5	102.5	10/14/1997	1447
Toluene		20	ug/L	22.7	113.5	10/14/1997	1447
Vinyl chloride		20	ug/L	18.2	91.0	10/14/1997	1447
VOLATILES-8240 AQ (PRESERVED)							
Chloroform		20	ug/L	17	85.0	10/22/1997	1447
1,1-Dichloroethene		20	ug/L	22.2	111.0	10/22/1997	1447
1,2-Dichloropropane		20	ug/L	18.6	93.0	10/22/1997	1447
Ethyl benzene		20	ug/L	19.8	99.0	10/22/1997	1447
Toluene		20	ug/L	20.6	103.0	10/22/1997	1447
Vinyl chloride		20	ug/L	13.2	66.0	10/22/1997	1447

CCVS - Continuing Calibration Verification Standard

QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	Units	Sample Result	Spike Matrix MS			Duplicate Spike		MSD		Date Analyzed	Prep Batch Number	Run Batch Number
				Amount Added	Spike Result	Percent Recovery	Amount Added	MSD Result	Percent Recovery	MS/MSD RPD			
Chloride		mg/L	380	400	810	107.5	400	810	107.5	0.0	10/20/1997		780
Chloride		mg/L	550	400	970	105.0	400	960	102.5	2.4	10/20/1997		780
Sulfate		mg/L	879	1000	2020	114.1	1000	2100	122.1	6.8	10/20/1997		605
Sulfate		mg/L	419	1000	1440	102.1	1000	1510	109.1	6.6	10/20/1997		605
Sulfate		mg/L	419	1000	1440	102.1	1000	1510	109.1	6.6	10/20/1997		605
VOLATILES-8240 AQ (PRESERVED)													
Benzene		ug/L	<5	20	20.2	101.0	20	19.5	97.5	3.4	10/14/1997		1447
Chlorobenzene		ug/L	<5	20	23	115.0	20	21.5	107.5	6.7	10/14/1997		1447
1,1-Dichloroethene		ug/L	<5	20	18.6	93.0	20	19.3	96.5	3.7	10/14/1997		1447
Toluene		ug/L	<5	20	23.2	116.0	20	21.7	108.5	6.7	10/14/1997		1447
Trichloroethene		ug/L	<5	20	20.5	102.5	20	19	95.0	7.5	10/14/1997		1447

NOTE: The Quality Control data in this report reflects the batch in which your sample was prepped and/or analyzed.
The sample selected for QA may not necessarily be your sample.

QUALITY CONTROL REPORT DUPLICATES

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086

Project Description:
Job Description: TWP WT-1 ERP

Parameter	Flag	Units	Sample Result	Duplicate Sample Result	RPD	Date Analyzed	Prep Batch Number	Run Batch Number
Total Dissolved Solids		mg/L	838	838	0.0	10/13/1997		760
Total Dissolved Solids		mg/L	3370	3250	3.6	10/13/1997		760
Total Dissolved Solids		mg/L	2690	2650	1.5	10/16/1997		761

QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
Houston, TX 77251

10/23/1997

EPIC Job Number: 97.04086

Project Description:
Job Description: TWP WT-1 ERP

Analyte	Prep Batch No.	Run Batch No.	LCS True Conc	Units	LCS Conc Found	LCS % Rec.	LCS Dup Conc. Found	LCS Dup % Rec	LCS % RPD	Flag	Date Analyzed
Chloride		780	1000	mg/L	1020	102.0					10/20/1997
Sulfate		605	20.0	mg/L	18.1	90.5					10/20/1997
Total Dissolved Solids		760	2000	mg/L	1970	98.5					10/13/1997
Total Dissolved Solids		761	2000	mg/L	2030	101.5					10/16/1997
VOLATILES-8240 AQ(PRESERVED)											
Benzene		1447	20	ug/L	25.8	129.0					10/14/1997
Chlorobenzene		1447	20	ug/L	25.6	128.0					10/14/1997
1,1-Dichloroethene		1447	20	ug/L	23.2	116.0					10/14/1997
Toluene		1447	20	ug/L	26.4	132.0					10/14/1997
Trichloroethene		1447	20	ug/L	25.9	129.5					10/14/1997

LCS - Laboratory Control Standard

For samples with insufficient sample volume, an LCS/LCS duplicate is reported instead of an MS/MSD.

EPIC

LABORATORIES, INC.

1548 VALWOOD PARKWAY, SUITE 118
CARROLLTON, TEXAS 75006
DALLAS (972) 406-8100
AUSTIN (512) 928-8905

CHAIN OF CUSTODY RECORD

COMPANY ENRON
ADDRESS P.O. BOX 1188 Houston, TX 77251
PHONE 713/446-7252 FAX 713/446-7867
PROJECT NAME/LOCATION TWIP WT-1 ERSP
PROJECT NUMBER _____
PROJECT MANAGER _____

SAMPLED BY Shirley Sharp
(PRINT NAME) _____
SIGNATURE _____
SIGNATURE _____

(PRINT NAME) _____

DATE	TIME	SAMPLE ID/DESCRIPTION	# and Type of Containers					ANALYSES									
			MATRIX	GRAB	COMP	HCl	NaOH	HNO ₃	H ₂ SO ₄	OTHER							
10/9/97	1100	MW-1	AX														
10/9/97	1615	MW-4															
10/9/97	1015	MW-5															
10/9/97	0825	MW-6															
10/9/97	0905	MW-7															
10/9/97	0940	MW-8															
10/9/97	1740	MW-14															
10/9/97	1710	MW-15															
10/9/97	1640	MW-16															
10/9/97	1130	MW-17															
		TRIP BLANK															

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA
REQUEST EPIC TO DISPOSE OF ALL SAMPLE REMAINDERS

RECEIVED BY: Shirley Sharp DATE: 10/9/97 TIME: 1330

METHOD OF SHIPMENT: _____

REPORT TO: GEORGE JOHNSON
INVOICE TO: AT&T 3AC3142
P.O. NO. P.O. BOX 1188
EPIC QUOTE NO. HOUSTON TX 94257

To assist us in selecting the proper method
Is this work being conducted for regulatory compliance monitoring? Yes X No _____
Is this work being conducted for regulatory enforcement action? Yes _____ No X
Which regulations apply: RCRA _____ NPDES Wastewater _____
UST _____ Drinking Water _____
Other X None _____

COMMENTS
X Include 1,2-dichloroethene AND o-m-p isomers of DICHLOBENZENE

TEMPERATURE UPON RECEIPT: _____
Bottles supplied by EPIC? YES / NO

DATE: 10/9/97

RECEIVED FOR EPIC BY: R. Waller

REMARKS: Indul # A871937814

Report of Ground Water Monitoring Activities

**WT-1 Compressor Station: Engine Room Drain Pit Area
Transwestern Pipeline Company**

Attachment #5

**Lab Reports for January 1998
Ground Water Sampling Event**



HOUSTON LABORATORY

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

February 13, 1998

Mr. George Robinson
CYPRESS ENGINEERING, INC.
16300 Kathy Frwy, #210
Houston, TX 77094

WT-1

The following report contains analytical results for the sample(s) received at Southern Petroleum Laboratories (SPL) on January 27, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9801B97 and analyzed for all parameters as listed on the chain of custody.

The samples for the Dissolved Metals analysis were received unfiltered and unpreserved. This is not compliant with the method requirement. The samples were filtered and preserved in the laboratory.

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


Shannon Tyrell
Client Services Representative



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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-01-B97

Approved for Release by:

Shannon Tyrell 2/17/98
Shannon Tyrell, Client Services Representative Date

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

The attached analytical data package may not be reproduced except in full without the express written approval of this laboratory.



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

Certificate of Analysis No. H9-9801B97-01

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-4

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 11:40:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 02/06/98	300	5	mg/L	
Sulfate Method 375.4 * Analyzed by: ST Date: 02/10/98	581	50	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 01/29/98	1920	10	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: KS Date: 02/09/98	ND	0.05	mg/L	
Silver, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Arsenic, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	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. H9-9801B97-01

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-4

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 11:40:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.017	0.005	mg/L	
Cadmium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.005	mg/L	
Chromium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Copper, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Iron, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.02	mg/L	
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 02/09/98 17:38:00	ND	0.0002	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. H9-9801B97-01

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-4

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 11:40:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.188	0.005	mg/L	
Dissolved Metals Prep. Method 3005A *** Analyzed by: SRC Date: 01/28/98	01/28/98			
Lead, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.05	mg/L	
Selenium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	mg/L	
Zinc, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	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.



Certificate of Analysis No. H9-9801B97-01

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

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-4

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 11:40:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	5	ug/L
Bromobenzene	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
Bromoform	ND	5	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
Carbon tetrachloride	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Chlorodibromomethane	ND	5	ug/L
Chloroethane	ND	10	ug/L
Chloroform	5	5	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,2-Dibromo-3-chloropropane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Dibromomethane	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloroethene	ND	5	ug/L
cis-1,2-Dichloroethene	ND	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
1,3-Dichloropropane	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
Methylene chloride	ND	5	ug/L

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9801B97-01

Cypress Engineering, Inc.

SAMPLE ID: MW-4

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	ND	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	ND	5	ug/L	
Toluene	ND	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	ND	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	ND	5	ug/L	
1,3,5-Trimethylbenzene	ND	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	ND	5	ug/L	
Acetone	ND	100	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	ND	20	ug/L	
1,2-Dichloroethene (total)	ND	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	ND	10	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	ND	10	ug/L	

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	88	76	114
Toluene-d8	50 ug/L	98	88	110
4-Bromofluorobenzene	50 ug/L	94	86	115

ANALYZED BY: JC

DATE/TIME: 01/29/98 19:16:00

METHOD: 8260 Water, Volatile Organics

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. H9-9801B97-02

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-16

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 12:15:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 02/06/98	800	10	mg/L	
Sulfate Method 375.4 * Analyzed by: ST Date: 02/10/98	824	50	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 01/29/98	2730	10	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: KS Date: 02/09/98	0.91	0.05	mg/L	
Silver, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Arsenic, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	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. H9-9801B97-02

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-16

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 12:15:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.019	0.005	mg/L	
Cadmium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.005	mg/L	
Chromium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Copper, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Iron, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.02	mg/L	
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 02/09/98 17:38:00	ND	0.0002	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. H9-9801B97-02

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-16

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 12:15:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.971	0.005	mg/L	
Dissolved Metals Prep. Method 3005A *** Analyzed by: SRC Date: 01/28/98	01/28/98			
Lead, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.05	mg/L	
Selenium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	mg/L	
Zinc, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	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. H9-9801B97-02

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-16

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 12:15:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	ND	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	ND	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	ND	5	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	ND	5	ug/L	
cis-1,2-Dichloroethene	ND	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	ND	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	ND	5	ug/L	
Methylene chloride	ND	5	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9801B97-02

Cypress Engineering, Inc.

SAMPLE ID: MW-16

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	ND	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	13	5	ug/L	
Toluene	ND	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	ND	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	ND	5	ug/L	
1,3,5-Trimethylbenzene	ND	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	ND	5	ug/L	
Acetone	ND	100	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	ND	20	ug/L	
1,2-Dichloroethene (total)	ND	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	ND	10	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	ND	10	ug/L	

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	92	76	114
Toluene-d8	50 ug/L	98	88	110
4-Bromofluorobenzene	50 ug/L	90	86	115

ANALYZED BY: JC

DATE/TIME: 01/29/98 19:43:00

METHOD: 8260 Water, Volatile Organics

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. H9-9801B97-03

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-15

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 14:00:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 02/06/98	400	5	mg/L	
Sulfate Method 375.4 * Analyzed by: ST Date: 02/10/98	766	50	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 01/29/98	2150	10	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: KS Date: 02/09/98	12.54	0.05	mg/L	
Silver, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Arsenic, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	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. H9-9801B97-03

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-15

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 14:00:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.014	0.005	mg/L	
Cadmium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.005	mg/L	
Chromium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Copper, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Iron, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.02	mg/L	
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 02/09/98 17:38:00	ND	0.0002	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. H9-9801B97-03

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-15

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 14:00:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.005	mg/L	
Dissolved Metals Prep. Method 3005A *** Analyzed by: SRC Date: 01/28/98	01/28/98			
Lead, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.05	mg/L	
Selenium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	mg/L	
Zinc, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	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. H9-9801B97-03

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-15

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 14:00:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	ND	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	ND	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	ND	5	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	ND	5	ug/L	
cis-1,2-Dichloroethene	ND	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	ND	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	ND	5	ug/L	
Methylene chloride	ND	5	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9801B97-03

Cypress Engineering, Inc.

SAMPLE ID: MW-15

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	ND	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	ND	5	ug/L	
Toluene	ND	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	ND	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	ND	5	ug/L	
1,3,5-Trimethylbenzene	ND	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	ND	5	ug/L	
Acetone	ND	100	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	ND	20	ug/L	
1,2-Dichloroethene (total)	ND	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	ND	10	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	ND	10	ug/L	

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	86	76	114
Toluene-d8	50 ug/L	96	88	110
4-Bromofluorobenzene	50 ug/L	90	86	115

ANALYZED BY: JC

DATE/TIME: 01/29/98 20:09:00

METHOD: 8260 Water, Volatile Organics

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. H9-9801B97-04

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-6

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 14:35:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 02/06/98	700	10	mg/L	
Sulfate Method 375.4 * Analyzed by: ST Date: 02/10/98	378	50	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 01/29/98	2190	10	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: KS Date: 02/09/98	ND	0.05	mg/L	
Silver, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Arsenic, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	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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PHONE (713) 660-0901

Certificate of Analysis No. H9-9801B97-04

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-6

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 14:35:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.121	0.005	mg/L	
Cadmium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.005	mg/L	
Chromium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Copper, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Iron, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.02	mg/L	
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 02/09/98 17:38:00	ND	0.0002	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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Certificate of Analysis No. H9-9801B97-04

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-6

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 14:35:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Manganese, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.933	0.005	mg/L
Dissolved Metals Prep. Method 3005A *** Analyzed by: SRC Date: 01/28/98	01/28/98		
Lead, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.05	mg/L
Selenium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	mg/L
Zinc, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	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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Certificate of Analysis No. H9-9801B97-04

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-6

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 14:35:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	5	ug/L
Bromobenzene	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
Bromoform	ND	5	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
Carbon tetrachloride	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Chlorodibromomethane	ND	5	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,2-Dibromo-3-chloropropane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Dibromomethane	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	14	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloroethene	ND	5	ug/L
cis-1,2-Dichloroethene	7	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
1,3-Dichloropropane	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
Methylene chloride	ND	5	ug/L

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9801B97-04

Cypress Engineering, Inc.

SAMPLE ID: MW-6

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	ND	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	ND	5	ug/L	
Toluene	ND	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	15	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	ND	5	ug/L	
1,3,5-Trimethylbenzene	ND	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	ND	5	ug/L	
Acetone	ND	100	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	ND	20	ug/L	
1,2-Dichloroethene (total)	7	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	ND	10	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	ND	10	ug/L	
SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	92	76	114
Toluene-d8	50 ug/L	98	88	110
4-Bromofluorobenzene	50 ug/L	92	86	115

ANALYZED BY: JC

DATE/TIME: 01/30/98 01:24:00

METHOD: 8260 Water, Volatile Organics

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. H9-9801B97-05

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-7

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 15:55:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: TV Date: 02/06/98	400	10	mg/L
Sulfate Method 375.4 * Analyzed by: ST Date: 02/10/98	646	50	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 01/29/98	1700	10	mg/L
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: KS Date: 02/09/98	8.40	0.05	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	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
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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9801B97-05

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-7

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 15:55:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.018	0.005	mg/L	
Cadmium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.005	mg/L	
Chromium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Copper, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Iron, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.02	mg/L	
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 02/09/98 17:38:00	ND	0.0002	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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Certificate of Analysis No. H9-9801B97-05

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-7

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 15:55:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.042	0.005	mg/L	
Dissolved Metals Prep. Method 3005A *** Analyzed by: SRC Date: 01/28/98	01/28/98			
Lead, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.05	mg/L	
Selenium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	mg/L	
Zinc, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	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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Certificate of Analysis No. H9-9801B97-05

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-7

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 15:55:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	6	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	ND	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	21	5	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	ND	5	ug/L	
cis-1,2-Dichloroethene	6	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	ND	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	ND	5	ug/L	
Methylene chloride	ND	5	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9801B97-05

Cypress Engineering, Inc.

