GW - 109 R

REPORTS

YEAR(S):

2000 - 1996

Cypress Engineering

10[redacted] West Little York Road, Suite 256
Houston, Texas 77040
(713) 856-7980 office
(713) 856-7981 fax

August 11, 2000

Mr. William C. Olson
Environmental Bureau
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, New Mexico 87505

AUG 18

RE: WT-1 Station Pit Area Remediation Site
Transwestern Pipeline Company
Lea County, New Mexico

Dear Bill,

Attached with this correspondence is a copy of the "request for proposal" for the proposed drilling activities at this site. The RFP provides the well completion details that we discussed this afternoon during our phone conversation. The plan is to utilize open-hole completions in an attempt to improve recovery of any phase separated hydrocarbon that might accumulate in the wells. The shallow water bearing soil matrix at the site is a well-cemented sandstone that should remain open without the use of a well screen and sand pack.

If you have any comments or questions regarding the proposed well completion plan, please contact me at (713) 646-7327.

Sincerely,

George C. Robinson, P.E.
President/Principal Engineer

xc w/attachment
Larry Campbell

Cypress Engineering

10235 West Little York Road, Suite 256
Houston, Texas 77040
(713) 856-7980 office
(713) 856-7981 fax

April 19, 2000

Mr. Pat Goodson
Geoprojects International, Inc.
8834 Circle Drive
Austin, Texas 78736

RE: Drilling Services Cost Estimate
WT-1 Station

Dear Mr. Goodson:

Cypress Engineering requests a cost per foot proposal for the installation of ten 4-inch diameter (or greater) recovery wells at the WT-1 Station. The facility is located on the north side of Highway 62, approximately 25 miles west of Hobbs, New Mexico. The proposal should include all costs required to complete the following tasks:

Drill and install ten 4-inch diameter (or greater) recovery wells:

- drill boreholes to a depth of 43 feet below grade
- run and grout 45 feet of surface casing to 43 feet bgs (with 2 feet above grade); driller is to specify casing material and size
- drill out to total depth of 60 feet bgs (10 feet below the water table) with a bit capable of creating a hole diameter of 4" or greater
- no screen or casing is required; this will be an open-hole completion
- no sand filter pack required
- no surface completion required

Notes:

1. Air rotary drilling methods will be required
2. Cores will be collected from surface to TD (also provide pricing without coring)

Please respond with an estimate no later than April 26, 2000. This may be done by fax to (713) 646-7867, with a copy to follow in the mail.

Mailing address: Attn: George C. Robinson
Cypress Engineering Services, Inc.
10235 West Little York Road
Suite 256
Houston, TX 77040

If there are any questions regarding this request, please contact me at (713) 646-7327.

Sincerely,

George C. Robinson, PE
President/Principal Engineer

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

August 11, 2000

CERTIFIED MAIL
RETURN RECEIPT NO. 5051-3457

Mr. Larry Campbell
Transwestern Pipeline Company
6381 North Main
Roswell, New Mexico 88201

RE: WT-1 COMPRESSOR STATION DEHY AREA

Dear Mr. Campbell:

The New Mexico Oil Conservation Division has reviewed Transwestern Pipeline Company's (TPC) August 11, 2000 "WT-1 STATION PIT AREA REMEDIATION SITE, TRANSWESTERN PIPELINE COMPANY, LEA COUNTY, NEW MEXICO" and June 1, 2000 "WT-1 STATION PIT AREA REMEDIATION SITE, TRANSWESTERN PIPELINE COMPANY, LEA COUNTY, NEW MEXICO" which were submitted on behalf of TPC by their consultant Cypress Engineering. These documents contain TPC's proposal to install 12 product recovery wells and implement an interim remediation plan for contamination related to activities at the WT-1 Compressor Station former engine room pit area.

The above-referenced remediation and recovery well installation proposals are approved with the following conditions:

1. TPC shall include the results of the construction of the recovery wells and implementation of product recovery in the annual report on the engine room drain pit.

2. TPC shall notify the OCD at least 48 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and split samples.

Please be advised that OCD approval does not relieve TPC of liability if the plan fails to adequately remediate contamination related to their activities, or if contamination exists which is outside the scope of the plan. In addition, OCD approval does not relieve TPC of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Supervisor
George Robinson, Cypress Engineering Services, Inc.

Cypress Engineering

10235 W. Little York Rd., Ste. 256
Houston, Texas 77040
(713) 856-7980 office
(713) 856-7981 fax

George C. Robinson, P.E. c/o: ENRON Gas Pipeline Group
Environmental Affairs; Room 3AC-3142
(713) 646-7327 ENRON office
(713) 646-7867 ENRON fax

FAX Transmission

To: William C. Olson **Fax:** 505-827-8177

From: George C. Robinson **Date:** August 11, 2000

Comments: **Pages:** 3 (including this cover)

Please call if you do not receive this transmission in its entirety!

Cypress Engineering

10235 West Little York Road, Suite 256
Houston, Texas 77040
(713) 856-7980 office
(713) 856-7981 fax

August 11, 2000

Mr. William C. Olson
Environmental Bureau
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, New Mexico 87505

RE: WT-1 Station Pit Area Remediation Site
Transwestern Pipeline Company
Lea County, New Mexico

Dear Bill,

Attached with this correspondence is a copy of the "request for proposal" for the proposed drilling activities at this site. The RFP provides the well completion details that we discussed this afternoon during our phone conversation. The plan is to utilize open-hole completions in an attempt to improve recovery of any phase separated hydrocarbon that might accumulate in the wells. The shallow water bearing soil matrix at the site is a well-cemented sandstone that should remain open without the use of a well screen and sand pack.

If you have any comments or questions regarding the proposed well completion plan, please contact me at (713) 646-7327.

Sincerely,

George C. Robinson, P.E.
President/Principal Engineer

xc w/attachment
Larry Campbell

Cypress Engineering

10235 West Little York Road, Suite 256
Houston, Texas 77040
(713) 856-7980 office
(713) 856-7981 fax

April 19, 2000

Mr. Pat Goodson
Geoprojects International, Inc.
8834 Circle Drive
Austin, Texas 78736

RE: Drilling Services Cost Estimate
WT-1 Station

Dear Mr. Goodson:

Cypress Engineering requests a cost per foot proposal for the installation of ten 4-inch diameter (or greater) recovery wells at the WT-1 Station. The facility is located on the north side of Highway 62, approximately 25 miles west of Hobbs, New Mexico. The proposal should include all costs required to complete the following tasks:

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- no sand filter pack required
- no surface completion required

Notes:

1. Air rotary drilling methods will be required
2. Cores will be collected from surface to TD (also provide pricing without coring)

Please respond with an estimate no later than April 26, 2000. This may be done by fax to (713) 646-7867, with a copy to follow in the mail.

Mailing address: Attn: George C. Robinson
Cypress Engineering Services, Inc.
10235 West Little York Road
Suite 256
Houston, TX 77040

If there are any questions regarding this request, please contact me at (713) 646-7327.

Sincerely,

George C. Robinson, PE
President/Principal Engineer

Cypress Engineering

1[illegible] West Little York Road, Suite 256
Houston, Texas 77040
(713) 856-7980 office
(713) 856-7981 fax

June 1, 2000

Mr. William C. Olson
Environmental Bureau
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, New Mexico 87505

RE: WT-1 Station Pit Area Remediation Site
Transwestern Pipeline Company
Lea County, New Mexico

Dear Bill,

In our last correspondence from the OCD regarding this site, TW was requested to provide a work plan for remediation of the site. In response to this request, we initiated an evaluation of remediation measures to address the removal of PSH accumulated at the water table.

The more common remediation methods that we have employed at other TW sites are not appropriate for this site due to the physical properties of the PSH (i.e., more viscous and less volatile). In light of this, we looked into co-solvent flushing as an alternative to the more traditional methods for PSH recovery. Co-solvent flushing uses a co-solvent, such as pentanol, to create more favorable conditions for recovery of PSH. A drawback to this technology is that the co-solvent also creates more favorable conditions for migration of contaminants away from the site in the event they are not recovered. While this technology shows promise for remediation of sites such as this one, TW is not yet prepared to recommend the use of co-solvent flushing for remediation at this site.

In the absence of a more appropriate remediation alternative for the site, TW proposes to install 12 additional wells as indicated in the attached figure. The objective is twofold: 1) to delineate the lateral extent of PSH accumulated at the water table; and 2) to get in-place several potential recovery points for the periodic removal of PSH. Initially, the periodic removal of accumulated PSH will be done on a weekly basis using a standard product recovery bailer that will be manually lowered and retrieved from the wells on bailing twine. Recovered liquids will be stored on-site in 55-gallon drums pending disposal at an appropriate waste disposal facility. A proposal for the installation of additional wells (i.e., in addition to the 12 wells proposed here) and/or a modified PSH recovery method will be submitted to the OCD within 12 months of implementation of this plan. In addition, TW will continue to evaluate more aggressive remediation technologies for use at this site and will continue with the semiannual groundwater monitoring program already in-place.