SAMPLE ID: MW-7

PARAMETER	ANALYTICAL DATA (continued)		UNITS
	RESULTS	PQL*	
Naphthalene	ND	5	ug/L
n-Propylbenzene	ND	5	ug/L
Styrene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Toluene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
Trichloroethene	13	5	ug/L
Trichlorofluoromethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
Vinyl chloride	ND	10	ug/L
Xylenes (total)	ND	5	ug/L
Acetone	ND	100	ug/L
Carbon Disulfide	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
1,2-Dichloroethene (total)	6	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
2-Hexanone	ND	10	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	92	76	114
Toluene-d8	50 ug/L	100	88	110
4-Bromofluorobenzene	50 ug/L	94	86	115

ANALYZED BY: JC

DATE/TIME: 01/30/98 01:50:00

METHOD: 8260 Water, Volatile Organics

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. H9-9801B97-06

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-14

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 16:40:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 02/06/98	500	10	mg/L	
Sulfate Method 375.4 * Analyzed by: ST Date: 02/10/98	663	50	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 01/30/98	2200	10	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: KS Date: 02/09/98	2.90	0.05	mg/L	
Silver, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Arsenic, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	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. H9-9801B97-06

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-14

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 16:40:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA			
PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Barium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.018	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.005	mg/L
Chromium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.02	mg/L
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 02/09/98 17:38:00	ND	0.0002	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
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PHONE (713) 660-0901

Certificate of Analysis No. H9-9801B97-06

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-14

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 16:40:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.080	0.005	mg/L	
Dissolved Metals Prep. Method 3005A *** Analyzed by: SRC Date: 01/28/98	01/28/98			
Lead, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.05	mg/L	
Selenium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	mg/L	
Zinc, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	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
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HOUSTON, TEXAS 77054
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Certificate of Analysis No. H9-9801B97-06

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-14

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 16:40:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	ND	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	ND	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	31	5	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	ND	5	ug/L	
cis-1,2-Dichloroethene	5	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	ND	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	ND	5	ug/L	
Methylene chloride	ND	5	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9801B97-06

Cypress Engineering, Inc.

SAMPLE ID: MW-14

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	ND	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	ND	5	ug/L	
Toluene	ND	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	13	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	ND	5	ug/L	
1,3,5-Trimethylbenzene	ND	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	ND	5	ug/L	
Acetone	ND	100	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	ND	20	ug/L	
1,2-Dichloroethene (total)	5	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	ND	10	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	ND	10	ug/L	

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	92	76	114
Toluene-d8	50 ug/L	98	88	110
4-Bromofluorobenzene	50 ug/L	88	86	115

ANALYZED BY: JC

DATE/TIME: 01/30/98 02:16:00

METHOD: 8260 Water, Volatile Organics

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. H9-9801B97-07

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 17:45:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chloride Method 325.3 * Analyzed by: TV Date: 02/06/98	160	2	mg/L
Sulfate Method 375.4 * Analyzed by: ST Date: 02/10/98	9	1	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 01/29/98	1890	10	mg/L
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: KS Date: 02/09/98	0.15	0.05	mg/L
Silver, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L
Arsenic, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.2	0.1	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. H9-9801B97-07

Cypress Engineering, Inc.

16300 Kathy Frwy. #210

Houston, TX 77094

ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline**SITE:** WT-1 ER Pit Area**SAMPLED BY:** Cypress Engineering**SAMPLE ID:** MW-1**PROJECT NO:****MATRIX:** WATER**DATE SAMPLED:** 01/23/98 17:45:00**DATE RECEIVED:** 01/27/98**ANALYTICAL DATA**

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Barium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	27.2	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.005	mg/L
Chromium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.54	0.02	mg/L
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 02/09/98 17:38:00	ND	0.0002	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. H9-9801B97-07

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 17:45:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.020	0.005	mg/L	
Dissolved Metals Prep. Method 3005A *** Analyzed by: SRC Date: 01/28/98	01/28/98			
Lead, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.05	mg/L	
Selenium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	mg/L	
Zinc, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	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. H9-9801B97-07

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/23/98 17:45:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	11	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	ND	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	530	250	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	ND	5	ug/L	
cis-1,2-Dichloroethene	ND	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	7	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	ND	5	ug/L	
Methylene chloride	J 230	250	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9801B97-07

Cypress Engineering, Inc.

SAMPLE ID: MW-1

ANALYTICAL DATA (continued)			
PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	ND	5	ug/L
n-Propylbenzene	ND	5	ug/L
Styrene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
Tetrachloroethene	8	5	ug/L
Toluene	82	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
Trichloroethene	24	5	ug/L
Trichlorofluoromethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
1,2,4-Trimethylbenzene	36	5	ug/L
1,3,5-Trimethylbenzene	13	5	ug/L
Vinyl chloride	ND	10	ug/L
Xylenes (total)	85	5	ug/L
Acetone	J 2300	5000	ug/L
Carbon Disulfide	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	93	20	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	2000	500	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
2-Hexanone	25	10	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	96	76	114
Toluene-d8	50 ug/L	98	88	110
4-Bromofluorobenzene	50 ug/L	92	86	115

ANALYZED BY: JC

DATE/TIME: 01/30/98 02:43:00

METHOD: 8260 Water, Volatile Organics

NOTES: * - Practical Quantitation Limit

ND - Not Detected

NA - Not Analyzed

J - Estimated value.

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. H9-9801B97-08

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-17

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/24/98 08:30:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 02/06/98	300	5	mg/L	
Sulfate Method 375.4 * Analyzed by: ST Date: 02/10/98	4	1	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 01/29/98	1680	10	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: KS Date: 02/09/98	ND	0.05	mg/L	
Silver, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Arsenic, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.1	0.1	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. H9-9801B97-08

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-17

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/24/98 08:30:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	16.4	0.005	mg/L	
Cadmium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.005	mg/L	
Chromium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Copper, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Iron, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.19	0.02	mg/L	
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 02/09/98 17:38:00	ND	0.0002	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. H9-9801B97-08

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-17

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/24/98 08:30:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.015	0.005	mg/L	
Dissolved Metals Prep. Method 3005A *** Analyzed by: SRC Date: 01/28/98	01/28/98			
Lead, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.05	mg/L	
Selenium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	mg/L	
Zinc, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	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. H9-9801B97-08

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-17

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/24/98 08:30:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	25	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	10	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	130	5	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	7	5	ug/L	
cis-1,2-Dichloroethene	150	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	9	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	ND	5	ug/L	
Methylene chloride	ND	5	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9801B97-08

Cypress Engineering, Inc.

SAMPLE ID: MW-17

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	40	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	ND	5	ug/L	
Toluene	19	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	77	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	17	5	ug/L	
1,3,5-Trimethylbenzene	10	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	34	5	ug/L	
Acetone	ND	100	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	ND	20	ug/L	
1,2-Dichloroethene (total)	150	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	120	10	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	ND	10	ug/L	

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	98	76	114
Toluene-d8	50 ug/L	100	88	110
4-Bromofluorobenzene	50 ug/L	92	86	115

ANALYZED BY: JC

DATE/TIME: 01/30/98 08:44:00

METHOD: 8260 Water, Volatile Organics

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. H9-9801B97-09

Cypress Engineering, Inc.

SAMPLE ID: Trip Blank

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	ND	5	ug/L
n-Propylbenzene	ND	5	ug/L
Styrene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Toluene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Trichlorofluoromethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
Vinyl chloride	ND	10	ug/L
Xylenes (total)	ND	5	ug/L
Acetone	ND	100	ug/L
Carbon Disulfide	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
2-Hexanone	ND	10	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	92	76	114
Toluene-d8	50 ug/L	98	88	110
4-Bromofluorobenzene	50 ug/L	90	86	115

ANALYZED BY: JC

DATE/TIME: 01/30/98 03:35:00

METHOD: 8260 Water, Volatile Organics

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. H9-9801B97-10

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-8

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/24/98 11:45:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 02/06/98	500	10	mg/L	
Sulfate Method 375.4 * Analyzed by: ST Date: 02/10/98	248	25	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 01/29/98	1740	10	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: KS Date: 02/09/98	ND	0.05	mg/L	
Silver, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Arsenic, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	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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Certificate of Analysis No. H9-9801B97-10

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-8

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/24/98 11:45:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.071	0.005	mg/L	
Cadmium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.005	mg/L	
Chromium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Copper, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Iron, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.02	mg/L	
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 02/09/98 17:38:00	ND	0.0002	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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Certificate of Analysis No. H9-9801B97-10

Cypress Engineering, Inc.
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Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-8

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/24/98 11:45:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.543	0.005	mg/L	
Dissolved Metals Prep. Method 3005A *** Analyzed by: SRC Date: 01/28/98	01/28/98			
Lead, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.05	mg/L	
Selenium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	mg/L	
Zinc, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	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
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PHONE (713) 660-0901

Certificate of Analysis No. H9-9801B97-10

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-8

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/24/98 11:45:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	21	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	ND	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	100	5	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	ND	5	ug/L	
cis-1,2-Dichloroethene	33	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	ND	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	10	5	ug/L	
Methylene chloride	ND	5	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9801B97-10

Cypress Engineering, Inc.

SAMPLE ID: MW-8

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	ND	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	ND	5	ug/L	
Toluene	ND	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	52	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	ND	5	ug/L	
1,3,5-Trimethylbenzene	ND	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	ND	5	ug/L	
Acetone	ND	100	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	ND	20	ug/L	
1,2-Dichloroethene (total)	33	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	12	10	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	ND	10	ug/L	

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	92	76	114
Toluene-d8	50 ug/L	100	88	110
4-Bromofluorobenzene	50 ug/L	92	86	115

ANALYZED BY: JC

DATE/TIME: 01/30/98 04:01:00

METHOD: 8260 Water, Volatile Organics

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. H9-9801B97-11

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-5

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/24/98 15:10:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 02/06/98	300	5	mg/L	
Sulfate Method 375.4 * Analyzed by: ST Date: 02/10/98	4	1	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 01/29/98	1640	10	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: KS Date: 02/09/98	ND	0.05	mg/L	
Silver, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L	
Arsenic, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	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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Certificate of Analysis No. H9-9801B97-11

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-5

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/24/98 15:10:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Barium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	15.5	0.005	mg/L
Cadmium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.005	mg/L
Chromium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L
Copper, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.01	mg/L
Iron, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.19	0.02	mg/L
Mercury, Dissolved Method 7470 A*** Analyzed by: AG Date: 02/09/98 17:38:00	ND	0.0002	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.
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Certificate of Analysis No. H9-9801B97-11

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

DATE: 02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-5

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/24/98 15:10:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	0.017	0.005	mg/L	
Dissolved Metals Prep. Method 3005A *** Analyzed by: SRC Date: 01/28/98	01/28/98			
Lead, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.05	mg/L	
Selenium, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	ND	0.1	mg/L	
Zinc, Dissolved Method 6010B *** Analyzed by: PS Date: 01/29/98	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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with EPA guidelines for quality assurance.



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Certificate of Analysis No. H9-9801B97-11

Cypress Engineering, Inc.
16300 Kathy Frwy. #210
Houston, TX 77094
ATTN: George Robinson

02/11/98

PROJECT: Transwestern Pipeline
SITE: WT-1 ER Pit Area
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-5

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 01/24/98 15:10:00
DATE RECEIVED: 01/27/98

ANALYTICAL DATA			
PARAMETER	RESULTS	PQL*	UNITS
Benzene	23	5	ug/L
Bromobenzene	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
Bromoform	ND	5	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
Carbon tetrachloride	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Chlorodibromomethane	ND	5	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,2-Dibromo-3-chloropropane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Dibromomethane	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	120	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloroethene	6	5	ug/L
cis-1,2-Dichloroethene	140	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
1,3-Dichloropropane	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Ethylbenzene	9	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
Methylene chloride	ND	5	ug/L

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9801B97-11

Cypress Engineering, Inc.

SAMPLE ID: MW-5

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	48	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	ND	5	ug/L	
Toluene	18	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	75	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	17	5	ug/L	
1,3,5-Trimethylbenzene	10	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	33	5	ug/L	
Acetone	ND	100	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	ND	20	ug/L	
1,2-Dichloroethene (total)	140	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	130	10	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	ND	10	ug/L	

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	92	76	114
Toluene-d8	50 ug/L	98	88	110
4-Bromofluorobenzene	50 ug/L	90	86	115

ANALYZED BY: JC

DATE/TIME: 01/30/98 04:27:00

METHOD: 8260 Water, Volatile Organics

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

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL

Contract:

Lab Code:

Case No.: 9801C50 SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: MAKEUP WATER

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50	0	52	104	61-145
Trichloroethene	50	0	52	104	71-120
Benzene	50	0	53	106	76-127
Toluene	50	0	53	106	76-125
Chlorobenzene	50	0	52	104	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
=====	=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50	51	102	2	14	61-145
Trichloroethene	50	52	104	0	14	71-120
Benzene	50	53	106	0	11	76-127
Toluene	50	52	104	2	13	76-125
Chlorobenzene	50	54	102	2	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

SPL Houston Labs

RECOVERY REPORT

Client Name: Client SDG: n980129
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS
Level: LOW Operator: JC
Data Type: MS DATA SampleType: METHSPIKE
SpikeList File: 8260_water.spk Quant Type: ISTD
Sublist File: 8260.sub
Method File: /var/chem/n.i/n980129.b/n8260w.m
Misc Info: N029W1//N029IW3

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 1,1-Dichloroethene	50	49	98.00	61-145
29 Trichloroethene	50	49	98.00	71-120
25 Benzene	50	52	104.00	76-127
37 Toluene	50	51	102.00	76-125
45 Chlorobenzene	50	50	100.00	75-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 21 1,2-Dichloroethane	50	50	100.00	76-114
\$ 36 Toluene-d8	50	49	98.00	88-110
\$ 56 Bromofluorobenzene	50	46	92.00	86-115

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL

Contract:

Lab Code:

Case No.: 9801A31 SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: MW-9

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50	0	53	106	61-145
Trichloroethene	50	0	53	106	71-120
Benzene	50	0	54	108	76-127
Toluene	50	0	54	108	76-125
Chlorobenzene	50	0	53	106	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS	
=====	=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50	52	104	2	14	61-145
Trichloroethene	50	53	106	0	14	71-120
Benzene	50	54	108	0	11	76-127
Toluene	50	54	108	0	13	76-125
Chlorobenzene	50	53	106	0	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

SPL Houston Labs

RECOVERY REPORT

Client Name: Client SDG: n980129
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS Operator: JC
Level: LOW SampleType: METHSPIKE
Data Type: MS DATA Quant Type: ISTD
SpikeList File: 8260_water.spk
Sublist File: 8260.sub
Method File: /var/chem/n.i/n980129a.b/n8260w.m
Misc Info: N029W2//N029CW1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 1,1-Dichloroethene	50	50	100.00	61-145
29 Trichloroethene	50	52	104.00	71-120
25 Benzene	50	52	104.00	76-127
37 Toluene	50	52	104.00	76-125
45 Chlorobenzene	50	52	104.00	75-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 21 1,2-Dichloroethane	50	46	92.00	76-114
\$ 36 Toluene-d8	50	48	96.00	88-110
\$ 56 Bromofluorobenzene	50	46	92.00	86-115



SPL Blank QC Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 669-9901

page 4

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980129122724

Reported on: 02/04/98 15:53
Analyzed on: 01/30/98 00:32
Analyst: JC

METHOD 8260/8240 N029B02

Compound	Result	Detection Limit	Units
Dichlorodifluoromethane	ND	10	ug/L
Chloromethane	ND	10	ug/L
Vinyl Chloride	ND	10	ug/L
Bromomethane	ND	10	ug/L
Chloroethane	ND	10	ug/L
Trichlorofluoromethane	ND	5	ug/L
Acetone	ND	100	ug/L
1,1-Dichloroethene	ND	5	ug/L
Methylene Chloride	ND	5	ug/L
Carbon Disulfide	ND	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
cis-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Chloroform	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Benzene	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Dibromomethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 669-8991

page 5

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980129122724

Reported on: 02/04/98 15:53
Analyzed on: 01/30/98 00:32
Analyst: JC

METHOD 8260/8240 N029B02

Compound	Result	Detection Limit	Units
1,3-Dichloropropane	ND	5	ug/L
2-Hexanone	ND	10	ug/L
Dibromochloromethane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Bromoform	ND	5	ug/L
Styrene	ND	5	ug/L
Xylene (Total)	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
Bromobenzene	ND	5	ug/L
N-Propylbenzene	ND	5	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
n-Butylbenzene	ND	5	ug/L
1,2-Dibromo-3-Chloropropan	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
Naphthalene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 669-8891

page 6

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980129122724

Reported on: 02/04/98 15:53
Analyzed on: 01/30/98 00:32
Analyst: JC

METHOD 8260/8240 N029B02

S u r r o g a t e	Result	QC Criteria	Units
1,2-Dichloroethane-d4	92	76-114	% Recovery
Toluene-d8	98	88-110	% Recovery
Bromofluorobenzene	92	86-115	% Recovery

Samples in Batch 9801B97-04 9801B97-05 9801B97-06 9801B97-07
9801B97-08 9801B97-09 9801B97-10 9801B97-11

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-9901

page 1

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980129122720

Reported on: 02/04/98 15:53
Analyzed on: 01/29/98 11:21
Analyst: JC

METHOD 8260/8240 N029B01

Compound	Result	Detection Limit	Units
Dichlorodifluoromethane	ND	10	ug/L
Chloromethane	ND	10	ug/L
Vinyl Chloride	ND	10	ug/L
Bromomethane	ND	10	ug/L
Chloroethane	ND	10	ug/L
Trichlorofluoromethane	ND	5	ug/L
Acetone	ND	100	ug/L
1,1-Dichloroethene	ND	5	ug/L
Methylene Chloride	ND	5	ug/L
Carbon Disulfide	ND	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
cis-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Chloroform	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Benzene	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Dibromomethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-9990

page 2

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980129122720

Reported on: 02/04/98 15:53
Analyzed on: 01/29/98 11:21
Analyst: JC

METHOD 8260/8240 N029B01

Compound	Result	Detection Limit	Units
1,3-Dichloropropane	ND	5	ug/L
2-Hexanone	ND	10	ug/L
Dibromochloromethane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Bromoform	ND	5	ug/L
Styrene	ND	5	ug/L
Xylene (Total)	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
Bromobenzene	ND	5	ug/L
N-Propylbenzene	ND	5	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
n-Butylbenzene	ND	5	ug/L
1,2-Dibromo-3-Chloropropan	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
Naphthalene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-9901

page 3

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980129122720

Reported on: 02/04/98 15:53
Analyzed on: 01/29/98 11:21
Analyst: JC

METHOD 8260/8240 N029B01

S u r r o g a t e	Result	QC Criteria	Units
1,2-Dichloroethane-d4	92	76-114	% Recovery
Toluene-d8	98	88-110	% Recovery
Bromofluorobenzene	96	86-115	% Recovery

Samples in Batch 9801B97-01 9801B97-02 9801B97-03

Notes

ND - Not detected.

ICP Spectroscopy Method 6010 Quality Control Report



Matrix: DISSOLVED Units: mg/L

Analyst: PS
HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TEXAS 77054
 Checked: (713) 660-0901

Date: 012998 Time: 0805 File Name: 012998C5

1/30/98

Laboratory Control Sample

Element	Mth. Blank	True Value	Result	% Recovery	Lower Limit	Upper Limit
Silver	ND	2.00	2.00	100	1.60	2.40
Aluminum						
Arsenic	ND	4.00	4.02	101	3.20	4.80
Barium	ND	2.00	1.96	98	1.60	2.40
Beryllium						
Calcium						
Cadmium	ND	2.00	1.92	96	1.60	2.40
Cobalt						
Chromium	ND	2.00	2.02	101	1.60	2.40
Copper	ND	2.00	1.97	99	1.60	2.40
Iron	ND	2.00	2.04	102	1.60	2.40
Potassium						
Magnesium						
Manganese	ND	2.00	2.02	101	1.60	2.40
Sodium						
Nickel						
Lead	ND	2.00	2.03	101	1.60	2.40
Antimony						
Selenium	ND	4.00	4.03	101	3.20	4.80
Thallium						
Vanadium						
Zinc	ND	2.00	2.02	101	1.60	2.40

Work Orders in Batch

Work Order	Fractions
98-01-B97	01D-08D 10D-11D

Matrix Spike - Spike Duplicate Results

Work Order Spiked: 9801B97-01D

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	0.9493	94.9	0.9402	94.0	80 120	1.0	20.0
Aluminum									
Arsenic	ND	2.0	2.216	110.8	2.197	109.9	80 120	0.9	20.0
Barium	0.0166	1.0	1.012	99.5	1.012	99.5	80 120	0.0	20.0
Beryllium									
Calcium									
Cadmium	ND	1.0	1.013	101.3	1.015	101.5	80 120	0.2	20.0
Cobalt									
Chromium	ND	1.0	1.023	102.3	1.023	102.3	80 120	0.0	20.0
Copper	ND	1.0	1.028	102.8	1.025	102.5	80 120	0.3	20.0
Iron	ND	1.0	1.026	102.6	1.026	102.6	80 120	0.0	20.0
Potassium									
Magnesium									
Manganese	0.1882	1.0	1.216	102.8	1.216	102.8	80 120	0.0	20.0
Sodium									
Nickel									
Lead	ND	1.0	1.038	103.8	1.034	103.4	80 120	0.4	20.0
Antimony									
Selenium	ND	2.0	2.313	115.7	2.304	115.2	80 120	0.4	20.0
Thallium									
Vanadium									
Zinc	ND	1.0	1.051	105.1	1.052	105.2	80 120	0.1	20.0

Elements Bench Spiked: ALL



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 02/09/98

Analyzed on: 02/09/98

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	1.98	99.0	80 - 120

-9802387

Samples in batch:

9801B97-01D	9801B97-02D	9801B97-03D	9801B97-04D
9801B97-05D	9801B97-06D	9801B97-07D	9801B97-08D
9801B97-10D	9801B97-11D	9801E18-01E	9801E18-02E
9801E18-03E	9801E18-05E	9801E18-06E	

COMMENTS:

LCS = SPL ID# 94-452-39-6



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 02/09/98

Analyzed on: 02/09/98

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	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)	
ID Number	Blank ug/L	Result ug/L	Added ug/L	Result ug/L	Recovery %	Result ug/L	Recovery %	(%)	RPD Max	% REC
9801E18-01E	ND	ND	2.00	1.90	95.0	1.90	95.0	0	20	75 -125

-9802387

Samples in batch:

9801B97-01D	9801B97-02D	9801B97-03D	9801B97-04D
9801B97-05D	9801B97-06D	9801B97-07D	9801B97-08D
9801B97-10D	9801B97-11D	9801E18-01E	9801E18-02E
9801E18-03E	9801E18-05E	9801E18-06E	

COMMENTS:

LCS = SPL ID# 94-452-39-6



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 02/10/98

Analyzed on: 02/06/98

Analyst: TV

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	170.0	171.93	101	94 - 106

-9802379

Samples in batch:

9801B97-01B	9801B97-02B	9801B97-03B	9801B97-04B
9801B97-05B	9801B97-06B	9801B97-07B	9801B97-08B
9801B97-10B	9801B97-11B	9801C99-01E	9801C99-03E
9801C99-04E	9801C99-05E	9801C99-06E	9801C99-07E
9801D02-08E	9801D02-09E	9801D02-10E	9801D02-11E

COMMENTS:

LCS=SPL ID#94453182-12



HOUSTON LABORATORY
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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 02/10/98

Analyzed on: 02/06/98

Analyst: TV

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	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)	
ID Number	Blank	Result	Added	Result	Recovery	Result	Recovery	(%)	RPD	% REC
	MG/L	MG/L	MG/L	MG/L	%	MG/L	%		Max	
9801B97-05B	ND	38.11	50.0	87.03	97.8	87.74	99.3	1.5	5	92 -109

-9802378

Samples in batch:

9801B97-01B 9801B97-02B 9801B97-03B 9801B97-04B
9801B97-05B 9801B97-06B 9801B97-07B 9801B97-08B
9801B97-10B 9801B97-11B

COMMENTS:



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 02/10/98

Analyzed on: 02/10/98

Analyst: ST

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:

Sulfate
Method 375.4 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	200.0	203.7	102	82 - 111

-9802590

Samples in batch:

9801B97-01B	9801B97-02B	9801B97-03B	9801B97-05B
9801B97-06B	9801B97-07B	9801B97-08B	9801B97-10B
9801B97-11B	9801E16-05G	9801E16-06G	9801E17-07G
9801E17-09G	9801E17-10G	9801E18-01C	9801E18-02C
9801E18-04C	9801E18-05C	9801E18-06C	9802210-01B

COMMENTS:

LCS = SPL ID#:94453182-12



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 02/10/98
Analyzed on: 02/10/98
Analyst: ST

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:

Sulfate
Method 375.4 *

SPL Sample	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)	
ID Number	Blank mg/L	Result mg/L	Added mg/L	Result mg/L	Recovery %	Result mg/L	Recovery %	(%)	RPD Max	% REC
9801B97-10B	ND	9.92	10.0	18.96	90.4	18.56	86.4	4.5	9.5	84 -120

-9802413

Samples in batch:

9801B97-01B 9801B97-02B 9801B97-03B 9801B97-05B
9801B97-06B 9801B97-07B 9801B97-08B 9801B97-10B
9801B97-11B 9802210-01B

COMMENTS:



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

**** SPL QUALITY CONTROL REPORT ****

Matrix: Aqueous

Reported on: 02/10/98

Analyzed on: 02/10/98

Analyst: ST

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:

Sulfate
Method 375.4 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	200	171.7	85.8	82 - 111

-9802592

Samples in batch:

9801B97-04B

COMMENTS:

LCS = SPLID#:94453182-12



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 02/10/98

Analyzed on: 02/10/98

Analyst: ST

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:

Sulfate
Method 375.4 *

SPL Sample	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)		
ID Number	Blank	Result	Added	Result	Recovery	Result	Recovery	(%)	RPD	% REC	
	mg/L	mg/L	mg/L	mg/L	%	mg/L	%		Max		
9801B97-04B	ND	7.57	10.0	18.56	110	18.56	110	0	9.5	84	-120

-9802415

Samples in batch:

9801B97-04B

COMMENTS:



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** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 01/30/98

Analyzed on: 01/29/98

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.
9801B97-01B	2120	2150	1.4	5

-9801A32

Samples in batch:

9801B97-01B	9801B97-02B	9801B97-03B	9801B97-04B
9801B97-05B	9801B97-07B	9801B97-10B	9801B97-11B
9801C50-01L	9801C55-03A		

COMMENTS:



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 01/30/98

Analyzed on: 01/29/98

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.
9801B97-08B	1680	1710	1.8	5

-9801A33

Samples in batch:

9801B97-08B 9801C96-03C

COMMENTS:



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 02/02/98

Analyzed on: 01/30/98

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.
9801D31-01C	2650	2720	2.6	5

-9802024

Samples in batch:

9801B97-06B 9801D31-01C

COMMENTS:



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 02/11/98

Analyzed on: 02/09/98

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:

Nitrate-Nitrite, as N
Method 353.3 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	2.00	1.84	92.0	92 - 111

-9802539

Samples in batch:

9801B97-01C	9801B97-02C	9801B97-03C	9801B97-04C
9801B97-05C	9801B97-06C	9801B97-07C	9801B97-08C
9801B97-10C	9801B97-11C		

COMMENTS:

SPL LCSID# 95535170-9



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 02/11/98

Analyzed on: 02/09/98

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:

Nitrate-Nitrite, as N
Method 353.3 *

SPL Sample	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)		
ID Number	Blank	Result	Added	Result	Recovery	Result	Recovery	(%)	RPD	% REC	
	mg/L	mg/L	mg/L	mg/L	%	mg/L	%		Max		
9801B97-07C	ND	ND	5.00	5.31	106	5.52	110	3.7	12	87	-120

-9802538

Samples in batch:

9801B97-01C 9801B97-02C 9801B97-03C 9801B97-04C
9801B97-05C 9801B97-06C 9801B97-07C 9801B97-08C
9801B97-10C 9801B97-11C

COMMENTS:

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST



SPL, Inc.

SPL Workorder No:

9801B97

Page ____ of ____

19626

Analysis Request & Chain of Custody Record

Client Name: LYBESS ENGINEERINGAddress/Phone: 16300 Katy Avenue, Suite 210 Houston TX 77054
281-578-3115Client Contact: GEORGE ROBINSONProject Name: TEXASWESTERN Pipeline

Project Number:

Project Location: WT-1 ER PIT AREAInvoice To: George Robinson

SAMPLE ID	DATE	TIME	comp	grab	matrix		bottle	size	pres.	Number of Containers	VOCs 8240 INCLUDE 1,2 DICHLORETHENE (CIS+TRANS) & DICHLORETHENE (O-M, P)	TDS, CHLORIDE, SULFATE	NITRITE & NITRATE AS NITROGEN (353.2)	METALS (7470/601P) As, Ba, Cd, Cr, Pb, Hg, Se, Ag, Cu, Fe, Mn, Zn				
					W=water	S=soil												
MMU-4	1/23/98	1140		X	W		P G	1 400	0	2	X	X	X	X				
MMU-110	1/23/98	1215		X	W		P	1	0	2	X	X	X	X				
MMU-16	1/23/98	1215		X	W		P	1	3	1			X					
MMU-16	1/23/98	1215		X	W		G	40	1	3	X							
MMU-15	1/23/98	1400		X	W		P	1	0	2	X			X				
MMU-15	1/23/98	1400		X	W		P	1	3	1			X					
MMU-15	1/23/98	1400		X	W		G	40	1	3	X							
MMU-15	1/23/98	1435		X	W		P	1	0	2			X					
MMU-6	1/23/98	1435		X	W		P	1	3	1				X				
MMU-6	1/23/98	1435		X	W		G	40	1	3	X							

Client/Consultant Remarks: SEE SHANNON FOR LEVEL III QC REPORTING DETAILS

Laboratory remarks:

Intact? ☒ Y ☐ N
Temp: 80

Requested TAT

Special Reporting Requirements

Fax Results

Raw Data

Special Detection Limits (specify):

PM review (initial):

24hr ☐ 72hr ☐
48hr ☐ Standard ☒
Other ☐1. Relinquished by Sampler
3. Relinquished by: Shannon Kelly
5. Relinquished by:Standard QC ☐ Level 3 QC ☒
Level 4 QC ☐date time
1/26/98 1330
4. Received by:Received by Laboratory: MLJ
1-27-98 1000☐ 8880 Interchange Drive, Houston, TX 77054 (713) 660-0901
☐ 459 Hedges Drive, Traverse City, MI 49684 (616) 947-5777☐ 500 Ambassador Caffery Parkway, Scott, LA 70583 (318) 237-4775
☐ 1511 E. Orangethorpe Avenue, Fullerton, CA 92631 (714) 447-6868



SPL, Inc.

SPL Workorder No:

19625

Analysis Request & Chain of Custody Record

page of

Requested Analysis

Client Name: <u>WILLIS ENGINEERING</u>				matrix				bottle				size				pres.				Number of Containers				Requested Analysis																																			
Address/Phone: <u>1630 Kathy Freeway, Suite 210 Houston, TX 77094</u> <u>(281) 573-3145</u>				S=soil SL=sludge O=other:				P=plastic A=amber glass G=glass V=vial				1=1 liter 4=4oz 40=vial 8=8oz 16=16oz				1=HCl 2=HNO3 3=H2SO4 O=other:				Vials 8240 Include: 1,2 DICHLOETHANE (GIS- & TRANS-) # DICHLOBENZENE (O-M, P-)				TDS, CHLORIDE, SULFATE				NITRITE & NITRATE AS NITROGEN (353.2)				METALS (7470/6010): AS Ba, Cd, Cr, Pb, Hg, Se, Ag, Cu, Fe, Mn, & Zn																											
Client Contact: <u>GEORGE ROBINSON</u>																																																											
Project Name: <u>TRABUCCO PIPELINE</u>																																																											
Project Number:																																																											
Project Location: <u>WT-1 DR PIT AREA</u>																																																											
Invoice To: <u>GEORGE ROBINSON</u>																																																											
SAMPLE ID				DATE				TIME				comp				grab																																											
MW-7				1/23/98				1555								X				W				P				1				0/3				2/1				X				X															
MW-7				1/23/98				1555								X				W				G				40				1				0/3				3				X				X											
MW-14				1/23/98				1640								X				W				P				1				0/3				2/1				X				X															
MW-14				1/23/98				1640								X				W				G				40				1				0/3				2/1				X				X											
MW-1				1/23/98				1745								X				W				P				1				0/3				2/1				X				X															
MW-1				1/23/98				1745								X				W				G				40				1				0/3				3				X				X											
MW-17				1/24/98				0830								X				W				P				1				0/3				2/1				X				X															
MW-17				1/24/98				0830								X				W				G				40				1				0/3				3				X				X											
TEMP BLANK				1/24/98				0830								X				W				G				40				1				0/3				2				X															

Client/Consultant Remarks: SEE SHANNON FOR LEVEL 3 OIL RECOVERY DETAILS

Laboratory remarks:

Intact? ☐ Y ☐ N
Temp: 2°C

Requested TAT

Special Reporting Requirements

Fax Results

Raw Data

Special Detection Limits (specify):

PM review (initial):

Standard QC

Level 3 QC

Level 4 QC

24hr ☐ 72hr ☐48hr ☐ Standard ☒Other ☐

1. Relinquished by Sample:

3. Relinquished by:

5. Relinquished by:

2. Received by:

4. Received by:

Received by Laboratory:

1-22-98 1000

☐ 8880 Interchange Drive, Houston, TX 77054 (713) 660-0901
☐ 459 Hines Drive, Traverse City, MI 49684 (616) 947-5777☐ 500 Ambassador Caffery Parkway, Scott, LA 70583 (318) 237-4775
☐ 1511 E. Orangethorpe Avenue, Fullerton, CA 92631 (714) 447-6060

Analysis Request & Chain of Custody Record

page _____ of _____

[illegible]

☐ 8880 Interchange Drive, Houston, TX 77054 (713) 660-0901

☐ 459 Hines Drive, Traverse City, MI 49684 (616) 947-5777

500 Ambassador Caffery Parkway, Scott, LA 70583 (318) 237-4775
1511 E. Orangethorpe Avenue, Fullerton, CA 92631 (714) 447-6868

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 1-27-98	Time: 1530
---------------	------------

SPL Sample ID: 9801B97

		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:	70 C	
10	Method of sample delivery to SPL:	SPL Delivery	
		Client Delivery	
		FedEx Delivery (airbill #)	9322662211
		Other:	
11	Method of sample disposal:	SPL Disposal	/
		HOLD	
		Return to Client	

Name: 	Date: 1-27-98
---	---------------



Report of Ground Water Monitoring Activities

**WT-1 Compressor Station: Engine Room Drain Pit Area
Transwestern Pipeline Company**

Attachment #6

**Lab Reports for April 1998
Ground Water Sampling Event**



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

May 1, 1998

Ms. Sandy Sharp
CYPRESS ENGINEERING, INC.
10235 W. Little York Rd #256
Houston, TX 77040

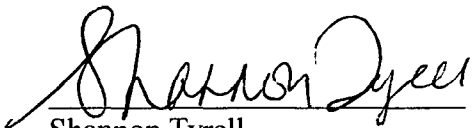
The following report contains analytical results for the sample(s) received at Southern Petroleum Laboratories (SPL) on April 18, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9804901 and analyzed for all parameters as listed on the chain of custody.