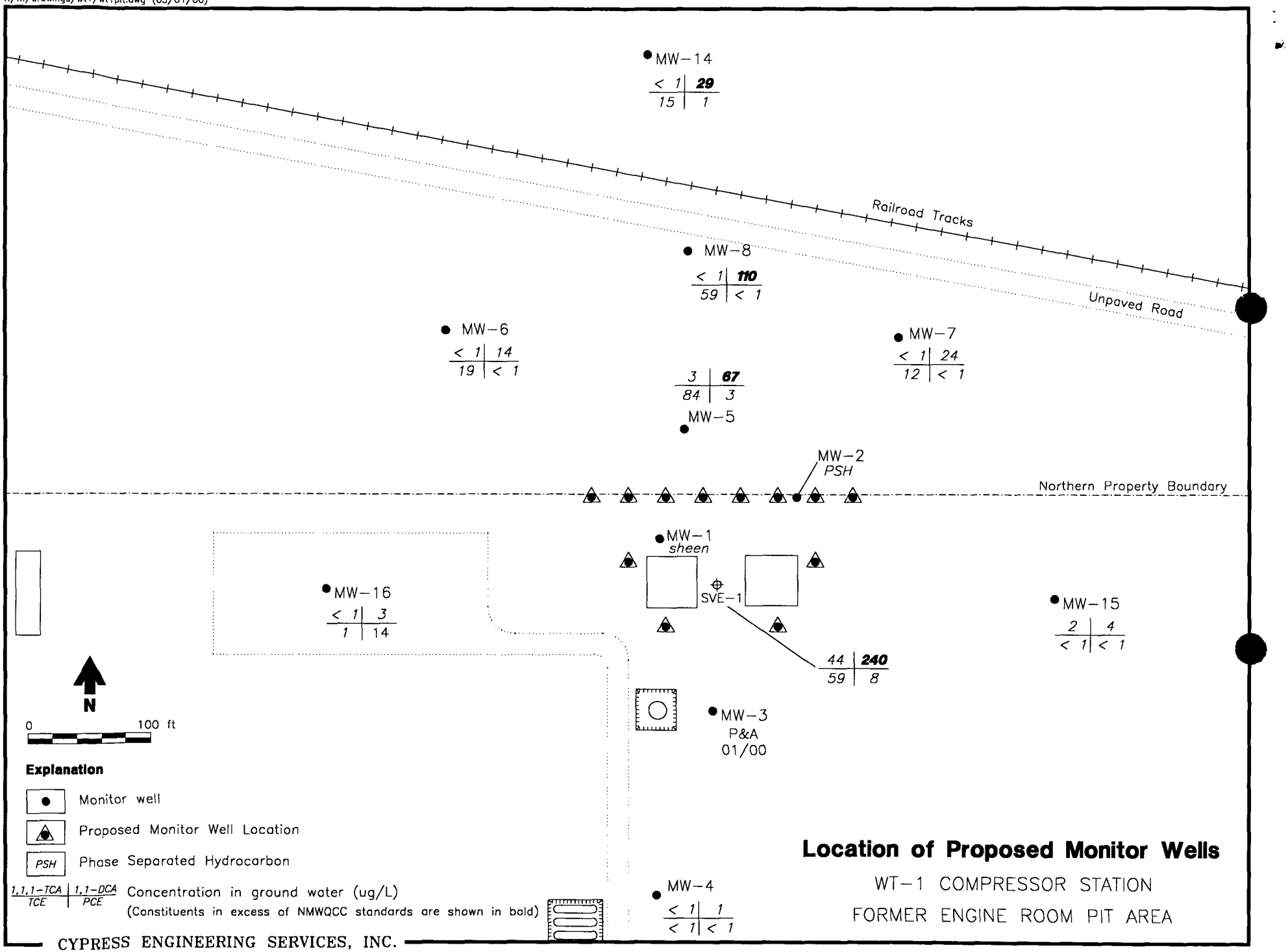
If you have any comments or questions regarding this proposed plan, please contact me at (713) 646-7327 or Larry Campbell at (505) 625-8022.

Sincerely,

George C. Robinson, P.E.
President/Principal Engineer

xc w/attachment
Larry Campbell

f:/.../drawings/wt1/wt1pit.dwg (05/01/00)



Location of Proposed Monitor Wells

WT-1 COMPRESSOR STATION

FORMER ENGINE ROOM PIT AREA

CYPRESS ENGINEERING SERVICES, INC.

Figure 1

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

April 20, 2000

CERTIFIED MAIL
RETURN RECEIPT NO. 5051-2993

Mr. Larry Campbell
Transwestern Pipeline Company
6381 North Main
Roswell, New Mexico 88201

RE: WT-1 COMPRESSOR STATION DEHY AREA

Dear Mr. Campbell:

The New Mexico Oil Conservation Division has reviewed Transwestern Pipeline Company's (TPC) February 23, 2000 "FINAL DISPOSITION OF EXCESS SOIL PILE, TRANSWESTERN PIPELINE COMPANY – WT-1 STATION DEHY AREA, LEA COUNTY, NEW MEXICO". This document contains TPC's request to use remediated soils, generated during excavation of contaminated soils from the WT-1 Compressor Station dehy pit, as fill at locations around the station.

Based upon the information provided, **the above referenced request is approved**. Please be advised that OCD approval does not relieve TPC of liability if their activities pose a future threat to surface water, ground water, human health or the environment. In addition, OCD approval does not relieve TPC of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Supervisor
George Robinson, Cypress Engineering Services, Inc.

Cypress Engineering

10235 West Little York Road, Suite 256
Houston, Texas 77040
(713) 856-7980 office
(713) 856-7981 fax

February 23, 2000

Mr. William C. Olson
Environmental Bureau
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, New Mexico 87505

RE: Final Disposition of Excess Soil Pile
Transwestern Pipeline Company - WT-1 Station Dehy Area
Lea County, New Mexico

Dear Bill,

The purpose of this letter is to request approval from your office for Transwestern Pipeline Company (TW) to utilize remediated soil as backfill material at other locations on-site.

In December 1994, TW completed the excavation and processing of affected soil located in the vicinity of the former dehydration unit area. The affected soil contained elevated concentrations of petroleum hydrocarbons (TPH) which had been inadvertently released from operation of the natural gas dehydration units. A more detailed description of the excavation and processing activities were presented in the report "Supplemental Environmental Investigation – WT-1 Compressor Station – Dehydration Area", dated March 28, 1995. A copy of this report had been submitted to your office for review. The bulk of processed soil was placed back into the open excavation, however, upon completion of these activities, there was an excess volume of about 800 cubic yards of soil. The excess volume was stockpiled in an area above the former excavation as shown in the attached figure. The dimensions of the excess soil pile are about 70 feet by 70 feet by 4.5 feet in height.

On January 27, 2000, two composite soil samples were collected from the excess soil pile. The sample identified as "North Composite" consists of a composite of three grab samples collected from near the north end of the soil pile as indicated in the attached figure as locations N1, N2, and N3. The sample identified as "South Composite" consists of a composite of three grab samples collected from near the south end of the soil pile. All grab samples were collected from a depth of about 4.5 feet from the top of the pile. The sample results were submitted to a laboratory for analysis for BTEX constituents by method 8021B and for TPH by method NWTPH (a GC method similar to method 8015mod). The results are presented as follows (a copy of the laboratory report is attached):

Analyte	North Composite	South Composite
Benzene	< 5 ug/kg	< 5 ug/kg
Toluene	< 10 ug/kg	< 10 ug/kg
Ethylbenzene	< 10 ug/kg	< 10 ug/kg
Xylenes	< 20 ug/kg	< 20 ug/kg
TPH (gasoline range)	< 5 mg/kg	< 5 mg/kg
TPH (diesel range)	140 mg/kg	160 mg/kg
TPH (oil range)	580 mg/kg	590 mg/kg

The results indicate a higher than anticipated concentration of heavier weight petroleum hydrocarbons and the absence of the more soluble BTEX constituents. In an effort to further characterize the soil

samples, the samples were resubmitted to a laboratory for analysis for TPH concentration by method 418.1. The results for this analysis are presented as follows (a copy of the laboratory report is attached):

Analyte	North Composite	South Composite
TPH (Total Extractable)	382 mg/kg	386 mg/kg

Upon review of both sets of laboratory data, the two samples appear to be characterized by a slightly elevated concentration of heavier weight hydrocarbons. Reuse of this soil on-site as backfill material (such as, to repair roadways and to fill shallow depressions) should not pose a threat to shallow groundwater located a depth of about 50-52 feet below ground surface. In light of this, TW requests approval from your office to reuse this soil at other locations on-site for backfill material.

If you have any questions or comments regarding this request, please contact me at (713) 646-7327 or Larry Campbell at (505) 625-8022 .