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


Shannon Tyrell
Client Services Representative



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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-04-901

Approved for Release by:

Shannon Tyrell
Shannon Tyrell, Client Services Representative

5/6/98
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.



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

Certificate of Analysis No. H9-9804901-01

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-7

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 09:25:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 04/30/98 10:00:00	410	5	mg/L	
Sulfate Method 375.4 * Analyzed by: EM Date: 04/27/98 13:00:00	900	100	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 04/23/98 14:55:00	1800	100	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: EM Date: 04/23/98 13:00:00	8.38	0.05	mg/L	
Silver, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Arsenic, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	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. H9-9804901-01

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-7

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 09:25:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.021	0.005	mg/L	
Cadmium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.005	mg/L	
Chromium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Copper, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Iron, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.08	0.02	mg/L	
Mercury, Total Method 7470 A*** Analyzed by: AG Date: 04/27/98 15:46:00	ND	0.0002	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
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8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9804901-01

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-7

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 09:25:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.051	0.005	mg/L	
Acid Digestion-Aqueous, ICP Method 3010A *** Analyzed by: GJ Date: 04/20/98 18:30:00	04/20/98			
Lead, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.05	mg/L	
Selenium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	mg/L	
Zinc, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.02	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. H9-9804901-01

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

04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-7

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 09:25:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	6	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	ND	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	20	5	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	ND	5	ug/L	
cis-1,2-Dichloroethene	8	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	ND	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	ND	5	ug/L	
Methylene chloride	ND	5	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9804901-01

Cypress Engineering, Inc.

SAMPLE ID: MW-7

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	ND	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	ND	5	ug/L	
Toluene	ND	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	14	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	ND	5	ug/L	
1,3,5-Trimethylbenzene	ND	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	ND	5	ug/L	
Acetone	ND	100	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	ND	20	ug/L	
1,2-Dichloroethene (total)	8	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	ND	10	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	ND	10	ug/L	

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	86	76	114
Toluene-d8	50 ug/L	104	88	110
4-Bromofluorobenzene	50 ug/L	96	86	115

ANALYZED BY: JC

DATE/TIME: 04/20/98 23:42:00

METHOD: 8260 Water, Volatile Organics

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. H9-9804901-02

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-8

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 10:50:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 04/30/98 10:00:00	550	10	mg/L	
Sulfate Method 375.4 * Analyzed by: EM Date: 04/27/98 13:00:00	400	100	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 04/21/98 16:40:00	1300	100	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: EM Date: 04/23/98 13:00:00	0.88	0.05	mg/L	
Silver, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Arsenic, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	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. H9-9804901-02

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-8

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 10:50:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.071	0.005	mg/L	
Cadmium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.005	mg/L	
Chromium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Copper, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Iron, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.65	0.02	mg/L	
Mercury, Total Method 7470 A*** Analyzed by: AG Date: 04/27/98 15:46:00	ND	0.0002	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. H9-9804901-02

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-8

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 10:50:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.751	0.005	mg/L	
Acid Digestion-Aqueous, ICP Method 3010A *** Analyzed by: GJ Date: 04/20/98 18:30:00	04/20/98			
Lead, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.05	mg/L	
Selenium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	mg/L	
Zinc, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	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. H9-9804901-02

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

04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-8

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 10:50:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	19	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	ND	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	89	5	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	ND	5	ug/L	
cis-1,2-Dichloroethene	33	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	ND	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	5	5	ug/L	
Methylene chloride	ND	5	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9804901-02

Cypress Engineering, Inc.

SAMPLE ID: MW-8

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	ND	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	ND	5	ug/L	
Toluene	ND	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	51	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	ND	5	ug/L	
1,3,5-Trimethylbenzene	ND	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	ND	5	ug/L	
Acetone	ND	100	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	ND	20	ug/L	
1,2-Dichloroethene (total)	33	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	ND	10	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	ND	10	ug/L	

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	82	76	114
Toluene-d8	50 ug/L	102	88	110
4-Bromofluorobenzene	50 ug/L	96	86	115

ANALYZED BY: JC

DATE/TIME: 04/21/98 00:09:00

METHOD: 8260 Water, Volatile Organics

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. H9-9804901-03

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-5

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 12:50:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 04/30/98 10:00:00	290	5	mg/L	
Sulfate Method 375.4 * Analyzed by: EM Date: 04/27/98 13:00:00	200	100	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 04/23/98 14:55:00	1400	100	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: EM Date: 04/23/98 13:00:00	0.88	0.05	mg/L	
Silver, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Arsenic, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	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. H9-9804901-03

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-5

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 12:50:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	14.4	0.005	mg/L	
Cadmium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.005	mg/L	
Chromium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Copper, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Iron, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	1.29	0.02	mg/L	
Mercury, Total Method 7470 A*** Analyzed by: AG Date: 04/27/98 15:46:00	ND	0.0002	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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8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9804901-03

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-5

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 12:50:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.022	0.005	mg/L	
Acid Digestion-Aqueous, ICP Method 3010A *** Analyzed by: GJ Date: 04/20/98 18:30:00	04/20/98			
Lead, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.05	mg/L	
Selenium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	mg/L	
Zinc, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.03	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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with EPA guidelines for quality assurance.



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Certificate of Analysis No. H9-9804901-03

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

04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-5

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 12:50:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	16	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	ND	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	83	5	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	ND	5	ug/L	
cis-1,2-Dichloroethene	91	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	ND	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	ND	5	ug/L	
Methylene chloride	ND	5	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9804901-03

Cypress Engineering, Inc.

SAMPLE ID: MW-5

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	5	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	ND	5	ug/L	
Toluene	9	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	67	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	6	5	ug/L	
1,3,5-Trimethylbenzene	ND	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	14	5	ug/L	
Acetone	ND	100	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	ND	20	ug/L	
1,2-Dichloroethene (total)	91	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	18	10	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	ND	10	ug/L	

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	84	76	114
Toluene-d8	50 ug/L	102	88	110
4-Bromofluorobenzene	50 ug/L	96	86	115

ANALYZED BY: JC

DATE/TIME: 04/21/98 01:32:00

METHOD: 8260 Water, Volatile Organics

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. H9-9804901-04

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 13:30:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 04/30/98 10:00:00	150	5	mg/L	
Sulfate Method 375.4 * Analyzed by: EM Date: 04/27/98 13:00:00	200	100	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 04/23/98 14:55:00	2100	100	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: EM Date: 04/23/98 13:00:00	0.90	0.05	mg/L	
Silver, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Arsenic, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.2	0.1	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. H9-9804901-04

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 13:30:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	26.8	0.005	mg/L	
Cadmium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.005	mg/L	
Chromium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Copper, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Iron, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	8.42	0.02	mg/L	
Mercury, Total Method 7470 A*** Analyzed by: AG Date: 04/27/98 15:46:00	ND	0.0002	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 LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9804901-04

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 13:30:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.018	0.005	mg/L	
Acid Digestion-Aqueous, ICP Method 3010A *** Analyzed by: GJ Date: 04/20/98 18:30:00	04/20/98			
Lead, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.05	mg/L	
Selenium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	mg/L	
Zinc, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	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. H9-9804901-04

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

04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-1

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 13:30:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	11	5	ug/L
Bromobenzene	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
Bromoform	ND	5	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
Carbon tetrachloride	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Chlorodibromomethane	ND	5	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,2-Dibromo-3-chloropropane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Dibromomethane	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	480	250	ug/L
1,2-Dichloroethane	8	5	ug/L
1,1-Dichloroethene	ND	5	ug/L
cis-1,2-Dichloroethene	ND	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
1,3-Dichloropropane	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Ethylbenzene	7	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
Methylene chloride	360	5	ug/L

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9804901-04

Cypress Engineering, Inc.

SAMPLE ID: MW-1

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	11	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	6	5	ug/L	
Toluene	84	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	24	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	39	5	ug/L	
1,3,5-Trimethylbenzene	13	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	85	5	ug/L	
Acetone	J 2100	5000	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	52	20	ug/L	
1,2-Dichloroethene (total)	ND	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	1600	500	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	18	10	ug/L	

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	90	76	114
Toluene-d8	50 ug/L	106	88	110
4-Bromofluorobenzene	50 ug/L	100	86	115

ANALYZED BY: JC

DATE/TIME: 04/21/98 02:26:00

METHOD: 8260 Water, Volatile Organics

NOTES: * - Practical Quantitation Limit

ND - Not Detected

NA - Not Analyzed

J - Estimated value.

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. H9-9804901-05

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-14

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 14:35:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 04/30/98 10:00:00	540	10	mg/L	
Sulfate Method 375.4 * Analyzed by: EM Date: 04/27/98 13:00:00	800	100	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 04/23/98 14:55:00	2000	100	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: EM Date: 04/23/98 13:00:00	3.72	0.05	mg/L	
Silver, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Arsenic, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	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. H9-9804901-05

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-14

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 14:35:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.028	0.005	mg/L	
Cadmium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.005	mg/L	
Chromium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Copper, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Iron, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.03	0.02	mg/L	
Mercury, Total Method 7470 A*** Analyzed by: AG Date: 04/27/98 15:46:00	ND	0.0002	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. H9-9804901-05

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-14

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 14:35:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.119	0.005	mg/L	
Acid Digestion-Aqueous, ICP Method 3010A *** Analyzed by: GJ Date: 04/20/98 18:30:00	04/20/98			
Lead, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.05	0.05	mg/L	
Selenium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	mg/L	
Zinc, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.02	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. H9-9804901-05

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

04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-14

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 14:35:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	ND	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	ND	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	28	5	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	ND	5	ug/L	
cis-1,2-Dichloroethene	ND	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	ND	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	ND	5	ug/L	
Methylene chloride	ND	5	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9804901-05

Cypress Engineering, Inc.

SAMPLE ID: MW-14

ANALYTICAL DATA (continued)			
PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	ND	5	ug/L
n-Propylbenzene	ND	5	ug/L
Styrene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Toluene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
Trichloroethene	14	5	ug/L
Trichlorofluoromethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
Vinyl chloride	ND	10	ug/L
Xylenes (total)	ND	5	ug/L
Acetone	ND	100	ug/L
Carbon Disulfide	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
2-Hexanone	ND	10	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	84	76	114
Toluene-d8	50 ug/L	104	88	110
4-Bromofluorobenzene	50 ug/L	90	86	115

ANALYZED BY: JC

DATE/TIME: 04/21/98 00:37:00

METHOD: 8260 Water, Volatile Organics

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. H9-9804901-06

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

04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Provided by SPL
SAMPLE ID: Trip Blank 4/7/98

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98
DATE RECEIVED: 04/18/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	5	ug/L
Bromobenzene	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
Bromoform	ND	5	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
Carbon tetrachloride	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Chlorodibromomethane	ND	5	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,2-Dibromo-3-chloropropane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Dibromomethane	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloroethene	ND	5	ug/L
cis-1,2-Dichloroethene	ND	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
1,3-Dichloropropane	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
Methylene chloride	ND	5	ug/L

METHOD: 8260 Water, Volatile Organics
(continued on next page)



HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

Certificate of Analysis No. H9-9804901-06

Cypress Engineering, Inc.

SAMPLE ID: Trip Blank 4/7/98

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	ND	5	ug/L
n-Propylbenzene	ND	5	ug/L
Styrene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Toluene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Trichlorofluoromethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
Vinyl chloride	ND	10	ug/L
Xylenes (total)	ND	5	ug/L
Acetone	ND	100	ug/L
Carbon Disulfide	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
2-Hexanone	ND	10	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	80	76	114
Toluene-d8	50 ug/L	102	88	110
4-Bromofluorobenzene	50 ug/L	92	86	115

ANALYZED BY: JC

DATE/TIME: 04/21/98 01:04:00

METHOD: 8260 Water, Volatile Organics

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

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL

Contract:

Lab Code:

Case No.: 9804967 SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: GW-042098-JH-001

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50	0	60	120	61-145
Trichloroethene	50	0	56	112	71-120
Benzene	50	0	54	108	76-127
Toluene	50	0	60	120	76-125
Chlorobenzene	50	0	55	110	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
=====	=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50	59	118	2	14	61-145
Trichloroethene	50	54	108	4	14	71-120
Benzene	50	53	106	2	11	76-127
Toluene	50	53	106	12	13	76-125
Chlorobenzene	50	56	112	2	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

SPL Houston Labs

RECOVERY REPORT

Client Name: Client SDG: n980422
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS
Level: LOW Operator: JC
Data Type: MS DATA SampleType: LCS
SpikeList File: 8260 water.spk Quant Type: ISTD
Sublist File: 8260.sub
Method File: /var/chem/n.i/n980422.b/n8260w.m
Misc Info: N112W1//N112CW1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 1,1-Dichloroethene	50	63	126.00	61-145
29 Trichloroethene	50	54	108.00	71-120
25 Benzene	50	55	110.00	76-127
37 Toluene	50	55	110.00	76-125
45 Chlorobenzene	50	54	108.00	75-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 21 1,2-Dichloroethane	50	47	94.00	76-114
\$ 36 Toluene-d8	50	50	100.00	88-110
\$ 56 Bromofluorobenzene	50	49	98.00	86-115

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL

Contract:

Lab Code:

Case No.: 9804899 SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: MW-16

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	55	110	61-145
Trichloroethene	50	0	49	98	71-120
Benzene	50	0	51	102	76-127
Toluene	50	0	52	104	76-125
Chlorobenzene	50	0	50	100	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	50	54	108	2	14	61-145
Trichloroethene	50	48	96	2	14	71-120
Benzene	50	51	102	0	11	76-127
Toluene	50	53	106	2	13	76-125
Chlorobenzene	50	50	100	0	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

SPL Houston Labs

RECOVERY REPORT

Client Name: Client SDG: n980420
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS
Level: LOW Operator: JC
Data Type: MS DATA SampleType: LCS
SpikeList File: 8260_water.spk Quant Type: ISTD
Sublist File: 8260.sub
Method File: /var/chem/n.i/n980420a.b/n8260w.m
Misc Info: N110W2//N110CW2

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 1,1-Dichloroethene	50	56	112.00	61-145
29 Trichloroethene	50	48	96.00	71-120
25 Benzene	50	48	96.00	76-127
37 Toluene	50	50	100.00	76-125
45 Chlorobenzene	50	48	96.00	75-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 21 1,2-Dichloroethane	50	44	88.00	76-114
\$ 36 Toluene-d8	50	52	104.00	88-110
\$ 56 Bromofluorobenzene	50	47	94.00	86-115



SPL Blank QC Report

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

page 13

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980422122720

Reported on: 04/23/98 15:30
Analyzed on: 04/22/98 11:04
Analyst: JC

METHOD 8260/8240 N112B01

Compound	Result	Detection Limit	Units
Dichlorodifluoromethane	ND	10	ug/L
Chloromethane	ND	10	ug/L
Vinyl Chloride	ND	10	ug/L
Bromomethane	ND	10	ug/L
Chloroethane	ND	10	ug/L
Trichlorofluoromethane	ND	5	ug/L
Acetone	ND	100	ug/L
1,1-Dichloroethene	ND	5	ug/L
Methylene Chloride	ND	5	ug/L
Carbon Disulfide	ND	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
cis-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Chloroform	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Benzene	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Dibromomethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

page 14

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980422122720

Reported on: 04/23/98 15:30
Analyzed on: 04/22/98 11:04
Analyst: JC

METHOD 8260/8240 N112B01

Compound	Result	Detection Limit	Units
1,3-Dichloropropane	ND	5	ug/L
2-Hexanone	ND	10	ug/L
Dibromochloromethane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Bromoform	ND	5	ug/L
Styrene	ND	5	ug/L
Xylene (Total)	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
Bromobenzene	ND	5	ug/L
N-Propylbenzene	ND	5	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
n-Butylbenzene	ND	5	ug/L
1,2-Dibromo-3-Chloropropan	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
Naphthalene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

page 15

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980422122720

Reported on: 04/23/98 15:30
Analyzed on: 04/22/98 11:04
Analyst: JC

METHOD 8260/8240 N112B01

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	98	76-114	% Recovery
Toluene-d8	102	88-110	% Recovery
Bromofluorobenzene	98	86-115	% Recovery

Samples in Batch 9804901-04

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

page 10

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980420122724

Reported on: 04/23/98 15:30
Analyzed on: 04/20/98 23:15
Analyst: JC

METHOD 8260/8240/624 N110B03

Compound	Result	Detection Limit	Units
Dichlorodifluoromethane	ND	10	ug/L
Chloromethane	ND	10	ug/L
Vinyl Chloride	ND	10	ug/L
Bromomethane	ND	10	ug/L
Chloroethane	ND	10	ug/L
Trichlorofluoromethane	ND	5	ug/L
Acetone	ND	100	ug/L
1,1-Dichloroethene	ND	5	ug/L
Methylene Chloride	ND	5	ug/L
Carbon Disulfide	ND	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
cis-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Chloroform	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Benzene	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Dibromomethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

page 11

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980420122724

Reported on: 04/23/98 15:30
Analyzed on: 04/20/98 23:15
Analyst: JC

METHOD 8260/8240/624 N110B03

Compound	Result	Detection Limit	Units
1,3-Dichloropropane	ND	5	ug/L
2-Hexanone	ND	10	ug/L
Dibromochloromethane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Bromoform	ND	5	ug/L
Styrene	ND	5	ug/L
Xylene (Total)	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
Bromobenzene	ND	5	ug/L
N-Propylbenzene	ND	5	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
n-Butylbenzene	ND	5	ug/L
1,2-Dibromo-3-Chloropropan	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
Naphthalene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

page 12

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980420122724

Reported on: 04/23/98 15:30
Analyzed on: 04/20/98 23:15
Analyst: JC

METHOD 8260/8240/624 N110B03

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	88	76-114	% Recovery
Toluene-d8	104	88-110	% Recovery
Bromofluorobenzene	94	86-115	% Recovery

Samples in Batch 9804901-01 9804901-02 9804901-03 9804901-04
9804901-05 9804901-06

Notes

ND - Not detected.



ICP Spectroscopy Method 6010 Quality Control Report

Matrix: Water

Units: mg/L

Analyst: JM

5880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

Date: 042298 Time: 1220 File Name: 042298C4

Checked: ym 4/23/98

Laboratory Control Sample

Element	Mth. Blank	True Value	Result	% Recovery	Lower Limit	Upper Limit
Silver	ND	2.00	1.92	96	1.60	2.40
Aluminum						
Arsenic	ND	4.00	3.90	97	3.20	4.80
Barium	ND	2.00	1.92	96	1.60	2.40
Boron	ND	4.00	3.93	98	3.20	4.80
Calcium						
Cadmium	ND	2.00	1.80	90	1.60	2.40
Cobalt						
Chromium	ND	2.00	1.89	95	1.60	2.40
Copper	ND	2.00	1.95	98	1.60	2.40
Iron	ND	2.00	2.02	101	1.60	2.40
Potassium						
Magnesium						
Manganese	ND	2.00	1.93	96	1.60	2.40
Sodium						
Nickel	ND	2.00	1.90	95	1.60	2.40
Lead	ND	2.00	1.96	98	1.60	2.40
Antimony						
Selenium	ND	4.00	3.85	96	3.20	4.80
Thallium						
Vanadium						
Zinc	ND	2.00	1.94	97	1.60	2.40

Work Orders in Batch

Work Order Fractions

98-04-899 01D-04D

98-04-784 01B-02B

98-04-901 01D-05D

98-04-374 01G

Matrix Spike - Spike Duplicate Results

Work Order Spiked: 9804899-01D

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	0.9742	97.4	0.9914	99.1	80 120	1.8	20.0
Aluminum									
Arsenic	ND	2.0	2.061	103.1	2.097	104.9	80 120	1.7	20.0
Barium	0.0262	1.0	0.9771	95.1	0.9888	96.3	80 120	1.2	20.0
Boron	2.407	2.0	4.434	101.4	4.523	105.8	80 120	4.3	20.0
Calcium									
Cadmium	ND	1.0	0.9279	92.8	0.947	94.7	80 120	2.0	20.0
Cobalt									
Chromium	ND	1.0	0.9389	93.9	0.9531	95.3	80 120	1.5	20.0
Copper	0.008	1.0	0.9899	98.2	1.004	99.6	80 120	1.4	20.0
Iron	0.0711	1.0	1.042	97.1	1.022	95.1	80 120	2.1	20.0
Potassium									
Magnesium									
Manganese	0.2008	1.0	1.153	95.2	1.17	96.9	80 120	1.8	20.0
Sodium									
Nickel	0.0203	1.0	0.9585	93.8	0.9689	94.9	80 120	1.1	20.0
Lead	ND	1.0	0.9917	99.2	1.007	100.7	80 120	1.5	20.0
Antimony									
Selenium	ND	2.0	2.038	101.9	2.053	102.7	80 120	0.7	20.0
Thallium									
Vanadium									
Zinc	0.031	1.0	0.9953	96.4	1.005	97.4	80 120	1.0	20.0



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/27/98

Analyzed on: 04/27/98

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, Total
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	2.18	109	80 - 120

-9804943

Samples in batch:

9804899-01D	9804899-02D	9804899-03D	9804899-04D
9804901-01D	9804901-02D	9804901-03D	9804901-04D
9804901-05D	9804953-03A	9804982-01D	9804984-03A
9804A95-02D			

COMMENTS:

LCS = SPL ID# 94-452-39-6



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 04/27/98

Analyzed on: 04/27/98

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, Total
Method 7470 A***

SPL Sample	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)		
ID Number	Blank	Result	Added	Result	Recovery	Result	Recovery	(%)	RPD	% REC	
	ug/L	ug/L	ug/L	ug/L	%	ug/L	%		Max		
9804899-01D	ND	ND	2.00	1.96	98.0	2.33	116	17	20	75	-125

-9804943

Samples in batch:

9804899-01D 9804899-02D 9804899-03D 9804899-04D
9804901-01D 9804901-02D 9804901-03D 9804901-04D
9804901-05D 9804953-03A 9804982-01D 9804984-03A
9804A95-02D

COMMENTS:

LCS = SPL ID# 94-452-39-6



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/30/98

Analyzed on: 04/30/98

Analyst: TV

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	170.0	169.27	99.6	94 - 106

-9804A91

Samples in batch:

9804278-01D	9804279-01D	9804281-01D	9804287-01D
9804289-01D	9804292-01D	9804294-01D	9804297-01D
9804298-01D	9804392-01D	9804899-01B	9804899-02B
9804899-03B	9804899-04B	9804901-01B	9804901-02B
9804901-03B	9804901-04B	9804901-05B	9804982-01B

COMMENTS:

LCS=SPL ID#94453192-24



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 04/30/98

Analyzed on: 04/30/98

Analyst: TV

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	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)	
ID Number	Blank MG/L	Result MG/L	Added MG/L	Result MG/L	Recovery %	Result MG/L	Recovery %	(%)	RPD Max	% REC
9804899-01B	ND	63.28	50.0	110.78	95.0	110.07	93.6	1.5	5	92 -109

-9804A94

Samples in batch:

9804899-01B 9804899-02B 9804899-03B 9804899-04B
9804901-01B 9804901-02B 9804901-03B 9804901-04B
9804901-05B 9804982-01B

COMMENTS:

LCS=SPL ID#94453192-24



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/27/98

Analyzed on: 04/27/98

Analyst: EM

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:

Sulfate
Method 375.4 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	4.52	4.94	109	82 - 111

-9804918

Samples in batch:

9804831-02D	9804831-04D	9804831-05D	9804831-06D
9804831-09D	9804831-11D	9804899-01B	9804899-02B
9804899-03B	9804899-04B	9804901-01B	9804901-02B
9804901-03B	9804901-04B	9804901-05B	9804B62-02A

COMMENTS:

SPL LCS#: 94453192-24



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 04/27/98

Analyzed on: 04/27/98

Analyst: EM

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:

Sulfate
Method 375.4 *

SPL Sample ID Number	Method Blank mg/L	Sample Result mg/L	Spike Added mg/L	Matrix Spike		Matrix Spike Duplicate		RPD (%)	QC LIMITS (Advisory)		
				Result mg/L	Recovery %	Result mg/L	Recovery %		RPD Max	% REC	
9804901-01B	ND	9.22	10.00	19.89	107	19.59	104	2.8	9.5	84	-120

-9804919

Samples in batch:

9804901-01B 9804901-02B 9804901-03B 9804901-04B
9804901-05B 9804B62-02A

COMMENTS:



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/24/98

Analyzed on: 04/23/98

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	459.8	446	97.0	93 - 107

-9804847

Samples in batch:

9804901-01B	9804901-03B	9804901-04B	9804901-05B
9804951-01I	9804967-01E	9804982-01B	

COMMENTS:

SPL LCS ID# 95535190-06



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/24/98

Analyzed on: 04/23/98

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.
9804951-01I	5680	5930	4.3	5

-9804846

Samples in batch:

9804901-01B 9804901-03B 9804901-04B 9804901-05B
9804951-01I 9804967-01E 9804982-01B

COMMENTS:



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/22/98

Analyzed on: 04/21/98

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	459.8	441	95.9	93 - 107

-9804735

Samples in batch:

9804874-06B	9804874-09B	9804874-12B	9804874-13B
9804899-01B	9804899-02B	9804899-03B	9804899-04B
9804901-02B			

COMMENTS:

SPL LCS ID#95535190-06



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/22/98

Analyzed on: 04/21/98

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.
9804899-01B	153	160	4.5	5

-9804734

Samples in batch:

9804874-06B	9804874-09B	9804874-12B	9804874-13B
9804899-01B	9804899-02B	9804899-03B	9804899-04B
9804901-02B			

COMMENTS:



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/24/98

Analyzed on: 04/23/98

Analyst: EM

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:

Nitrate-Nitrite, as N
Method 353.3 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	2.77	2.60	93.9	92 - 111

-9804854

Samples in batch:

9804899-01C	9804899-02C	9804899-03C	9804899-04C
9804901-01C	9804901-02C	9804901-03C	9804901-04C
9804901-05C	9804953-03F	9804967-01C	9804982-01C

COMMENTS:

SPL LCS#: 95535172-26



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 04/24/98

Analyzed on: 04/23/98

Analyst: EM

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:

Nitrate-Nitrite, as N
Method 353.3 *

SPL Sample	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)		
ID Number	Blank	Result	Added	Result	Recovery	Result	Recovery	(%)	RPD	% REC	
	mg/L	mg/L	mg/L	mg/L	%	mg/L	%		Max		
9804901-05C	ND	3.72	5.00	8.60	97.6	8.30	91.6	6.3	12	87	-120

-9804853

Samples in batch:

9804899-03C 9804899-04C 9804901-01C 9804901-02C
9804901-03C 9804901-04C 9804901-05C 9804953-03F
9804967-01C 9804982-01C

COMMENTS:

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST



SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No:

9804901

51301

page 1 of 1

Client Name: *CHPES ENGINEERS*Address/Phone: *10235 WEST LITTLE AVE, SUITE 250
HOUSTON, TX 77046 713/852-7980*Client Contact: *Sandy Sampedro 713/646-7352*Project Name: *TWP: 147-100E PT AREA*

Project Number:

Project Location:

Invoice To: *George Robinson*

SAMPLE ID

DATE

TIME

comp grab

matrix bottle size pres.

P=plastic A=amber glass
G=glass V=vial1=1 liter 4=4oz 40=vial
8=8oz 16=16oz1=HCl 2=HNO3
3=H2SO4 O=other:

Number of Containers

VOCs 8260 INCLUDE:
1,2-DICHLOROETHENE (CIS-TRANS-)
& DICHLOROBENZENE (O-M-P-)

TDS, CHLORIDE, SULFATE

NITRITE & NITRATE AS
NITROGEN (553.3)METALS (7420/600) i.e.,
Ba, Cd, Cr, Pb, Hg, Se, Ag,

Cu, Fe, Mn, & Zn

TOTAL

Requested Analysis

MAW-7	4/17/98	0925	X	W	P	1	0/3	2/1	X	X	X								
MAW-8		0925			G	40	1	0/3	2/1	X	X	X							
MAW-8		1050			P	1	0/3	2/1	X	X	X								
MAW-5		1050			G	40	1	0/3	2/1	X	X	X							
MAW-5		1250			P	1	0/3	2/1	X	X	X								
MAW-1		1250			G	40	1	0/3	2/1	X	X	X							
MAW-1		1330			P	1	0/3	2/1	X	X	X								
MAW-14		1330			G	40	1	0/3	2/1	X	X	X							
MAW-14		1435			P	1	0/3	2/1	X	X	X								
MAW-14		1435			G	40	1	0/3	2/1	X	X	X							

Client/Consultant Remarks: *METALS DO NOT NEED TO BE FILTERED, Add Preservative*

Laboratory reports: 40 1 2 X (TRIP BLANK)

Intact? ☒ Y ☐ N
Temp: *20C*

Requested TAT

Special Reporting Requirements

Fax Results

Raw Data

Special Detection Limits (specify):

PM review (initial):

Standard QC

Level 3 QC

Level 4 QC

24hr ☐ 72hr ☐48hr ☐ Standard ☒Other ☐

5. Relinquished by:

date

time

4. Received by:

5. Received by Laboratory:

date

1. Relinquished by Sampler:

date

time

2. Received by:

date

time

☐ 8880 Interchange Drive, Houston, TX 77054 (713) 660-0901☐ 500 Ambassador Caffery Parkway, Scott, LA 70583 (318) 237-4775☐ 459-H... Drive, Traverse City, MI 49684 (616) 947-5777☐ 1501 E. Orangethorpe Avenue, Fullerton, CA 92631 (4) 447-6868

DUST

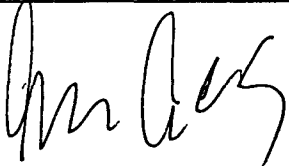
SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 4-18-98	Time: 1000
---------------	------------

SPL Sample ID: 9804901

		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:	2' C	
10	Method of sample delivery to SPL:	SPL Delivery	
		Client Delivery	
		FedEx Delivery (airbill #)	804039168750
		Other:	
11	Method of sample disposal:	SPL Disposal	✓
		HOLD	
		Return to Client	

Name: 	Date: 4-18-98
---	---------------



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

May 1, 1998

Ms. Sandy Sharp
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 April 18, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9804899 and analyzed for all parameters as listed on the chain of custody.

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

A handwritten signature in cursive script, reading "Shannon Tyrell", is written over a horizontal line.

Shannon Tyrell
Client Services Representative

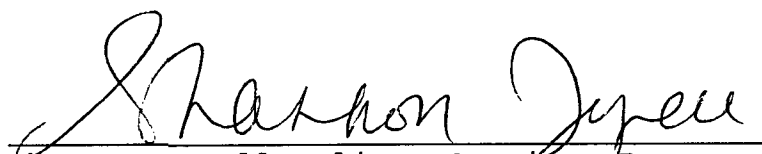


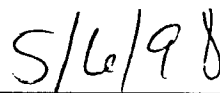
HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-04-899

Approved for Release by:


Shannon Tyrell, Client Services Representative


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.



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

Certificate of Analysis No. H9-9804899-01

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-4

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 15:15:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 04/30/98 10:00:00	320	5	mg/L	
Sulfate Method 375.4 * Analyzed by: EM Date: 04/27/98 13:00:00	800	100	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 04/21/98 16:40:00	1600	100	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: EM Date: 04/23/98 13:00:00	11.60	0.05	mg/L	
Silver, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Arsenic, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	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
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Certificate of Analysis No. H9-9804899-01

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-4

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 15:15:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.026	0.005	mg/L	
Cadmium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.005	mg/L	
Chromium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Copper, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Iron, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.07	0.02	mg/L	
Mercury, Total Method 7470 A*** Analyzed by: AG Date: 04/27/98 15:46:00	ND	0.0002	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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Certificate of Analysis No. H9-9804899-01

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-4

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 15:15:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.201	0.005	mg/L	
Acid Digestion-Aqueous, ICP Method 3010A *** Analyzed by: GJ Date: 04/20/98 18:30:00	04/20/98			
Lead, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.05	mg/L	
Selenium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	mg/L	
Zinc, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.03	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
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HOUSTON, TEXAS 77054
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Certificate of Analysis No. H9-9804899-01

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

04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-4

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 15:15:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	ND	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	ND	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	ND	5	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	ND	5	ug/L	
cis-1,2-Dichloroethene	ND	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	ND	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	ND	5	ug/L	
Methylene chloride	ND	5	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9804899-01

Cypress Engineering, Inc.