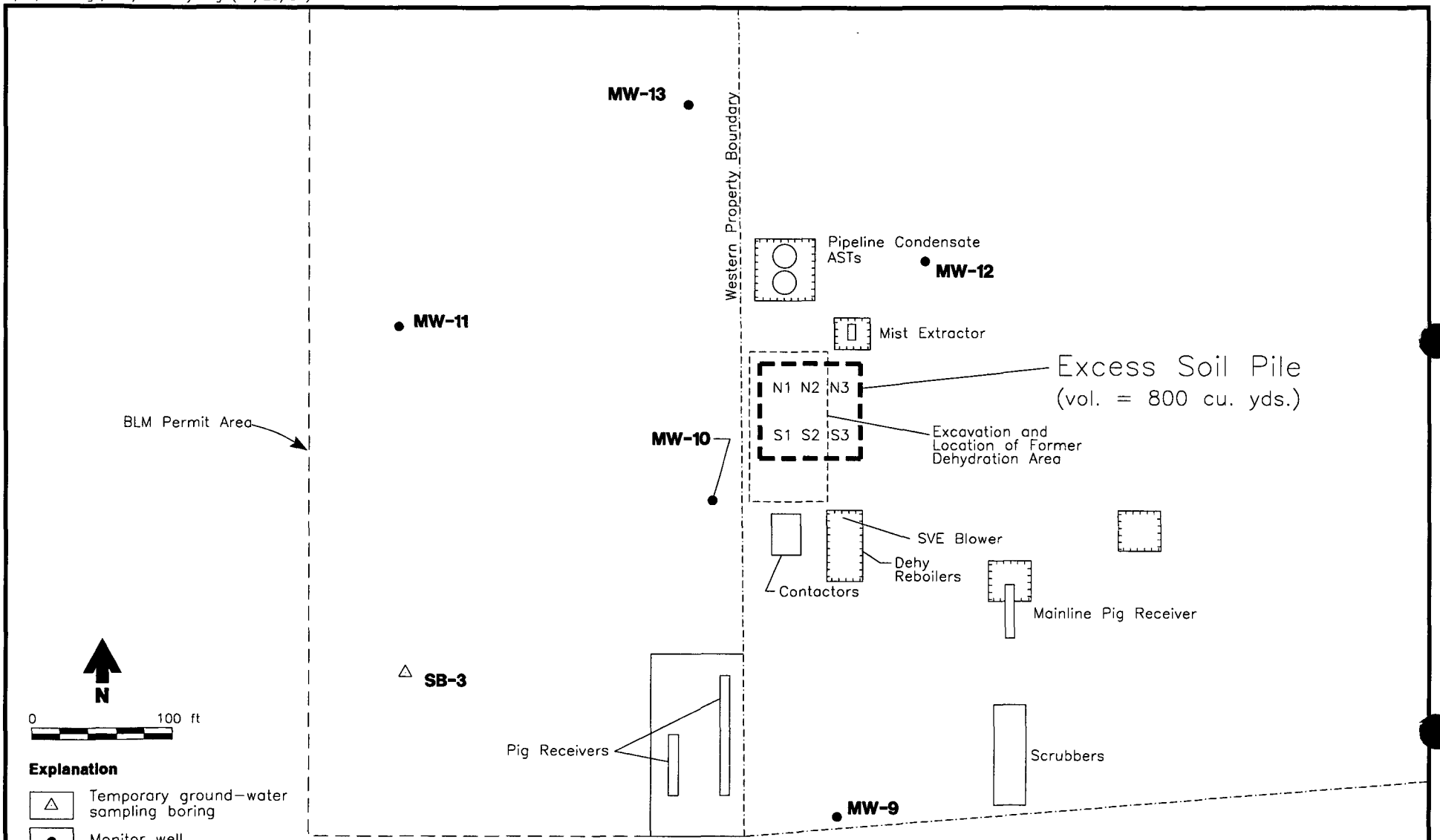
Sincerely,

George C. Robinson, PE
President/Principal Engineer

xc w/attachment:

Larry Campbell	Transwestern Pipeline Company
Chris Williams	NMOCD Hobbs District Office
Randy Smith	TW Operations

f:/.../drawings/wt1/wt1dehy.dwg (02/23/00)



Site Diagram

WT-1 COMPRESSOR STATION
Dehydration Area

Figure 2

CYPRESS ENGINEERING SERVICES, INC.

Committed To *Your* Success

Formerly Quanterra

Date: 02/18/00
Time: 20:58:28
(Mountain Time)

From: Sandra Green
Severn Trent Laboratories
5307 Industrial Oaks Blvd
Suite 160
Austin, TX 78735

voice: 512-892-6684
fax: 512-892-6652

To: GEORGE ROBINSON
Cypress Engineering

713-6467867

Number of Pages
Including Cover Sheet: 02

Quote Number :34541
Project Number :
Project Name/Site :WT-1 STATION:DEHY

This is an automated feature provided by Severn Trent Laboratories.

QUANTERRA INCORPORATED

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Cypress Engineering — PAGE 1

Lot #: I0B100225 — WT-1 STATION:DEHY — Date Reported: 2/18/00

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Client Sample ID: NORTH COMPOSITE				
Sample #: 001 Date Sampled: 01/27/00 10:20 Date Received: 02/10/00 Matrix: SOLID				
Inorganic Analysis		Soil		Reviewed
Method for Determination of Water Content of Soil	9.0	0.50	%	ASTM D 2216-90
Total Recoverable Petroleum Hydrocarbons	382	10.0	mg/kg	MCAWW 418.1
Client Sample ID: SOUTH COMPOSITE				
Sample #: 002 Date Sampled: 01/27/00 10:50 Date Received: 02/10/00 Matrix: SOLID				
Inorganic Analysis		Soil		Reviewed
Method for Determination of Water Content of Soil	8.7	0.50	%	ASTM D 2216-90
Total Recoverable Petroleum Hydrocarbons	386	10.0	mg/kg	MCAWW 418.1

OAL

L14907

February 7, 2000

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

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

Re: Laboratory Sample Analysis

Project: WT-1 Station: Dehy

Project Manager: George Robinson

Dear George Robinson:

On Saturday, January 29, 2000, OAL received two (2) soil samples for analysis. The samples were analyzed utilizing EPA, ASTM, or equivalent methodology.

Should you have any questions concerning the results in this report, please contact us at (503)590-5300. Please refer to OAL login number L14907.

Sincerely,

Doug McKenzie
Client Manager

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

OAL

L14907

Sample Summary

Sample ID	Lab #	Description	Sampled	Received
NORTH COMPOSITE	L14907-1	soil	01/27/2000 10:20	01/29/2000 10:25
SOUTH COMPOSITE	L14907-2	soil	01/27/2000 10:40	01/29/2000 10:25

Definition of Terms

K2 Batch matrix spike was diluted out during analysis.

ND Analytical result was below the reporting limit.

Laboratory Certifications*

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

* Current Scopes of Accreditation are available upon request.

Analysts

Initials	Analyst	Title
JLW	Jana L. Wahl	Technician
RJ	Rick Jordan	Chemist
WB	Wayne Boyle	Chemist

Method Summary

Analysis	Method
BTEX	EPA 8021
Semi-Volatile Petroleum Products	NWTPH-DX
Volatile Petroleum Products	NWTPH-GX

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

OAL

L14907

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

Project: ***WT-1 Station: Dehy***

Inorganics

Sample ID / *Matrix* / *Lab Number*								
Analyte	**Result**	**Reporting Limit**	**Units**	**Dil-ution**	**Date Analyzed**	**Method**	**Comment**	**Analyst**
NORTH COMPOSITE / *soil* / **Sampled:** *1/27/2000* / *L14907-1*								
Solids	89.9		% w/w		2/2/2000			JLW
SOUTH COMPOSITE / *soil* / **Sampled:** *1/27/2000* / *L14907-2*								
Solids	91.4		% w/w		2/2/2000			JLW

OREGON ANALYTICAL LABORATORY
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Phone 503-590-5300 • Fax 503-590-1404
www.oalab.com • Toll-Free 1-800-644-0967

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

Project: ***WT-1 Station: Dehy***

BTEX
by EPA 8021

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

Sampled: *1/27/2000*
Extracted: *2/2/2000*

NORTH COMPOSITE	*soil*			**Analyzed:** *2/3/2000 by WB*		*L14907-1*
71-43-2	Benzene	ND	5.	µg/kg		
108-88-3	Toluene	ND	10.	µg/kg		
100-41-4	Ethylbenzene	ND	10.	µg/kg		
1330-20-7	Total Xylenes	ND	20.	µg/kg		

Surrogate	Recovery	Limit
Trifluorotoluene	101.%	50 - 150
4-Bromofluorobenzene	100.%	50 - 150

Sampled: *1/27/2000*
Extracted: *2/2/2000*

SOUTH COMPOSITE	*soil*			**Analyzed:** *2/3/2000 by WB*		*L14907-2*
71-43-2	Benzene	ND	5.	µg/kg		
108-88-3	Toluene	ND	10.	µg/kg		
100-41-4	Ethylbenzene	ND	10.	µg/kg		
1330-20-7	Total Xylenes	ND	20.	µg/kg		

Surrogate	Recovery	Limit
Trifluorotoluene	76.%	50 - 150
4-Bromofluorobenzene	81.%	50 - 150

OREGON ANALYTICAL LABORATORY
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14855 S.W. Scholls Ferry Road, Beaverton, OR 97007
Phone 503-590-5300 • Fax 503-590-1404
www.oalab.com • Toll-Free 1-800-644-0967

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

Project: ***WT-1 Station: Dehy***

Semi-Volatile Petroleum Products
by NWTPH-DX

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

Sampled: *1/27/2000*
Extracted: *2/2/2000*

NORTH COMPOSITE	*soil*	**Analyzed:** *2/2/2000 by RJ*				*L14907-1*
Diesel Region		**140**	**25.**	**mg/kg**	**1**	
Oil Region		**580**	**50.**	**mg/kg**	**2**	

Surrogate	Recovery	Limit
2-Fluorobiphenyl	108.%	50 - 150
O-terphenyl	121.%	50 - 150

[1] Product appears to be diesel.
[2] Product appears to be oil.

Sampled: *1/27/2000*
Extracted: *2/2/2000*

SOUTH COMPOSITE	*soil*	**Analyzed:** *2/2/2000 by RJ*				*L14907-2*
Diesel Region		**160**	**25.**	**mg/kg**	**1**	
Oil Region		**590**	**50.**	**mg/kg**	**2**	

Surrogate	Recovery	Limit
2-Fluorobiphenyl	104.%	50 - 150
O-terphenyl	112.%	50 - 150

[1] Product appears to be diesel.
[2] Product appears to be oil.