SAMPLE ID: MW-4

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	ND	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	ND	5	ug/L	
Toluene	ND	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	ND	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	ND	5	ug/L	
1,3,5-Trimethylbenzene	ND	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	ND	5	ug/L	
Acetone	ND	100	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	ND	20	ug/L	
1,2-Dichloroethene (total)	ND	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	ND	10	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	ND	10	ug/L	

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	80	76	114
Toluene-d8	50 ug/L	104	88	110
4-Bromofluorobenzene	50 ug/L	92	86	115

ANALYZED BY: JC

DATE/TIME: 04/21/98 03:21:00

METHOD: 8260 Water, Volatile Organics

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. H9-9804899-02

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-16

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 16:35:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 04/30/98 10:00:00	710	10	mg/L	
Sulfate Method 375.4 * Analyzed by: EM Date: 04/27/98 13:00:00	1100	100	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 04/21/98 16:40:00	2400	100	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: EM Date: 04/23/98 13:00:00	1.78	0.05	mg/L	
Silver, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Arsenic, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	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. H9-9804899-02

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-16

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 16:35:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.026	0.005	mg/L	
Cadmium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.005	mg/L	
Chromium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Copper, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Iron, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.04	0.02	mg/L	
Mercury, Total Method 7470 A*** Analyzed by: AG Date: 04/27/98 15:46:00	ND	0.0002	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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PHONE (713) 660-0901

Certificate of Analysis No. H9-9804899-02

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-16

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 16:35:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.941	0.005	mg/L	
Acid Digestion-Aqueous, ICP Method 3010A *** Analyzed by: GJ Date: 04/20/98 18:30:00	04/20/98			
Lead, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.05	mg/L	
Selenium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	mg/L	
Zinc, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	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
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HOUSTON, TEXAS 77054
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Certificate of Analysis No. H9-9804899-02

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

04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-16

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 16:35:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	ND	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	ND	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	ND	5	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	ND	5	ug/L	
cis-1,2-Dichloroethene	ND	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	ND	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	ND	5	ug/L	
Methylene chloride	ND	5	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9804899-02

Cypress Engineering, Inc.

SAMPLE ID: MW-16

ANALYTICAL DATA (continued)				
PARAMETER	RESULTS	PQL*	UNITS	
Naphthalene	ND	5	ug/L	
n-Propylbenzene	ND	5	ug/L	
Styrene	ND	5	ug/L	
1,1,1,2-Tetrachloroethane	ND	5	ug/L	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	
Tetrachloroethene	ND	5	ug/L	
Toluene	ND	5	ug/L	
1,2,3-Trichlorobenzene	ND	5	ug/L	
1,2,4-Trichlorobenzene	ND	5	ug/L	
1,1,1-Trichloroethane	ND	5	ug/L	
1,1,2-Trichloroethane	ND	5	ug/L	
Trichloroethene	ND	5	ug/L	
Trichlorofluoromethane	ND	5	ug/L	
1,2,3-Trichloropropane	ND	5	ug/L	
1,2,4-Trimethylbenzene	ND	5	ug/L	
1,3,5-Trimethylbenzene	ND	5	ug/L	
Vinyl chloride	ND	10	ug/L	
Xylenes (total)	ND	5	ug/L	
Acetone	ND	100	ug/L	
Carbon Disulfide	ND	5	ug/L	
Vinyl Acetate	ND	10	ug/L	
2-Butanone	ND	20	ug/L	
1,2-Dichloroethene (total)	ND	5	ug/L	
2-Chloroethylvinylether	ND	10	ug/L	
4-Methyl-2-Pentanone	ND	10	ug/L	
cis-1,3-Dichloropropene	ND	5	ug/L	
trans-1,3-Dichloropropene	ND	5	ug/L	
2-Hexanone	ND	10	ug/L	

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	78	76	114
Toluene-d8	50 ug/L	102	88	110
4-Bromofluorobenzene	50 ug/L	88	86	115

ANALYZED BY: JC

DATE/TIME: 04/21/98 03:49:00

METHOD: 8260 Water, Volatile Organics

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. H9-9804899-03

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-15

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 17:45:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 04/30/98 10:00:00	420	5	mg/L	
Sulfate Method 375.4 * Analyzed by: EM Date: 04/27/98 13:00:00	1000	100	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 04/21/98 16:40:00	1700	100	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: EM Date: 04/23/98 13:00:00	19.6	0.50	mg/L	
Silver, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Arsenic, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	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. H9-9804899-03

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-15

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 17:45:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Barium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.020	0.005	mg/L	
Cadmium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.005	mg/L	
Chromium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Copper, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Iron, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.06	0.02	mg/L	
Mercury, Total Method 7470 A*** Analyzed by: AG Date: 04/27/98 15:46:00	ND	0.0002	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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ATTN: Sandy Sharp

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-15

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 17:45:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.005	mg/L	
Acid Digestion-Aqueous, ICP Method 3010A *** Analyzed by: GJ Date: 04/20/98 18:30:00	04/20/98			
Lead, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.05	mg/L	
Selenium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	mg/L	
Zinc, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.03	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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HOUSTON, TEXAS 77054
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Certificate of Analysis No. H9-9804899-03

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

04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-15

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 17:45:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	PQL*	UNITS	
Benzene	ND	5	ug/L	
Bromobenzene	ND	5	ug/L	
Bromochloromethane	ND	5	ug/L	
Bromodichloromethane	ND	5	ug/L	
Bromoform	ND	5	ug/L	
Bromomethane	ND	10	ug/L	
n-Butylbenzene	ND	5	ug/L	
sec-Butylbenzene	ND	5	ug/L	
tert-Butylbenzene	ND	5	ug/L	
Carbon tetrachloride	ND	5	ug/L	
Chlorobenzene	ND	5	ug/L	
Chlorodibromomethane	ND	5	ug/L	
Chloroethane	ND	10	ug/L	
Chloroform	ND	5	ug/L	
Chloromethane	ND	10	ug/L	
2-Chlorotoluene	ND	5	ug/L	
4-Chlorotoluene	ND	5	ug/L	
1,2-Dibromo-3-chloropropane	ND	5	ug/L	
1,2-Dibromoethane	ND	5	ug/L	
Dibromomethane	ND	5	ug/L	
1,2-Dichlorobenzene	ND	5	ug/L	
1,3-Dichlorobenzene	ND	5	ug/L	
1,4-Dichlorobenzene	ND	5	ug/L	
Dichlorodifluoromethane	ND	10	ug/L	
1,1-Dichloroethane	5	5	ug/L	
1,2-Dichloroethane	ND	5	ug/L	
1,1-Dichloroethene	ND	5	ug/L	
cis-1,2-Dichloroethene	ND	5	ug/L	
trans-1,2-Dichloroethene	ND	5	ug/L	
1,2-Dichloropropane	ND	5	ug/L	
1,3-Dichloropropane	ND	5	ug/L	
2,2-Dichloropropane	ND	5	ug/L	
1,1-Dichloropropene	ND	5	ug/L	
Ethylbenzene	ND	5	ug/L	
Hexachlorobutadiene	ND	5	ug/L	
Isopropylbenzene	ND	5	ug/L	
p-Isopropyltoluene	ND	5	ug/L	
Methylene chloride	ND	5	ug/L	

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9804899-03

Cypress Engineering, Inc.

SAMPLE ID: MW-15

PARAMETER	ANALYTICAL DATA (continued)		UNITS
	RESULTS	PQL*	
Naphthalene	ND	5	ug/L
n-Propylbenzene	ND	5	ug/L
Styrene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
Tetrachloroethene	13	5	ug/L
Toluene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Trichlorofluoromethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
Vinyl chloride	ND	10	ug/L
Xylenes (total)	ND	5	ug/L
Acetone	ND	100	ug/L
Carbon Disulfide	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
2-Hexanone	ND	10	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	76	76	114
Toluene-d8	50 ug/L	102	88	110
4-Bromofluorobenzene	50 ug/L	88	86	115

ANALYZED BY: JC

DATE/TIME: 04/21/98 04:16:00

METHOD: 8260 Water, Volatile Organics

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.



Certificate of Analysis No. H9-9804899-04

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

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-6

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 18:55:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 04/30/98 10:00:00	720	10	mg/L	
Sulfate Method 375.4 * Analyzed by: EM Date: 04/27/98 13:00:00	500	100	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 04/21/98 16:40:00	1700	100	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: EM Date: 04/23/98 13:00:00	0.89	0.05	mg/L	
Silver, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L	
Arsenic, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	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. H9-9804899-04

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

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-6

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 18:55:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA			
PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Barium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.112	0.005	mg/L
Cadmium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.005	mg/L
Chromium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L
Copper, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.01	mg/L
Iron, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.70	0.02	mg/L
Mercury, Total Method 7470 A*** Analyzed by: AG Date: 04/27/98 15:46:00	ND	0.0002	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
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Cypress Engineering, Inc.
10235 W. Little York Rd #256
Houston, TX 77040
ATTN: Sandy Sharp

DATE: 04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-6

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 18:55:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Manganese, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	0.844	0.005	mg/L	
Acid Digestion-Aqueous, ICP Method 3010A *** Analyzed by: GJ Date: 04/20/98 18:30:00	04/20/98			
Lead, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.05	mg/L	
Selenium, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	ND	0.1	mg/L	
Zinc, Total Method 6010B *** Analyzed by: JM Date: 04/22/98 12:20:00	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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HOUSTON, TEXAS 77054
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Certificate of Analysis No. H9-9804899-04

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

04/30/98

PROJECT: TWP: WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-6

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/16/98 18:55:00
DATE RECEIVED: 04/18/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	5	ug/L
Bromobenzene	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
Bromoform	ND	5	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
Carbon tetrachloride	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Chlorodibromomethane	ND	5	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,2-Dibromo-3-chloropropane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Dibromomethane	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	13	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloroethene	ND	5	ug/L
cis-1,2-Dichloroethene	8	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
1,3-Dichloropropane	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
Methylene chloride	ND	5	ug/L

METHOD: 8260 Water, Volatile Organics
(continued on next page)



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
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Certificate of Analysis No. H9-9804899-04

Cypress Engineering, Inc.

SAMPLE ID: MW-6

ANALYTICAL DATA (continued)			
PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	ND	5	ug/L
n-Propylbenzene	ND	5	ug/L
Styrene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Toluene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
Trichloroethene	17	5	ug/L
Trichlorofluoromethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
Vinyl chloride	ND	10	ug/L
Xylenes (total)	ND	5	ug/L
Acetone	ND	100	ug/L
Carbon Disulfide	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
1,2-Dichloroethene (total)	8	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
2-Hexanone	ND	10	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	98	76	114
Toluene-d8	50 ug/L	100	88	110
4-Bromofluorobenzene	50 ug/L	98	86	115

ANALYZED BY: JC

DATE/TIME: 04/22/98 14:31:00

METHOD: 8260 Water, Volatile Organics

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

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL

Contract:

Lab Code:

Case No.: 9804967 SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: GW-042098-JH-001

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	60	120	61-145
Trichloroethene	50	0	56	112	71-120
Benzene	50	0	54	108	76-127
Toluene	50	0	60	120	76-125
Chlorobenzene	50	0	55	110	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	50	59	118	2	14	61-145
Trichloroethene	50	54	108	4	14	71-120
Benzene	50	53	106	2	11	76-127
Toluene	50	53	106	12	13	76-125
Chlorobenzene	50	56	112	2	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

SPL Houston Labs

RECOVERY REPORT

Client Name: Client SDG: n980422
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS
Level: LOW Operator: JC
Data Type: MS DATA SampleType: LCS
SpikeList File: 8260_water.spk Quant Type: ISTD
Sublist File: 8260.sub
Method File: /var/chem/n.i/n980422.b/n8260w.m
Misc Info: N112W1//N112CW1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 1,1-Dichloroethene	50	63	126.00	61-145
29 Trichloroethene	50	54	108.00	71-120
25 Benzene	50	55	110.00	76-127
37 Toluene	50	55	110.00	76-125
45 Chlorobenzene	50	54	108.00	75-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 21 1,2-Dichloroethane	50	47	94.00	76-114
\$ 36 Toluene-d8	50	50	100.00	88-110
\$ 56 Bromofluorobenzene	50	49	98.00	86-115

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL

Contract:

Lab Code:

Case No.: 9804899 SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: MW-16

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50	0	55	110	61-145
Trichloroethene	50	0	49	98	71-120
Benzene	50	0	51	102	76-127
Toluene	50	0	52	104	76-125
Chlorobenzene	50	0	50	100	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
=====	=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50	54	108	2	14	61-145
Trichloroethene	50	48	96	2	14	71-120
Benzene	50	51	102	0	11	76-127
Toluene	50	53	106	2	13	76-125
Chlorobenzene	50	50	100	0	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

SPL Houston Labs

RECOVERY REPORT

Client Name: Client SDG: n980420
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS
Level: LOW Operator: JC
Data Type: MS DATA SampleType: LCS
SpikeList File: 8260_water.spk Quant Type: ISTD
Sublist File: 8260.sub
Method File: /var/chem/n.i/n980420a.b/n8260w.m
Misc Info: N110W2//N110CW2

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 1,1-Dichloroethene	50	56	112.00	61-145
29 Trichloroethene	50	48	96.00	71-120
25 Benzene	50	48	96.00	76-127
37 Toluene	50	50	100.00	76-125
45 Chlorobenzene	50	48	96.00	75-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 21 1,2-Dichloroethane	50	44	88.00	76-114
\$ 36 Toluene-d8	50	52	104.00	88-110
\$ 56 Bromofluorobenzene	50	47	94.00	86-115



SPL Blank QC Report

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

page 10

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980420122724

Reported on: 04/23/98 15:32
Analyzed on: 04/20/98 23:15
Analyst: JC

METHOD 8260/8240/624 N110B03

Compound	Result	Detection Limit	Units
Dichlorodifluoromethane	ND	10	ug/L
Chloromethane	ND	10	ug/L
Vinyl Chloride	ND	10	ug/L
Bromomethane	ND	10	ug/L
Chloroethane	ND	10	ug/L
Trichlorofluoromethane	ND	5	ug/L
Acetone	ND	100	ug/L
1,1-Dichloroethene	ND	5	ug/L
Methylene Chloride	ND	5	ug/L
Carbon Disulfide	ND	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
cis-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Chloroform	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Benzene	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Dibromomethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

page 11

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980420122724

Reported on: 04/23/98 15:32
Analyzed on: 04/20/98 23:15
Analyst: JC

METHOD 8260/8240/624 N110B03

Compound	Result	Detection Limit	Units
1,3-Dichloropropane	ND	5	ug/L
2-Hexanone	ND	10	ug/L
Dibromochloromethane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Bromoform	ND	5	ug/L
Styrene	ND	5	ug/L
Xylene (Total)	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
Bromobenzene	ND	5	ug/L
N-Propylbenzene	ND	5	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
n-Butylbenzene	ND	5	ug/L
1,2-Dibromo-3-Chloropropan	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
Naphthalene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

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

page 12

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980420122724

Reported on: 04/23/98 15:32
Analyzed on: 04/20/98 23:15
Analyst: JC

METHOD 8260/8240/624 N110B03

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	88	76-114	% Recovery
Toluene-d8	104	88-110	% Recovery
Bromofluorobenzene	94	86-115	% Recovery

Samples in Batch 9804899-01 9804899-02 9804899-03 9804899-04

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

page 13

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980422122720

Reported on: 04/23/98 15:32
Analyzed on: 04/22/98 11:04
Analyst: JC

METHOD 8260/8240 N112B01

Compound	Result	Detection Limit	Units
Dichlorodifluoromethane	ND	10	ug/L
Chloromethane	ND	10	ug/L
Vinyl Chloride	ND	10	ug/L
Bromomethane	ND	10	ug/L
Chloroethane	ND	10	ug/L
Trichlorofluoromethane	ND	5	ug/L
Acetone	ND	100	ug/L
1,1-Dichloroethene	ND	5	ug/L
Methylene Chloride	ND	5	ug/L
Carbon Disulfide	ND	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
cis-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Chloroform	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Benzene	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Dibromomethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

page 14

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980422122720

Reported on: 04/23/98 15:32
Analyzed on: 04/22/98 11:04
Analyst: JC

METHOD 8260/8240 N112B01

Compound	Result	Detection Limit	Units
1,3-Dichloropropane	ND	5	ug/L
2-Hexanone	ND	10	ug/L
Dibromochloromethane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Bromoform	ND	5	ug/L
Styrene	ND	5	ug/L
Xylene (Total)	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
Bromobenzene	ND	5	ug/L
N-Propylbenzene	ND	5	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
n-Butylbenzene	ND	5	ug/L
1,2-Dibromo-3-Chloropropan	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
Naphthalene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901
page 15

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980422122720

Reported on: 04/23/98 15:32
Analyzed on: 04/22/98 11:04
Analyst: JC

METHOD 8260/8240 N112B01

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	98	76-114	% Recovery
Toluene-d8	102	88-110	% Recovery
Bromofluorobenzene	98	86-115	% Recovery

Samples in Batch 9804899-04

Notes

ND - Not detected.