OREGON ANALYTICAL LABORATORY
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Phone 503-590-5300 • Fax 503-590-1404
www.oalab.com • Toll-Free 1-800-644-0967

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

Project: ***WT-1 Station: Dehy***

Volatile Petroleum Products
by NWTPH-GX

Sample ID / *Matrix* / CAS / Analyte	Result	Reporting Limit	Units (ppm)	Dilution	Comment	*Lab Number*
NORTH COMPOSITE *soil*					Sampled: *1/27/2000* Extracted: *2/1/2000* Analyzed: *2/3/2000 by WB*	*L14907-1*
8006-61-9 Gasoline Region	ND	5.	mg/kg		K2	
Surrogate			Recovery		Limit	
Trifluorotoluene			80.%		50 - 150	
4-Bromofluorobenzene			84.%		50 - 150	
SOUTH COMPOSITE *soil*					Sampled: *1/27/2000* Extracted: *2/1/2000* Analyzed: *2/3/2000 by WB*	*L14907-2*
8006-61-9 Gasoline Region	ND	5.	mg/kg		K2	
Surrogate			Recovery		Limit	
Trifluorotoluene			61.%		50 - 150	
4-Bromofluorobenzene			69.%		50 - 150	

OREGON ANALYTICAL LABORATORY
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Phone 503-590-5300 • Fax 503-590-1404
www.oalab.com • Toll-Free 1-800-644-0967

OAL

L14907

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

Project: ***WT-1 Station: Dehy***

Batch Q.C.

Method Blank

BTEX/Soil (ug/kg)

Analyte	Result	Reporting Limit	Q	Date Analyzed
Benzene	ND	5		02/03/00
Toluene	ND	10		
Ethylbenzene	ND	10		
Xylenes	ND	20		

Surrogates	% Recovery
Trifluorotoluene	102
Bromofluorobenzene	105

Comments: L14907-1 & 2.

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

OAL

L14907

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

Project: ***WT-1 Station: Dehy***

Batch Q.C.

LCS

BTEX/Soil (ug/kg)

Analyte	Result	True Value	% Recovery	Control Limits %	Q	Date Analyzed
Benzene	132	152	87	56-117		01/26/00
Toluene	133	152	88	68-122		
Ethylbenzene	135	152	89	70-123		
Xylenes	419	455	92	70-122		

Surrogates	% Recovery
Trifluorotoluene	90
Bromofluorobenzene	75

Comments: L14907-1 & 2.

OREGON ANALYTICAL LABORATORY
A Division of Portland General Electric
14855 S.W. Scholls Ferry Road, Beaverton, OR 97007
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OAL

L14907

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

Project: ***WT-1 Station: Dehy***

Batch Q.C.

MS

BTEX/Soil (ug/kg)

Analyte	Sample Result	MS Result	True Value	% Recovery	Control Limits %	Q	Date Analyzed
Benzene	ND	96	199	48	23-118		01/26/00
Toluene	ND	106	199	53	29-118		
Ethylbenzene	ND	120	199	60	39-111		
Xylenes	105	460	597	59	35-122		

Surrogates	% Recovery Sample	% Recovery MS
Trifluorotoluene	57	55
Bromofluorobenzene	67	61

Comments: L14907-1 & 2.

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OAL

L14907

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

Project: ***WT-1 Station: Dehy***

Batch Q.C.

Duplicate

BTEX/Soil (ug/kg)

Analyte	Result	Duplicate Result	RPD	Reporting Limit	Q	Date Analyzed
Benzene	ND	ND	NA	5		01/26/00
Toluene	ND	ND	NA	10		
Ethylbenzene	ND	ND	NA	10		
Xylenes	105	89	16	20		

Surrogates	% Recovery Sample	% Recovery Duplicate
Trifluorotoluene	57	59
Bromofluorobenzene	67	70

Comments: L14907-1 & 2.

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OAL

L14907

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

Project: ***WT-1 Station: Dehy***

Batch Q.C.

Method Blank

NWTPH-Dx/Soil (mg/kg)

Analyte	Result	Reporting Limit	Q	Date Analyzed
NWTPH-Dx				
Diesel range	ND	25		02/02/00
Oil range	ND	50		

Surrogates	% Recovery
Fluorobiphenyl	113
O-terphenyl	126

Comments: Batch QC for samples L14907-1 through -2.

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OAL

L14907

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

Project: ***WT-1 Station: Dehy***

Batch Q.C.

LCS

NWTPH-Dx/Soil (mg/kg)

Analyte	Result	True Value	% Recovery	Control Limits %	Q	Date Analyzed
NWTPH-Dx	115	127	91	72-124		02/01/00

Surrogates	% Recovery
Fluorobiphenyl	111
O-terphenyl	123

Comments: Batch QC for samples L14907-1 through -2.

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OAL

L14907

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

Project: ***WT-1 Station: Dehy***

Batch Q.C.

MS

NWTPH-Dx/Soil (mg/kg)

Analyte	Sample Result	MS Result	True Value	% Recovery	Control Limits %	Q	Date Analyzed
NWTPH-Dx	ND	122	139	88	58-152		02/01/00

Surrogates	% Recovery Sample	% Recovery MS
Fluorobiphenyl	104	109
O-terphenyl	117	119

Comments: Batch QC for samples L14907-1 through -2.

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OAL

L14907

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

Project: ***WT-1 Station: Dehy***

Batch Q.C.

Duplicate
NWTPH-Dx/Soil (mg/kg)

Analyte	Result	Duplicate Result	RPD	Reporting Limit	Q	Date Analyzed
NWTPH-Dx						
Diesel range	130	131	1	25		01/31/00
Oil range	178	182	2	50		

Surrogates	% Recovery Sample	% Recovery Duplicate
Fluorobiphenyl	103	99
O-terphenyl	115	111

Comments: Batch QC for samples L14907-1 through -2.

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OAL

L14907

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

Project: ***WT-1 Station: Dehy***

Batch Q.C.

Method Blank

NWTPH-Gx/Soil (mg/kg)

Analyte	Result	Reporting Limit	Q	Date Analyzed
NWTPH-Gx	ND	5		02/03/00

Surrogates	% Recovery
Trifluorotoluene	81
Bromofluorobenzene	88

Comments: L14907-1 & 2.

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OAL

L14907

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

Project: ***WT-1 Station: Dehy***

Batch Q.C.

LCS

NWTPH-Gx/Soil (mg/kg)

Analyte	Result	True Value	% Recovery	Control Limits %	Q	Date Analyzed
NWTPH-Gx	12.7	12.5	102	79-137		01/20/00

Surrogates	% Recovery
Trifluorotoluene	91
Bromofluorobenzene	95

Comments: L14907-1 & 2.

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OAL

L14907

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

Project: ***WT-1 Station: Dehy***

Batch Q.C.

MS

NWTPH-Gx/Soil (mg/kg)

Analyte	Sample Result	MS Result	True Value	% Recovery	Control Limits %	Q	Date Analyzed
NWTPH-Gx	ND	MI	16.6	MI	51-116	K2	01/20/00

Surrogates	% Recovery Sample	% Recovery MS
Trifluorotoluene	MI	MI
Bromofluorobenzene	MI	MI

Comments: L14907-1 & 2.
Mineral spirits and kerosene in sample interfered with spike recovery.

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OAL

L14907

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

Project: ***WT-1 Station: Dehy***

Batch Q.C.

Duplicate
NWTPH-Gx/Soil (mg/kg)

Analyte	Result	Duplicate Result	RPD	Reporting Limit	Q	Date Analyzed
NWTPH-Gx	ND	ND	NA	5		01/20/00

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

Comments: L14907-1 & 2.

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Oregon Analytical Laboratory

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Beaverton OR 97007
(503) 590-5300
FAX (503) 590-1404
1-800-644-0967

Chain of Custody Record
Laboratory Analysis Request

Sampling: ☐ Grab ☒ Comp Page 1 of 1
OAL Hours _____ Site Visit ☐
ISCO _____
www.oalab.com

Client Information
Company: CYPRESS ENGINEERING
Contact: SANDY SHARP
Address: 10235 WEST LITTLE YORK STE 254 HOUSTON TX 77040
Phone # 713 6467252 Fax # 7867

Billing Information
Company: ENRON
Contact: % GEORGE ROBINSON
Address: _____
Phone # 7327 Fax # 7867

Project Information
Project Name: ALGONQUIN PIPELINE
Project # WT-1 DEHY
P.O. # _____
Comments _____

Sampler's Name: CHARLES CHILD
Signature _____

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

	Sample Identification	Date	Time	FOR LAB USE ONLY OAL Login #	# of Containers	Matrix: Soil	Matrix: Water	Matrix: Other (Note in Remarks)	Volatiles 620 / 8260 / 8240 8010 / 8020	Semivolatiles 625 / 8270 PAH(SIM)8270 PAH8310	Organochlor Pest 608 / 8081 PCB 608 / 8082	NW TPH-HCID Quantify? ☐ Yes ☐ No	* NWTPH Quantification DX/OIL GX	BTEX 602 / 8021 ☐ MTBE ☐ Naphthalene	Metals ☐ Total ☐ TCLP ☐ Dissolved As Ba Cd Cr Pb Hg Se Ag Other	* TPH DX	Turnaround	Remarks
1	NORTH COMPOSITE	1/27/00	1020	L14907-1	2	X							✓ GX	1/G		5/S	N	
2	SOUTH "	"	1040	↓ -2	2	X							✓	1/G		1/G	N	
3																		
4																		
5																		* RUN DX + GX per Sandy Sharp 2/1/00 - DGM
6																		
7																		
8																		
9																		

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

Relinquished
Signature: Sandy Sharp Date: 1/28/00
Print Name: SANDY SHARP Time: 0500
Company: CYPRESS

Received
Signature: Deborah L. McBroom-Jackson Date: 1.28.00
Print Name: Deborah L. McBroom-Jackson Time: 10:25
Company: OAL

Relinquished
Signature _____ Date _____
Print Name _____ Time _____
Company _____

Received
Signature _____ Date _____
Print Name _____ Time _____
Company _____

Relinquished
Signature _____ Date _____
Print Name _____ Time _____
Company _____

Received
Signature _____ Date _____
Print Name _____ Time _____
Company _____

☐ Courier ☐ UPS ☒ FedEx ☐ Other
Received @ 2 °C
Appropriate Containers ☒ Yes ☐ No
4 4oz/8oz Jars
_____ VOA Vials
_____ Plastic Bottles
_____ Glass Bottles
_____ Other _____

PGE 71982 (Oct 99)

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

December 28, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z-274-520-749

Mr. Larry Campbell
Transwestern Pipeline Company
6381 North Main
Roswell, New Mexico 88201

RE: WT-1 COMPRESSOR STATION ENGINE ROOM DRAIN PIT AREA

Dear Mr. Campbell:

The New Mexico Oil Conservation Division has reviewed Transwestern Pipeline Company's (TPC) November 2, 1999 "REPORT OF GROUND WATER MONITORING ACTIVITIES, , TRANSWESTERN PIPELINE COMPANY - WT-1 STATION ENGINE ROOM DRAIN PIT AREA, LEA COUNTY, NEW MEXICO". This document contains the results of TPC's ground water monitoring activities at the WT-1 Compressor Station engine room drain pit. The document also proposes to eliminate several metals analyses from the sampling program and requests that the deadline for submission of a remediation work plan be extended to April 1, 2000.