ICP Spectroscopy Method 6010 Quality Control Report

Matrix: Water

Units: mg/L

Analyst: JLM

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

Date: 042298 Time: 1220 File Name: 042298C4

Checked: JLM 4/23/98

Laboratory Control Sample

Element	Mth. Blank	True Value	Result	% Recovery	Lower Limit	Upper Limit
Silver	ND	2.00	1.92	96	1.60	2.40
Aluminum						
Arsenic	ND	4.00	3.90	97	3.20	4.80
Barium	ND	2.00	1.92	96	1.60	2.40
Boron	ND	4.00	3.93	98	3.20	4.80
Calcium						
Cadmium	ND	2.00	1.80	90	1.60	2.40
Cobalt						
Chromium	ND	2.00	1.89	95	1.60	2.40
Copper	ND	2.00	1.95	98	1.60	2.40
Iron	ND	2.00	2.02	101	1.60	2.40
Potassium						
Magnesium						
Manganese	ND	2.00	1.93	96	1.60	2.40
Sodium						
Nickel	ND	2.00	1.90	95	1.60	2.40
Lead	ND	2.00	1.96	98	1.60	2.40
Antimony						
Selenium	ND	4.00	3.85	96	3.20	4.80
Thallium						
Vanadium						
Zinc	ND	2.00	1.94	97	1.60	2.40

Work Orders in Batch

Work Order Fractions

98-04-899 01D-04D

98-04-784 01B-02B

98-04-901 01D-05D

98-04-374 01G

Matrix Spike - Spike Duplicate Results

Work Order Spiked: 9804899-01D

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	0.9742	97.4	0.9914	99.1	80 120	1.8	20.0
Aluminum									
Arsenic	ND	2.0	2.061	103.1	2.097	104.9	80 120	1.7	20.0
Barium	0.0262	1.0	0.9771	95.1	0.9888	96.3	80 120	1.2	20.0
Boron	2.407	2.0	4.434	101.4	4.523	105.8	80 120	4.3	20.0
Calcium									
Cadmium	ND	1.0	0.9279	92.8	0.947	94.7	80 120	2.0	20.0
Cobalt									
Chromium	ND	1.0	0.9389	93.9	0.9531	95.3	80 120	1.5	20.0
Copper	0.008	1.0	0.9899	98.2	1.004	99.6	80 120	1.4	20.0
Iron	0.0711	1.0	1.042	97.1	1.022	95.1	80 120	2.1	20.0
Potassium									
Magnesium									
Manganese	0.2008	1.0	1.153	95.2	1.17	96.9	80 120	1.8	20.0
Sodium									
Nickel	0.0203	1.0	0.9585	93.8	0.9689	94.9	80 120	1.1	20.0
Lead	ND	1.0	0.9917	99.2	1.007	100.7	80 120	1.5	20.0
Antimony									
Selenium	ND	2.0	2.038	101.9	2.053	102.7	80 120	0.7	20.0
Thallium									
Vanadium									
Zinc	0.031	1.0	0.9953	96.4	1.005	97.4	80 120	1.0	20.0



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/27/98

Analyzed on: 04/27/98

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, Total
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	2.18	109	80 - 120

-9804943

Samples in batch:

9804899-01D	9804899-02D	9804899-03D	9804899-04D
9804901-01D	9804901-02D	9804901-03D	9804901-04D
9804901-05D	9804953-03A	9804982-01D	9804984-03A
9804A95-02D			

COMMENTS:

LCS = SPL ID# 94-452-39-6



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 04/27/98

Analyzed on: 04/27/98

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, Total
Method 7470 A***

SPL Sample	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)		
ID Number	Blank	Result	Added	Result	Recovery	Result	Recovery	(%)	RPD	% REC	
	ug/L	ug/L	ug/L	ug/L	%	ug/L	%		Max		
9804899-01D	ND	ND	2.00	1.96	98.0	2.33	116	17	20	75	-125

-9804943

Samples in batch:

9804899-01D 9804899-02D 9804899-03D 9804899-04D
9804901-01D 9804901-02D 9804901-03D 9804901-04D
9804901-05D 9804953-03A 9804982-01D 9804984-03A
9804A95-02D

COMMENTS:

LCS = SPL ID# 94-452-39-6



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/30/98

Analyzed on: 04/30/98

Analyst: TV

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	170.0	169.27	99.6	94 - 106

-9804A91

Samples in batch:

9804278-01D	9804279-01D	9804281-01D	9804287-01D
9804289-01D	9804292-01D	9804294-01D	9804297-01D
9804298-01D	9804392-01D	9804899-01B	9804899-02B
9804899-03B	9804899-04B	9804901-01B	9804901-02B
9804901-03B	9804901-04B	9804901-05B	9804982-01B

COMMENTS:

LCS=SPL ID#94453192-24



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 04/30/98

Analyzed on: 04/30/98

Analyst: TV

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	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)	
ID Number	Blank	Result	Added	Result	Recovery	Result	Recovery	(%)	RPD	% REC
	MG/L	MG/L	MG/L	MG/L	%	MG/L	%		Max	
9804899-01B	ND	63.28	50.0	110.78	95.0	110.07	93.6	1.5	5	92 -109

-9804A94

Samples in batch:

9804899-01B 9804899-02B 9804899-03B 9804899-04B
9804901-01B 9804901-02B 9804901-03B 9804901-04B
9804901-05B 9804982-01B

COMMENTS:

LCS=SPL ID#94453192-24



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/27/98

Analyzed on: 04/27/98

Analyst: EM

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:

Sulfate
Method 375.4 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	4.52	4.94	109	82 - 111

-9804918

Samples in batch:

9804831-02D	9804831-04D	9804831-05D	9804831-06D
9804831-09D	9804831-11D	9804899-01B	9804899-02B
9804899-03B	9804899-04B	9804901-01B	9804901-02B
9804901-03B	9804901-04B	9804901-05B	9804B62-02A

COMMENTS:

SPL LCS#: 94453192-24



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 04/27/98

Analyzed on: 04/27/98

Analyst: EM

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:

Sulfate
Method 375.4 *

SPL Sample	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)	
ID Number	Blank	Result	Added	Result	Recovery	Result	Recovery	(%)	RPD	% REC
	mg/L	mg/L	mg/L	mg/L	%	mg/L	%		Max	
9804831-09D	ND	7.37	10.00	17.51	101	17.51	101	0	9.5	84 -120

-9804917

Samples in batch:

9804831-02D	9804831-04D	9804831-05D	9804831-06D
9804831-09D	9804831-11D	9804899-01B	9804899-02B
9804899-03B	9804899-04B		

COMMENTS:



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/22/98

Analyzed on: 04/21/98

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	459.8	441	95.9	93 - 107

-9804735

Samples in batch:

9804874-06B	9804874-09B	9804874-12B	9804874-13B
9804899-01B	9804899-02B	9804899-03B	9804899-04B
9804901-02B			

COMMENTS:

SPL LCS ID#95535190-06



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/22/98

Analyzed on: 04/21/98

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.
9804899-01B	153	160	4.5	5

-9804734

Samples in batch:

9804874-06B	9804874-09B	9804874-12B	9804874-13B
9804899-01B	9804899-02B	9804899-03B	9804899-04B
9804901-02B			

COMMENTS:



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/24/98

Analyzed on: 04/23/98

Analyst: EM

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:

Nitrate-Nitrite, as N
Method 353.3 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	2.77	2.60	93.9	92 - 111

-9804854

Samples in batch:

9804899-01C	9804899-02C	9804899-03C	9804899-04C
9804901-01C	9804901-02C	9804901-03C	9804901-04C
9804901-05C	9804953-03F	9804967-01C	9804982-01C

COMMENTS:

SPL LCS#: 95535172-26



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 04/24/98

Analyzed on: 04/23/98

Analyst: EM

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:

Nitrate-Nitrite, as N
Method 353.3 *

SPL Sample	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)		
ID Number	Blank	Result	Added	Result	Recovery	Result	Recovery	(%)	RPD	% REC	
	mg/L	mg/L	mg/L	mg/L	%	mg/L	%		Max		
9804899-02C	ND	2.01	5.00	7.35	107	7.40	108	0.9	12	87	-120

-9804855

Samples in batch:

9804899-01C 9804899-02C

COMMENTS:



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 04/24/98

Analyzed on: 04/23/98

Analyst: EM

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:

Nitrate-Nitrite, as N
Method 353.3 *

SPL Sample	Method	Sample	Spike	Matrix Spike		Matrix Spike Duplicate		RPD	QC LIMITS (Advisory)		
ID Number	Blank	Result	Added	Result	Recovery	Result	Recovery	(%)	RPD	% REC	
	mg/L	mg/L	mg/L	mg/L	%	mg/L	%		Max		
9804901-05C	ND	3.72	5.00	8.60	97.6	8.30	91.6	6.3	12	87	-120

-9804853

Samples in batch:

9804899-03C 9804899-04C 9804901-01C 9804901-02C
9804901-03C 9804901-04C 9804901-05C 9804953-03F
9804967-01C 9804982-01C

COMMENTS:

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST



page 1 of 1

Client Name: CYLLRESS ENGINEERING					matrix		bottle		size		pres.		Requested Analysis	
Address/Phone: 16235 West Little York, Suite 254 Houston, TX 77040 (713) 856-7980					W=water S=soil SL=sludge O=other:		P=plastic A=amber glass G=glass V=vial		1=1 liter 4=4oz 40=vial 8=8oz 16=16oz		1=HCl 2=HNO3 3=H2SO4 O=other:			
Client Contact: Sandy Shepard (713) 646-7252									Number of Containers		VOC'S 8260 INCLUDE 1,2-DICHLOROETHENE (CIS/TRANS) DICHLOROBENZENE (O, M- & P-)			
Project Name: TWP: WT-1 ER P.T. AERT											TDS, CHLORIDE, SULFATE			
Project Number:											NITRITE & NITROGEN AS NITROGEN (353.3)			
Project Location:											METALS (7470/6010): AS, BA, CD, CR, PB, HG, SE, AG, CU, FE, MN, & ZN AS (TOTAL)			
Invoice To: Genlue Robinson														
SAMPLE ID	DATE	TIME	comp	grab										
MAU-4	4/16/98	1515		X	W	P	1	0/3	2/1	X				
MAU-4		1515 1515		X	W	G	40	1	3	X				
MAU-10		1635		X	W	P	1	0/3	2/1	X				
MAU-10		1635		X	W	G	40	1	3	X				
MAU-15		1745		X	W	P	1	0/3	2/1	X				
MAU-15		1745		X	W	G	40	1	3	X				
MAU-10		1855		X	W	P	1	0/3	2/1	X				
MAU-10		1855		X	W	G	40	1	3	X				

<

Intact?	☒ Y ☐ N
Temp:	20°C

Requested TAT		Special Reporting Requirements			Special Detection Limits (specify):		PM review (initial):
24hr ☐	72hr ☐	Standard QC ☒	Fax Results ☒	Raw Data ☐			
48hr ☐	Standard ☒	Level 3 QC ☐	Level 4 QC ☐				
Other ☐							
1. Relinquished by Samplet: <i>[Signature]</i>		date	time	2. Received by: <i>[Signature]</i>			
3. Relinquished by: <i>[Signature]</i>		date	time	4. Received by: <i>[Signature]</i>			
5. Relinquished by:		date	time	6. Received by Laboratory: <i>[Signature]</i>			

500 Ambassador Caffery Parkway, Scott, LA 70583 (318) 237-4775
1501 E. Orangethorpe Avenue, Fullerton, CA 92631 (714) 447-6868

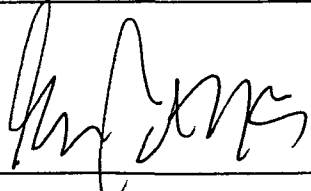
SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 4-18-98	Time: 1200
------------------	---------------

SPL Sample ID: 9804299

		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:	2° C	
10	Method of sample delivery to SPL:	SPL Delivery	
		Client Delivery	
		FedEx Delivery (airbill #)	804039168740
		Other:	
11	Method of sample disposal:	SPL Disposal	✓
		HOLD	
		Return to Client	

Name: 	Date: 4/18/98
--	------------------



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

May 7, 1998

Ms. Sandy Sharp
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 April 21, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9804982 and analyzed for all parameters as listed on the chain of custody.

The sample "MW-17" (SPL 9804982-01) was randomly selected for use in SPL's quality control program for the total metals analysis by method 6010. The Matrix Spike and Matrix Spike Duplicate (MS/MSD) recoveries were outside quality control limits for Silver, Barium, Cadmium, Chromium, and Manganese due to matrix interference. Additionally, the Matrix Spike recoveries were outside QC limits for Copper and Iron due to matrix interference. The Matrix Spike Duplicate (MSD) recovery was outside QC limits for Lead due to matrix interference. Additionally, the Relative Percent Difference (RPD) recoveries were outside quality control limits for Barium and Iron.

Any other 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

A handwritten signature in cursive script, reading "Shannon Tyrell", is written over a horizontal line.

Shannon Tyrell
Client Services Representative



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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-04-982

Approved for Release by:

A handwritten signature in cursive script, reading "Shannon Tyrell", is written over a horizontal line.

Shannon Tyrell, Client Services Representative

A handwritten date "5/7/98" is written in cursive script over a horizontal line.

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.



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

Certificate of Analysis No. H9-9804982-01

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

DATE: 05/01/98

PROJECT: TWP WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-17

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 18:30:00
DATE RECEIVED: 04/21/98

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION LIMIT	UNITS	
Chloride Method 325.3 * Analyzed by: TV Date: 04/30/98 10:00:00	150	5	mg/L	
Sulfate Method 375.4 * Analyzed by: EM Date: 04/30/98 15:00:00	7	2	mg/L	
Total Dissolved Solids Method 160.1 * Analyzed by: KS Date: 04/23/98 14:55:00	1800	100	mg/L	
Nitrate-Nitrite, as N Method 353.3 * Analyzed by: EM Date: 04/23/98 13:00:00	1.29	0.05	mg/L	
Silver, Total Method 6010B *** Analyzed by: DQ Date: 04/25/98 09:05:00	ND	0.01	mg/L	
Arsenic, Total Method 6010B *** Analyzed by: DQ Date: 04/25/98 09:05:00	0.1	0.1	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. H9-9804982-01

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

DATE: 05/01/98

PROJECT: TWP WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-17

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 18:30:00
DATE RECEIVED: 04/21/98

ANALYTICAL DATA			
PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Barium, Total Method 6010B *** Analyzed by: DQ Date: 04/25/98 09:05:00	24.9	0.005	mg/L
Cadmium, Total Method 6010B *** Analyzed by: DQ Date: 04/25/98 09:05:00	ND	0.005	mg/L
Chromium, Total Method 6010B *** Analyzed by: DQ Date: 04/25/98 09:05:00	ND	0.01	mg/L
Copper, Total Method 6010B *** Analyzed by: DQ Date: 04/25/98 09:05:00	ND	0.01	mg/L
Iron, Total Method 6010B *** Analyzed by: DQ Date: 04/25/98 09:05:00	8.92	0.02	mg/L
Mercury, Total Method 7470 A*** Analyzed by: AG Date: 04/27/98 15:46:00	ND	0.0002	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. H9-9804982-01

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

DATE: 05/01/98

PROJECT: TWP WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-17

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 18:30:00
DATE RECEIVED: 04/21/98

ANALYTICAL DATA			
PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Manganese, Total Method 6010B *** Analyzed by: DQ Date: 04/25/98 09:05:00	0.019	0.005	mg/L
Acid Digestion-Aqueous, ICP Method 3010A *** Analyzed by: GJ Date: 04/21/98 17:00:00	04/21/98		
Lead, Total Method 6010B *** Analyzed by: DQ Date: 04/25/98 09:05:00	ND	0.05	mg/L
Selenium, Total Method 6010B *** Analyzed by: DQ Date: 04/25/98 09:05:00	ND	0.1	mg/L
Zinc, Total Method 6010B *** Analyzed by: DQ Date: 04/25/98 09:05:00	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. H9-9804982-01

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

05/01/98

PROJECT: TWP WT-1 ER Pit Area
SITE: Transwestern Pipeline
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-17

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 04/17/98 18:30:00
DATE RECEIVED: 04/21/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	14	5	ug/L
Bromobenzene	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
Bromoform	ND	5	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
Carbon tetrachloride	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Chlorodibromomethane	ND	5	ug/L
Chloroethane	11	10	ug/L
Chloroform	ND	5	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,2-Dibromo-3-chloropropane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Dibromomethane	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	460	100	ug/L
1,2-Dichloroethane	11	5	ug/L
1,1-Dichloroethene	ND	5	ug/L
cis-1,2-Dichloroethene	ND	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
1,3-Dichloropropane	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Ethylbenzene	8	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
Methylene chloride	230	100	ug/L

METHOD: 8260 Water, Volatile Organics
(continued on next page)



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

Certificate of Analysis No. H9-9804982-01

Cypress Engineering, Inc.