The proposed sampling modifications and extension request as contained in the above referenced document is approved.

Please be advised that OCD approval does not relieve TPC of liability if the ground water monitoring plan fails to adequately monitor contamination related to TPC's activities. In addition, OCD approval does not relieve TPC of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Supervisor
George Robinson, Cypress Engineering Services, Inc.

Cypress Engineering

10[illegible] West Little York Road, Suite 256
Houston, Texas 77040
(713) 856-7980 office
(713) 856-7981 fax

November 2, 1999

Mr. William C. Olson
Environmental Bureau
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, New Mexico 87505

RE: Report of Ground Water Monitoring Activities
Transwestern Pipeline Company - WT-1 Station Engine Room Drain Pit Area
Lea County, New Mexico

Dear Bill,

The enclosed report is submitted pursuant to the NMOCD's requirements for reporting of ground water monitoring activities at the subject facility.

In a related matter, your office had recently requested that Transwestern submit a work plan for remediation of contamination at this site. Transwestern is currently in the process of evaluating corrective action alternatives. Traditional methods of remediation such as PSH recovery using pumps with skimmers and soil vapor extraction would have limited success at this site due to the physical characteristics of the source of contaminants, more specifically, the phase separated hydrocarbon accumulated at the water table has a high viscosity and low vapor pressure. In light of this, we are currently working with researchers at the University of Florida to evaluate the feasibility of co-solvent flushing for removal of PSH at this site. Co-solvent flushing would involve the introduction of a co-solvent, such as ethanol or pentanol, in an effort to mobilize the PSH toward an extraction well. We anticipate that a conceptual remediation plan will be completed and submitted to your office for review by April 1, 2000.

If you have any questions or comments regarding this report or the feasibility study in progress, please contact me at (713) 646-7327 or Larry Campbell at (505) 625-8022 .

Sincerely,

George C. Robinson, PE
President/Principal Engineer

xc w/attachment:

Larry Campbell	Transwestern Pipeline Company
Bill Kendrick	ENRON Gas Pipeline Group
Chris Williams	NMOCD Hobbs District Office
Randy Smith	TW Operations

Cypress Engineering

10235 West Little York Road, Suite 256
Houston, Texas 77040
(713) 856-7980 office
(713) 856-7981 fax

October 15, 1999

Mr. William C. Olson
Environmental Bureau
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, New Mexico 87505

RE: Report of Ground Water Remediation Activities
Transwestern Pipeline Company - WT-1 Station Dehy Area
Lea County, New Mexico

Dear Bill,

The attached report is submitted pursuant to the NMOCD's requirements for reporting of ground water remediation activities at the subject facility.

If you have any questions or comments regarding this report, please contact me at (713) 646-7327 or Larry Campbell at (505) 625-8022 .

Sincerely,

George C. Robinson, PE
President/Principal Engineer

xc w/attachment:	Larry Campbell	Transwestern Pipeline Company
	Chris Williams	NMOCD Hobbs District Office
	Randy Smith	TW Operations

Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area
Lea County, New Mexico

Submitted to:
New Mexico Oil Conservation Division

October 15, 1999

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

Prepared by:
Cypress Engineering Services, Inc.
16300 Katy Freeway, Suite 210
Houston, Texas 77094-1610

Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

I. Ground Water Monitoring Activities

Semiannual Ground Water Sampling Events

Transwestern Pipeline Company has completed three sampling events since the last report of ground water remediation activities. These events were completed on August 5, 1998, February 12, 1999, and August 11, 1999.

Prior to sampling, the depth to water, and the depth to hydrocarbon where phase separated hydrocarbon (PSH) was present, was determined for each monitor well and soil vapor extraction (SVE) well. The measured depths and the corresponding water table elevation for each monitor well is presented in Table 1. The measured depths and the corresponding water table elevation for each SVE well is presented in Table 2.

In the course of each sample event, ground water samples were collected from each of the monitor wells at the site. Samples were not collected from monitor wells with PSH accumulated in the well casing. Ground water samples were delivered to a laboratory for analysis by EPA Method 8021B for benzene, toluene, ethylbenzene, and xylenes (BTEX). A summary of the laboratory results and field measured parameters is presented in Table 3.

Approximately 30 gallons of purge water were generated during the semiannual sampling events. The purge water was placed in the facility's on-site ground water recovery AST.

Results/Conclusions from Ground Water Sampling Events

Occurrence and Direction of Ground Water Flow

A ground water surface elevation map, based on measurements obtained on August 11, 1999 is included as Figure 3. The ground water flow direction is toward the north and is consistent with the flow direction indicated by information obtained in the course of previous sampling events.

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-10 and wells SVE-10, SVE-11, SVE-12, and SVE-13. Based on the information currently available, the volume and lateral extent of PSH in the area appears to be relatively limited.

Condition of Affected Ground Water

The condition of affected ground water, based on the recent sampling event, has not changed significantly from previous sampling events as evidenced by the information presented in Table 3 and Figure 4. The three monitor wells downgradient of the release area continue to yield ground water samples that are non-detect for BTEX constituents. Monitor well MW-9, located about 200 feet upgradient of the release area, also yielded samples that are non-detect for BTEX constituents for the August 11, 1999 sampling event.

Two additional wells have been sampled since the last report of remediation activities, wells MW-10 and SVE-14. Monitor well MW-10 had previously not been sampled due to the presence of PSH accumulated in the well casing, however, this well has been relatively free of PSH in the well casing since February 1998. Well SVE-14 is a new well installed in June 1999 in the course of an expansion of the remediation system. This well has also been free of PSH accumulated in the well casing and therefore has been utilized as an additional monitor point. The primary objective for adding these two wells to the monitoring program is to provide information regarding natural attenuation of dissolved phase constituents within the affected area.

II. Planned Changes to the Ground Water Monitoring Program

Disposal of Monitor Well Purge Water

Transwestern anticipates that approximately 12 gallons (total) of purge water will be generated from the six monitor wells in the course of each sampling event. The purge water generated from all wells will be placed in the facility's on-site ground water recovery AST.

Frequency of Ground Water Monitoring

Transwestern will continue with semiannual ground water sampling events.

Routine Reporting of Monitoring Activities

Transwestern will continue with annual reporting of ground water remediation activities. The next annual report will be submitted to the OCD by November 1, 2000.

III. Status of Remediation Activities

Remediation Activities Completed

The following remediation activities were completed through September 1999:

1) Transwestern installed five additional SVE wells in May 1999. The well locations are indicated in Figure 2 as wells SVE-10, SVE-11, SVE-12, SVE-13, and SVE-14. Well construction details are included as an attachment to this report.

   Well SVE-10 was installed to replace well SVE-4. Initially, well SVE-10 was to be located 10 feet west of well SVE-4, however, the soil boring drilled at this location failed to produce water. The borehole was abandoned and a second location was drilled 5 feet north of well SVE-4. A well was constructed at this location even though this borehole also failed to produce water, however, shortly after well completion the well casing collapsed at a point about 10 feet below ground surface and the well was abandoned. In the final attempt to install well SVE-10, well SVE-4 was overdrilled and a well was completed in the same location as well SVE-4. As a result, there is no longer a well SVE-4.

   Well SVE-11 was installed as a replacement for well SVE-5 which had not been completed to a sufficient depth to allow for liquid recovery. Wells SVE-12 and SVE-13 were installed for the purpose of providing more efficient removal of PSH. Well SVE-14 was installed for the same purpose as wells SVE-12 and SVE-13 but did not encounter PSH at the water table.

2) Transwestern has continued routine O&M of the SVE system to ensure efficient and effective operation. The SVE system is currently recovering vapor from wells SVE-2, SVE-3, SVE-9, SVE-10, SVE-11, SVE-12, SVE-13, SVE-14, and MW-10.

3) Transwestern has continued routine O&M of the liquid recovery system. A single pneumatic recovery pump is utilized at this site. The pump is routinely rotated between wells which contain accumulated PSH in the well casing. The maximum recovery rate is 0.5 gpm and is primarily water (greater than 99% water). Vapor extraction continues during liquid recovery (dual phase extraction).

Current Status of Remediation Activities

Routine operation and maintenance of the remediation system is ongoing.

Remediation Activities Planned for 1999-2000

Transwestern anticipates that the remediation system will be in operation at least through mid-2000 in order to achieve its cleanup objectives. In addition, Transwestern plans to complete the ground water sampling program as outlined above.

Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

Figures

f:/.../drawings/wt1/wt1FAC.dwg (10/14/99)

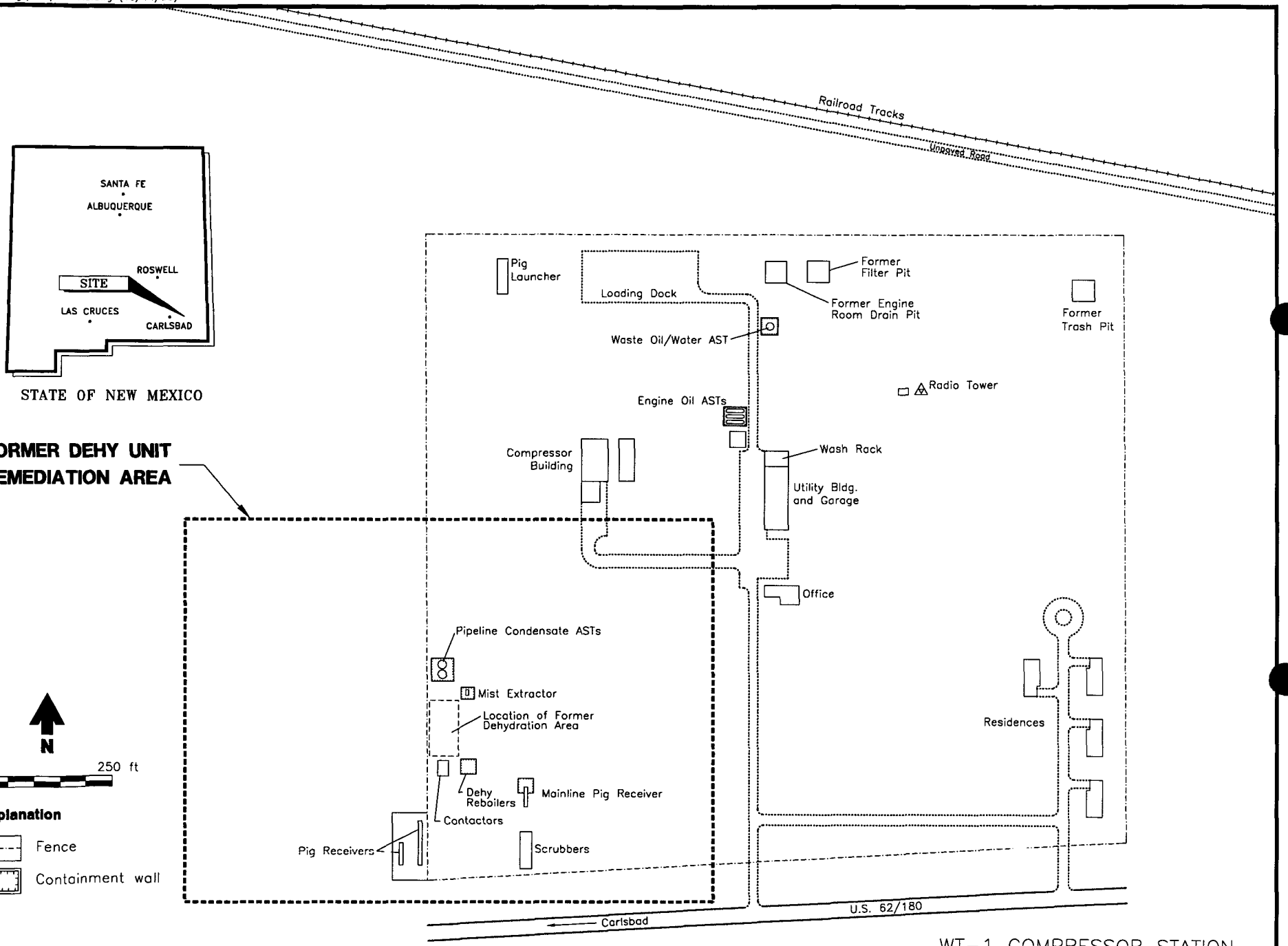


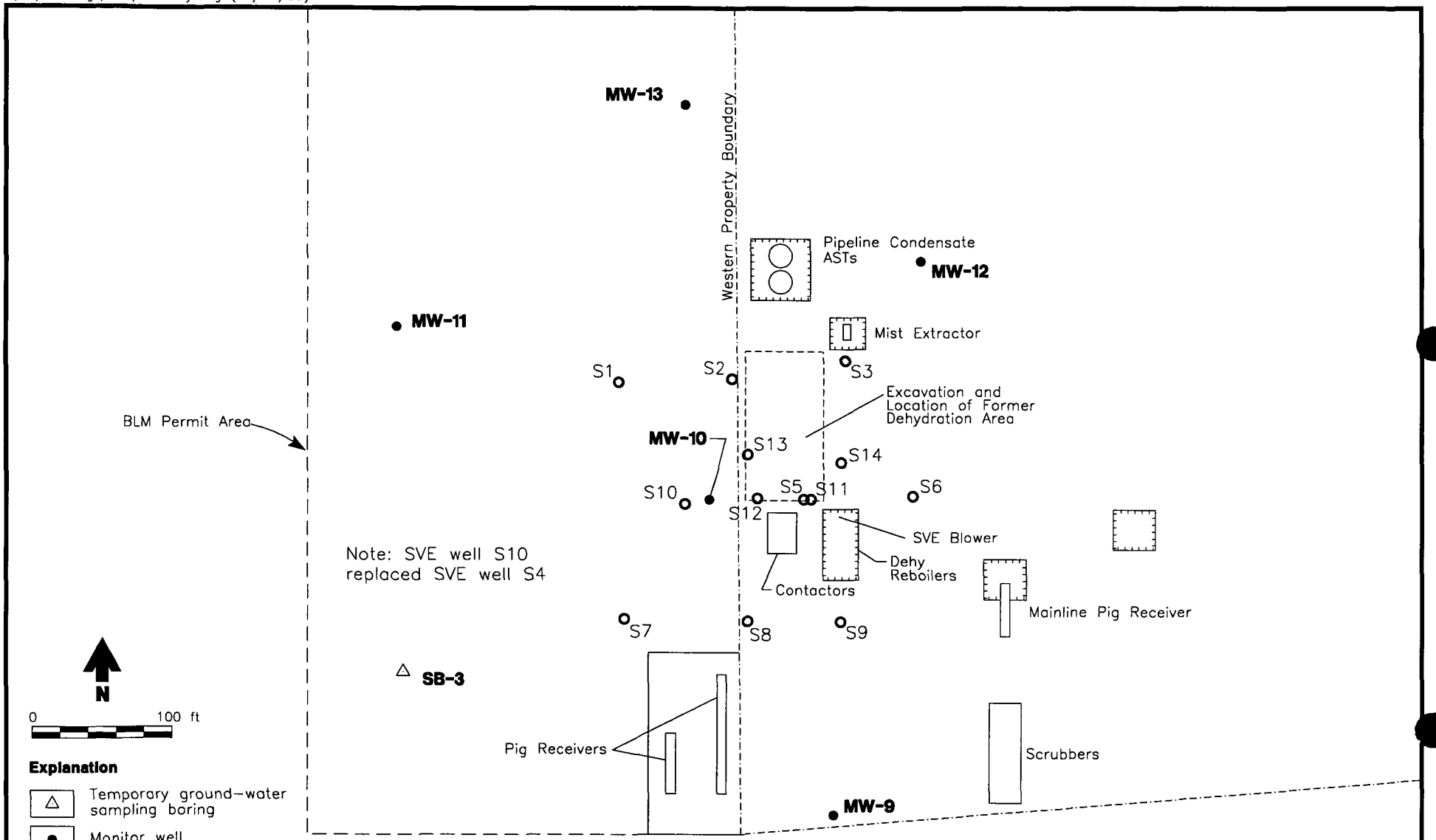
Figure 1

Facility Site Map

WT-1 COMPRESSOR STATION
TRANSWESTERN PIPELINE COMPANY

CYPRESS ENGINEERING SERVICES, INC.

f:/.../drawings/wt1/wt1dehy.dwg (10/14/99)