SAMPLE ID: MW-17

ANALYTICAL DATA (continued)			
PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	24	5	ug/L
n-Propylbenzene	ND	5	ug/L
Styrene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
Tetrachloroethene	8	5	ug/L
Toluene	93	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
Trichloroethene	30	5	ug/L
Trichlorofluoromethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
1,2,4-Trimethylbenzene	40	5	ug/L
1,3,5-Trimethylbenzene	14	5	ug/L
Vinyl chloride	ND	10	ug/L
Xylenes (total)	96	5	ug/L
Acetone	2400	2000	ug/L
Carbon Disulfide	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	100	20	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	2100	200	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
2-Hexanone	26	10	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	100	76	114
Toluene-d8	50 ug/L	102	88	110
4-Bromofluorobenzene	50 ug/L	108	86	115

ANALYZED BY: JC

DATE/TIME: 04/22/98 16:45:00

METHOD: 8260 Water, Volatile Organics

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

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL

Contract:

Lab Code:

Case No.: 9804A68 SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: DW216-1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50	0	66	132	61-145
Trichloroethene	50	0	57	114	71-120
Benzene	50	0	54	108	76-127
Toluene	50	0	57	114	76-125
Chlorobenzene	50	0	58	116	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
=====	=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50	60	120	10	14	61-145
Trichloroethene	50	56	112	2	14	71-120
Benzene	50	54	108	0	11	76-127
Toluene	50	59	118	3	13	76-125
Chlorobenzene	50	57	114	2	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

SPL Houston Labs

RECOVERY REPORT

Client Name: Client SDG: n980423
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS
Level: LOW Operator: JC
Data Type: MS DATA SampleType: LCS
SpikeList File: 8260_water.spk Quant Type: ISTD
Sublist File: 8260.sub
Method File: /var/chem/n.i/n980423.b/n8260w.m
Misc Info: N113W1//N113CW1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 1,1-Dichloroethene	50	45	90.00	61-145
29 Trichloroethene	50	46	92.00	71-120
25 Benzene	50	44	88.00	76-127
37 Toluene	50	44	88.00	76-125
45 Chlorobenzene	50	45	90.00	75-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 21 1,2-Dichloroethane	50	46	92.00	76-114
\$ 36 Toluene-d8	50	48	96.00	88-110
\$ 56 Bromofluorobenzene	50	48	96.00	86-115

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL

Contract:

Lab Code:

Case No.: 9804967 SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: GW-042098-JH-001

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50	0	60	120	61-145
Trichloroethene	50	0	56	112	71-120
Benzene	50	0	54	108	76-127
Toluene	50	0	60	120	76-125
Chlorobenzene	50	0	55	110	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
=====	=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50	59	118	2	14	61-145
Trichloroethene	50	54	108	4	14	71-120
Benzene	50	53	106	2	11	76-127
Toluene	50	53	106	12	13	76-125
Chlorobenzene	50	56	112	2	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

SPL Houston Labs

RECOVERY REPORT

Client Name: Client SDG: n980422
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS Operator: JC
Level: LOW SampleType: LCS
Data Type: MS DATA Quant Type: ISTD
SpikeList File: 8260 water.spk
Sublist File: 8260.sub
Method File: /var/chem/n.i/n980422.b/n8260w.m
Misc Info: N112W1//N112CW1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 1,1-Dichloroethene	50	63	126.00	61-145
29 Trichloroethene	50	54	108.00	71-120
25 Benzene	50	55	110.00	76-127
37 Toluene	50	55	110.00	76-125
45 Chlorobenzene	50	54	108.00	75-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 21 1,2-Dichloroethane	50	47	94.00	76-114
\$ 36 Toluene-d8	50	50	100.00	88-110
\$ 56 Bromofluorobenzene	50	49	98.00	86-115



SPL Blank QC Report

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

page 1

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980422122720

Reported on: 04/24/98 16:01
Analyzed on: 04/22/98 11:04
Analyst: JC

METHOD 8260/8240 N112B01

Compound	Result	Detection Limit	Units
Dichlorodifluoromethane	ND	10	ug/L
Chloromethane	ND	10	ug/L
Vinyl Chloride	ND	10	ug/L
Bromomethane	ND	10	ug/L
Chloroethane	ND	10	ug/L
Trichlorofluoromethane	ND	5	ug/L
Acetone	ND	100	ug/L
1,1-Dichloroethene	ND	5	ug/L
Carbon Disulfide	ND	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
cis-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Chloroform	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Benzene	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Dibromomethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
1,3-Dichloropropane	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

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

Page 2

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980422122720

Reported on: 04/24/98 16:01
Analyzed on: 04/22/98 11:04
Analyst: JC

METHOD 8260/8240 N112B01

Compound	Result	Detection Limit	Units
2-Hexanone	ND	10	ug/L
Dibromochloromethane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Bromoform	ND	5	ug/L
Styrene	ND	5	ug/L
Xylene (Total)	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
Bromobenzene	ND	5	ug/L
N-Propylbenzene	ND	5	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
n-Butylbenzene	ND	5	ug/L
1,2-Dibromo-3-Chloropropan	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
Naphthalene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0801

Page 3

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980422122720

Reported on: 04/24/98 16:01
Analyzed on: 04/22/98 11:04
Analyst: JC

METHOD 8260/8240 N112B01

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	98	76-114	% Recovery
Toluene-d8	102	88-110	% Recovery
Bromofluorobenzene	98	86-115	% Recovery

Samples in Batch 9804982-01

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

page

4

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980423122720

Reported on: 04/27/98 11:15
Analyzed on: 04/23/98 07:45
Analyst: JC

METHOD 8260/8240 N113B01

C o m p o u n d	Result	Detection Limit	Units
Dichlorodifluoromethane	ND	10	ug/L
Chloromethane	ND	10	ug/L
Vinyl Chloride	ND	10	ug/L
Bromomethane	ND	10	ug/L
Chloroethane	ND	10	ug/L
Trichlorofluoromethane	ND	5	ug/L
Acetone	ND	100	ug/L
1,1-Dichloroethene	ND	5	ug/L
Methylene Chloride	ND	5	ug/L
Carbon Disulfide	ND	5	ug/L
trans-1,2-Dichloroethene	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
cis-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Chloroform	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Benzene	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Dibromomethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901
page 5

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980423122720

Reported on: 04/27/98 11:15
Analyzed on: 04/23/98 07:45
Analyst: JC

METHOD 8260/8240 N113B01

C o m p o u n d	Result	Detection Limit	Units
1,3-Dichloropropane	ND	5	ug/L
2-Hexanone	ND	10	ug/L
Dibromochloromethane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Bromoform	ND	5	ug/L
Styrene	ND	5	ug/L
Xylene (Total)	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
Bromobenzene	ND	5	ug/L
N-Propylbenzene	ND	5	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
n-Butylbenzene	ND	5	ug/L
1,2-Dibromo-3-Chloropropan	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
Naphthalene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L
Dibromofluoromethane	ND	5	ug/L

Notes

ND - Not detected.



SPL Blank QC Report

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

page 6

Matrix: Aqueous
Sample ID: VLBLK
Batch: N980423122720

Reported on: 04/27/98 11:15
Analyzed on: 04/23/98 07:45
Analyst: JC

METHOD 8260/8240 N113B01

S u r r o g a t e	Result	QC Criteria	Units
1,2-Dichloroethane-d4	94	76-114	% Recovery
Toluene-d8	100	88-110	% Recovery
Bromofluorobenzene	96	86-115	% Recovery

Samples in Batch 9804982-01

Notes

ND - Not detected.



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/30/98

Analyzed on: 04/30/98

Analyst: TV

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	170.0	169.27	99.6	94 - 106

-9804A91

Samples in batch:

9804278-01D	9804279-01D	9804281-01D	9804287-01D
9804289-01D	9804292-01D	9804294-01D	9804297-01D
9804298-01D	9804392-01D	9804899-01B	9804899-02B
9804899-03B	9804899-04B	9804901-01B	9804901-02B
9804901-03B	9804901-04B	9804901-05B	9804982-01B

COMMENTS:

LCS=SPL ID#94453192-24



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/30/98

Analyzed on: 04/30/98

Analyst: TV

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		Matrix Spike Duplicate		RPD (%)	QC LIMITS (Advisory)	
				Result MG/L	Recovery %	Result MG/L	Recovery %		RPD Max	% REC
9804899-01B	ND	63.28	50.0	110.78	95.0	110.07	93.6	1.5	5	92 -109

-9804A94

Samples in batch:

9804899-01B	9804899-02B	9804899-03B	9804899-04B
9804901-01B	9804901-02B	9804901-03B	9804901-04B
9804901-05B	9804982-01B		

COMMENTS:

LCS=SPL ID#94453192-24



** SPL QUALITY CONTROL REPORT **

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

Matrix: Aqueous

Reported on: 04/30/98

Analyzed on: 04/30/98

Analyst: EM

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:

Sulfate
Method 375.4 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	4.52	4.53	100	82 - 111

-9804A93

amples in batch:

9804334-01D	9804381-01D	9804382-01D	9804383-01D
9804384-01D	9804385-01D	9804386-01D	9804387-01D
9804388-01D	9804389-01D	9804390-01D	9804391-01D
9804982-01B			

COMMENTS:

SPL LCS#: 944531924-24



HOUSTON LABORATORY
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PHONE (713) 660-0901

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/30/98

Analyzed on: 04/30/98

Analyst: EM

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:

Sulfate
Method 375.4 *

SPL Sample ID Number	Method Blank mg/L	Sample Result mg/L	Spike Added mg/L	Matrix Spike		Matrix Spike Duplicate		RPD (%)	QC LIMITS (Advisory)		
				Result mg/L	Recovery %	Result mg/L	Recovery %		RPD Max	% REC	
9804381-01D	ND	9.69	10.00	19.46	97.7	19.23	95.4	2.4	9.5	84	-120

-9804A92

Samples in batch:

9804334-01D	9804381-01D	9804382-01D	9804383-01D
9804384-01D	9804385-01D	9804386-01D	9804387-01D
9804388-01D	9804982-01B		

COMMENTS:



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/24/98

Analyzed on: 04/23/98

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	459.8	446	97.0	93 - 107

-9804847

Samples in batch:

9804901-01B 9804901-03B 9804901-04B 9804901-05B
9804951-01I 9804967-01E 9804982-01B

COMMENTS:

SPL LCS ID# 95535190-06



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/24/98

Analyzed on: 04/23/98

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.
9804951-01I	5680	5930	4.3	5

-9804846

Samples in batch:

9804901-01B	9804901-03B	9804901-04B	9804901-05B
9804951-01I	9804967-01E	9804982-01B	

COMMENTS:



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/24/98

Analyzed on: 04/23/98

Analyst: EM

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:

Nitrate-Nitrite, as N
Method 353.3 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	2.77	2.60	93.9	92 - 111

-9804854

Samples in batch:

9804899-01C	9804899-02C	9804899-03C	9804899-04C
9804901-01C	9804901-02C	9804901-03C	9804901-04C
9804901-05C	9804953-03F	9804967-01C	9804982-01C

COMMENTS:

SPL LCS#: 95535172-26



HOUSTON LABORATORY
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PHONE (713) 660-0901

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/24/98

Analyzed on: 04/23/98

Analyst: EM

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:

Nitrate-Nitrite, as N
Method 353.3 *

SPL Sample ID Number	Method Blank mg/L	Sample Result mg/L	Spike Added mg/L	Matrix Spike		Matrix Spike Duplicate		RPD (%)	QC LIMITS (Advisory)		
				Result mg/L	Recovery %	Result mg/L	Recovery %		RPD Max	% REC	
9804901-05C	ND	3.72	5.00	8.60	97.6	8.30	91.6	6.3	12	87	-120

-9804853

Samples in batch:

9804899-03C 9804899-04C 9804901-01C 9804901-02C
9804901-03C 9804901-04C 9804901-05C 9804953-03F
9804967-01C 9804982-01C

COMMENTS:

ICP Spectroscopy Method 6010 Quality Control Report



Matrix: Water

Units: mg/L

Analysis: HODSON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE: (713) 660-0901

Date: 042598 Time: 0905 File Name: 042598C4

Checked: *4/27/98*

Laboratory Control Sample

Element	Mth. Blank	True Value	Result	% Recovery	Lower Limit	Upper Limit
Silver	ND	2.00	1.94	97	1.60	2.40
Aluminum	ND	2.00	1.99	100	1.60	2.40
Arsenic	ND	4.00	4.09	102	3.20	4.80
Barium	ND	2.00	1.93	96	1.60	2.40
Beryllium						
Calcium	ND	20.00	19.88	99	16.00	24.00
Cadmium	ND	2.00	1.85	92	1.60	2.40
Cobalt						
Chromium	ND	2.00	1.95	98	1.60	2.40
Copper	ND	2.00	1.99	99	1.60	2.40
Iron	ND	2.00	1.97	98	1.60	2.40
Potassium	ND	20.00	19.52	98	16.00	24.00
Magnesium	ND	20.00	19.83	99	16.00	24.00
Manganese	ND	2.00	1.97	98	1.60	2.40
Sodium						
Nickel						
Lead	ND	2.00	1.95	98	1.60	2.40
Antimony						
Selenium	ND	4.00	4.07	102	3.20	4.80
Thallium						
Vanadium	ND	2.00	2.05	103	1.60	2.40
Zinc	ND	2.00	1.99	99	1.60	2.40

Work Orders in Batch

Work Order	Fractions
98-04-982	01D
98-04-948	02B
98-04-967	01i
98-04-953	03A

Matrix Spike - Spike Duplicate Results

Work Order Spiked: 9804982-01D

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	0.005	1.0	0.7965	79.2 *	0.7798	77.5 *	80 120	2.1	20.0
Aluminum	ND	1.0	0.8752	87.5	0.8202	82.0	80 120	6.5	20.0
Arsenic	0.1134	2.0	1.815	85.1	1.81	84.8	80 120	0.3	20.0
Barium	24.88	1.0	25.12	24.0 *	25.19	31.0 *	80 120	25.5 **	20.0
Beryllium									
Calcium	250.5	10.0	264.9	144.0 *	263	125.0 *	80 120	14.1	20.0
Cadmium	0.0044	1.0	0.7754	77.1 *	0.7871	78.3 *	80 120	1.5	20.0
Cobalt									
Chromium	ND	1.0	0.7899	79.0 *	0.7927	79.3 *	80 120	0.4	20.0
Copper	0.0085	1.0	0.8081	80.0 *	0.8391	83.1	80 120	3.8	20.0
Iron	8.925	1.0	10.39	146.5 *	9.95	102.5	80 120	35.3 **	20.0
Potassium	44.39	10.0	48.84	44.5 *	52.48	80.9	80 120	58.1 **	20.0
Magnesium	158.4	10.0	165.7	73.0 *	168.3	99.0	80 120	30.2 **	20.0
Manganese	0.0186	1.0	0.8161	79.8 *	0.8149	79.6 *	80 120	0.2	20.0
Sodium									
Nickel									
Lead	ND	1.0	0.856	85.6	0.7675	76.8 *	80 120	10.9	20.0
Antimony									
Selenium	ND	2.0	1.667	83.4	1.697	84.9	80 120	1.8	20.0
Thallium									
Vanadium	0.015	1.0	0.8411	82.6	0.8459	83.1	80 120	0.6	20.0
Zinc	ND	1.0	0.8164	81.6	0.8199	82.0	80 120	0.4	20.0

* Spike Results Outside Method Limits

** Spike RPD Outside Method Limits



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/27/98

Analyzed on: 04/27/98

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, Total
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	2.18	109	80 - 120

-9804943

Samples in batch:

9804899-01D	9804899-02D	9804899-03D	9804899-04D
9804901-01D	9804901-02D	9804901-03D	9804901-04D
9804901-05D	9804953-03A	9804982-01D	9804984-03A
9804A95-02D			

COMMENTS:

LCS = SPL ID# 94-452-39-6



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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 04/27/98

Analyzed on: 04/27/98

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, Total
Method 7470 A***

SPL Sample ID Number	Method Blank ug/L	Sample Result ug/L	Spike Added ug/L	Matrix Spike		Matrix Spike Duplicate		RPD (%)	QC LIMITS (Advisory)		
				Result ug/L	Recovery %	Result ug/L	Recovery %		RPD Max	% REC	
9804899-01D	ND	ND	2.00	1.96	98.0	2.33	116	17	20	75	-125

-9804943

Samples in batch:

9804899-01D	9804899-02D	9804899-03D	9804899-04D
9804901-01D	9804901-02D	9804901-03D	9804901-04D
9804901-05D	9804953-03A	9804982-01D	9804984-03A
9804A95-02D			

COMMENTS:

LCS = SPL ID# 94-452-39-6

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 4-21-98	Time: 1000
---------------	------------

SPL Sample ID: 9804982

		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:	40°C	
10	Method of sample delivery to SPL:	SPL Delivery	
		Client Delivery	
		FedEx Delivery (airbill #)	80241845816 Z
		Other:	
11	Method of sample disposal:	SPL Disposal	/
		HOLD	
		Return to Client	

Name: <i>R. King</i>	Date: 4-21-98
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