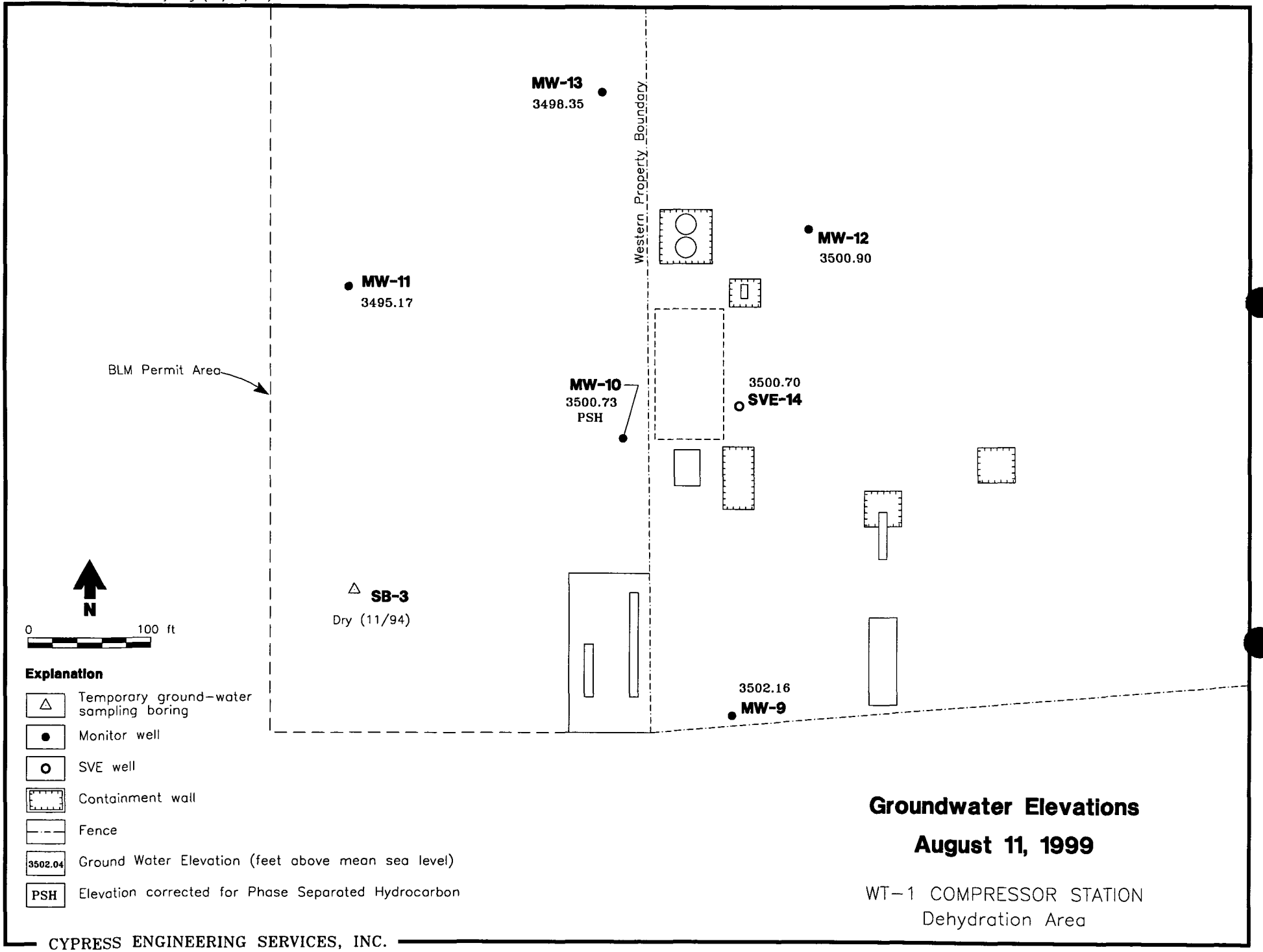
Site Diagram

WT-1 COMPRESSOR STATION
Dehydration Area

CYPRESS ENGINEERING SERVICES, INC.

Figure 2

f:/.../drawings/wt1/wt1dehy.dwg (10/14/99)



Groundwater Elevations

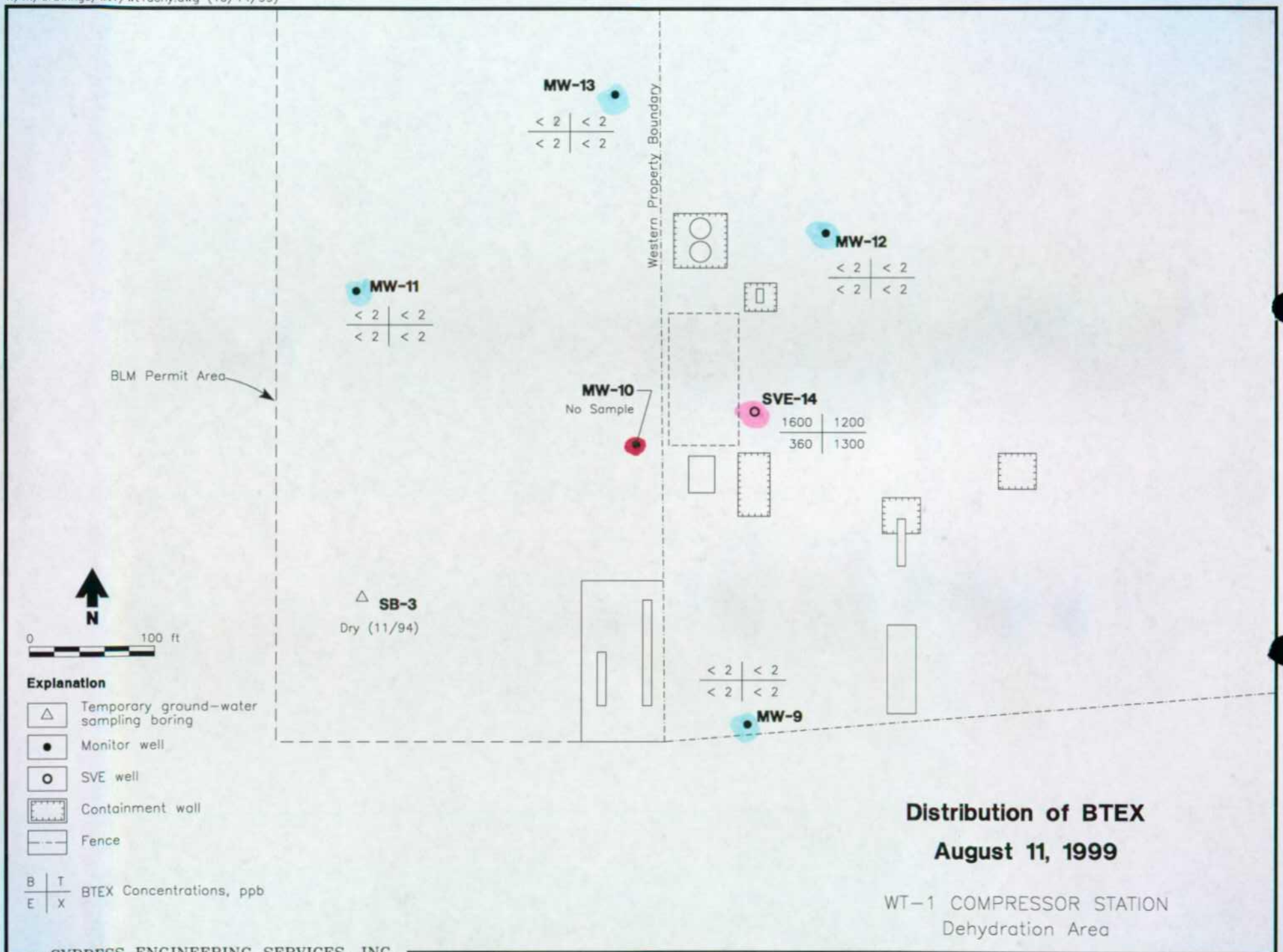
August 11, 1999

WT-1 COMPRESSOR STATION
Dehydration Area

CYPRESS ENGINEERING SERVICES, INC.

Figure 3

f:/.../drawings/wt1/wt1dehy.dwg (10/14/99)



Distribution of BTEX

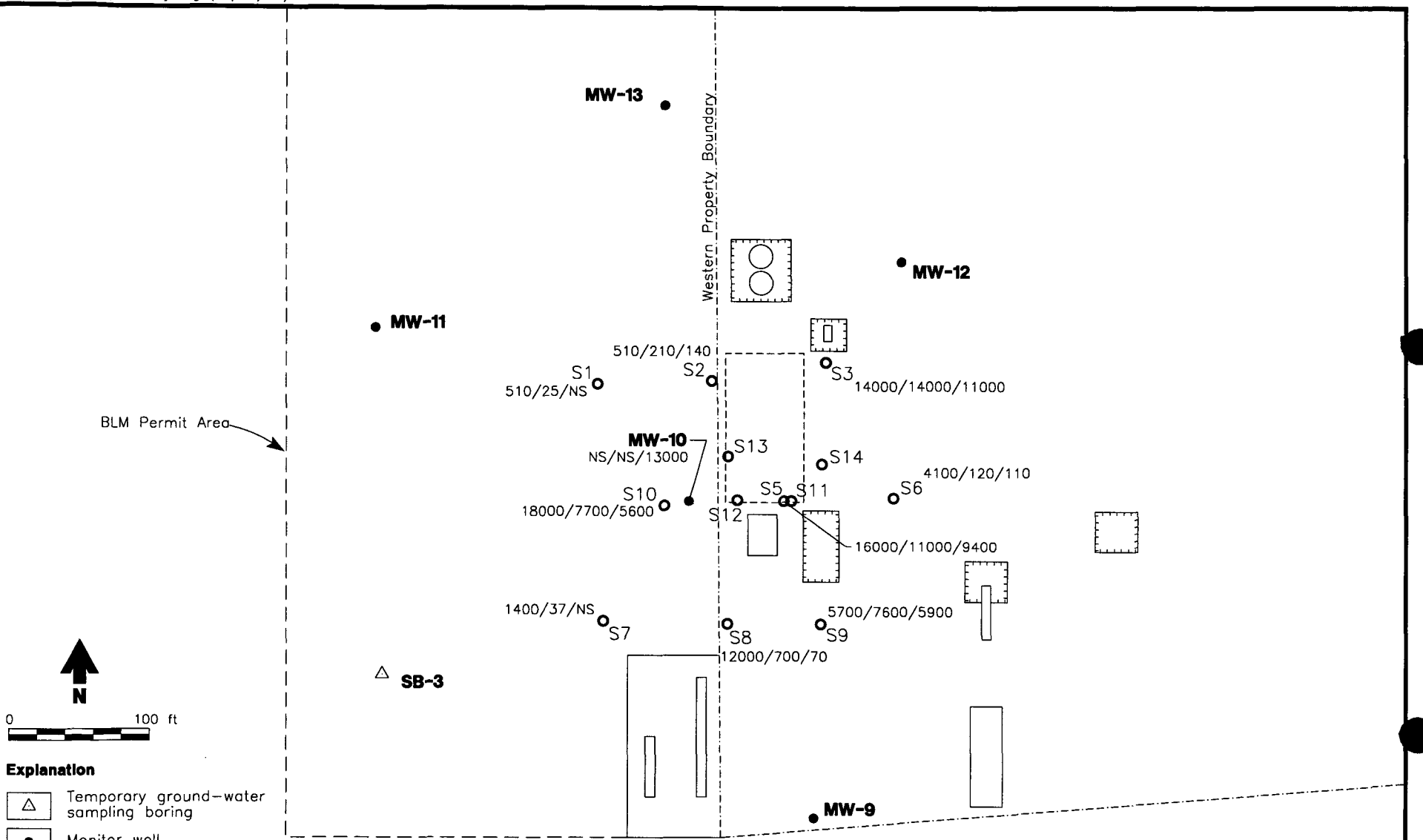
August 11, 1999

WT-1 COMPRESSOR STATION
Dehydration Area

Figure 4

CYPRESS ENGINEERING SERVICES, INC.

f:/.../drawings/wt1/wt1dehy.dwg (10/14/99)



Explanation

- Temporary ground-water sampling boring
- Monitor well
- SVE well
- Containment wall
- Fence
- (136) Concentration of VOCs in soil vapor samples (ug/L) (Aug '96/Aug '97/Aug '98)

Concentration of VOCs in Soil Vapor
Aug '96, Aug '97, & Aug '98

WT-1 COMPRESSOR STATION
Dehydration Area

CYPRESS ENGINEERING SERVICES, INC.

Figure 5

Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

Tables

Table 1. Summary of Ground Water Surface Elevations
TW WT-1 Compressor Station Dehy Area

Well	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Water (ft)	PSH (ft)	Surface Elevation (ft)
MW-9	11/21/94	3557.31 (b)	(a)	55.14	(a)	3502.17
	11/21/95		(a)	55.67	(a)	3501.64
	02/22/96		(a)	55.27	(a)	3502.04
	05/14/96		(a)	55.18	(a)	3502.13
	08/12/96		(a)	55.53	(a)	3501.78
	11/12/96		(a)	55.25	(a)	3502.06
	02/05/97		(a)	55.20	(a)	3502.11
	08/05/97		(a)	55.25	(a)	3502.06
	12/29/97		(a)	55.19	(a)	3502.12
	02/23/98		(a)	54.71	(a)	3502.60
	08/05/98		(a)	54.72	(a)	3502.59
	08/27/98		(a)	54.64	(a)	3502.67
	02/11/99		(a)	55.63	(a)	3501.68
	08/11/99		(a)	55.15	(a)	3502.16
MW-10	11/18/94	3553.45 (b)	(a)	52.63	(a)	3500.82
	11/21/95		52.31	54.21	1.90	3500.76
	02/22/96		52.08	53.75	1.67	3501.04
	05/14/96		51.93	53.58	1.65	3501.19
	08/12/96		52.25	53.40	1.15	3500.97
	11/12/96		52.48	52.82	0.34	3500.90
	02/05/97		52.57	52.98	0.41	3500.80
	08/05/97		52.38	53.08	0.70	3500.93
	08/07/97		52.39	52.72	0.33	3500.99
	08/29/97		52.15	52.57	0.42	3501.22
	12/29/97		53.51	53.62	0.11	3499.92
	02/23/98		(a)	53.42	(a)	3500.03
	08/27/98		(a)	51.65	(a)	3501.80
	02/11/99		(a)	52.50	(a)	3500.95
	08/11/99	3554.31 (c)	53.57	53.62	0.05	3500.73
	09/14/99		(a)	53.60	(a)	3499.85
	10/07/99		(a)	53.71	(a)	3499.74
MW-11	11/21/94	3547.84 (b)	(a)	DRY	(a)	DRY
	11/21/95		(a)	58.10	(a)	3489.74
	02/22/96		(a)	56.70	(a)	3491.14
	05/14/96		(a)	57.33	(a)	3490.51
	08/12/96		(a)	56.96	(a)	3490.88
	11/12/96		(a)	56.66	(a)	3491.18
	02/05/97		(a)	57.09	(a)	3490.75
	08/05/97		(a)	54.93	(a)	3492.91
	12/29/97		(a)	54.53	(a)	3493.31
	02/23/98		(a)	53.97	(a)	3493.87
	08/05/98		(a)	54.37	(a)	3493.47
	08/27/98		(a)	57.48	(a)	3490.36
	02/11/99		(a)	53.11	(a)	3494.73
	08/11/99		(a)	52.67	(a)	3495.17

Table 1. Summary of Ground Water Surface Elevations
TW WT-1 Compressor Station Dehy Area

Well	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Water (ft)	PSH (ft)	Surface Elevation (ft)
MW-12	11/17/94	3551.19 (b)	(a)	49.31	(a)	3501.88
	11/21/95		(a)	50.49	(a)	3500.70
	02/22/96		(a)	50.13	(a)	3501.06
	05/14/96		(a)	49.96	(a)	3501.23
	08/12/96		(a)	50.31	(a)	3500.88
	11/12/96		(a)	50.41	(a)	3500.78
	02/05/97		(a)	50.53	(a)	3500.66
	08/05/97		(a)	50.39	(a)	3500.80
	12/29/97		(a)	50.35	(a)	3500.84
	02/23/98		(a)	50.26	(a)	3500.93
	08/05/98		(a)	50.22	(a)	3500.97
	08/27/98		(a)	49.94	(a)	3501.25
	02/11/99		(a)	49.87	(a)	3501.32
	08/11/99		(a)	50.29	(a)	3500.90
MW-13	12/01/94	3547.78 (b)	(a)	49.70	(a)	3498.08
	11/21/95		(a)	49.55	(a)	3498.23
	02/22/96		(a)	49.27	(a)	3498.51
	05/14/96		(a)	49.15	(a)	3498.63
	08/12/96		(a)	49.40	(a)	3498.38
	11/12/96		(a)	49.42	(a)	3498.36
	02/05/97		(a)	49.40	(a)	3498.38
	08/05/97		(a)	49.37	(a)	3498.41
	12/29/97		(a)	49.50	(a)	3498.28
	02/23/98		(a)	49.35	(a)	3498.43
	08/05/98		(a)	49.41	(a)	3498.37
	08/27/98		(a)	49.20	(a)	3498.58
	02/11/99		(a)	49.12	(a)	3498.66
	08/11/99		(a)	49.43	(a)	3498.35

NOTES:
PSH - Phase separated hydrocarbon
Corrections to ground water surface elevation for presence of hydrocarbon is calculated assuming a specific gravity of 0.8
(a) Not applicable since no measurable thickness of hydrocarbon is present
(b) Survey by John West Engineering, Hobbs, NM dated 11/94
(c) Survey by Cypress Engineering, Houston, TX dated 08/11/99

Table 2. Summary of Ground Water Surface Elevations at SVE Wells
TW WT-1 Compressor Station Dehy Area

Well	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Water (ft)	PSH (ft)	Surface Elevation (ft)
SVE-1	05/14/96	3551.22 (e)	(a)	51.01	(a)	3500.21
	08/06/97		(a)	49.09	(a)	3502.13
	02/11/99		(a)	51.52	(a)	3499.70
	08/11/99		(a)	52.17	(a)	3499.05
SVE-2	05/14/96	3551.96 (e)	50.63	51.38	0.75	3501.18
	08/06/97		50.95	52.15	1.20	3500.77
	08/07/97		50.93	51.64	0.71	3500.89
	08/29/97		50.75	51.16	0.41	3501.13
	12/29/97		51.02	51.76	0.74	3500.79
	06/26/98		(a)	50.87	(a)	3501.09
	07/13/98		(a)	50.87	(a)	3501.09
	02/11/99		(a)	50.15	(a)	3501.81
	08/11/99		(a)	51.26	(a)	3500.70
SVE-3	05/14/96	3552.75 (e)	(a)	50.95	(a)	3501.80
	08/06/97		(a)	47.70	(a)	3505.05
	12/29/97		(a)	51.44	(a)	3501.31
	02/11/99		(a)	46.45	(a)	3506.30
	08/11/99		(a)	51.03	(a)	3501.72
SVE-4	05/14/96	3553.03 (d)	51.91	53.67	1.76	3500.77
	08/06/97		50.56	52.24	1.68	3502.13
	08/07/97		52.84	53.39	0.55	3500.08
	08/29/97		50.50	51.74	1.24	3502.28
	12/29/97		52.02	53.04	1.02	3500.81
	06/26/98		50.58	52.30	1.72	3502.11
	07/13/98		50.52	52.30	1.78	3502.15
	07/24/98		50.38	51.80	1.42	3502.37
	09/23/98		50.11	51.31	1.20	3502.68
	01/07/99		50.70	51.36	0.66	3502.20
	01/27/99		50.65	51.18	0.53	3502.27
SVE-5	05/14/96	3554.39 (e)	51.34	--	--	(a)
	08/06/97		45.69	49.30	3.61	3507.98
	08/07/97		50.22	51.08	0.86	3504.00
	08/29/97		45.00	48.59	3.59	3508.67
	12/29/97		51.83	--	--	(a)
	08/26/98		44.65	47.10	2.45	3509.25
	01/17/99		46.20	46.60	0.40	3508.11
	02/11/99		44.87	45.10	0.23	3509.47
	08/13/99		<52.05	<52.05	na	na
	09/14/99		<52.05	<52.05	na	na
	10/07/99		<52.05	<52.05	na	na
SVE-6	05/14/96	3553.74 (e)	(a)	54.30	(a)	3499.44
	08/06/97		(a)	49.75	(a)	3503.99
	02/11/99		(a)	52.05	(a)	3501.69
	08/11/99		(a)	52.59	(a)	3501.15

Table 2. Summary of Ground Water Surface Elevations at SVE Wells
TW WT-1 Compressor Station Dehy Area

Well	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Water (ft)	PSH (ft)	Surface Elevation (ft)
SVE-7	05/14/96	3553.81 (e)	(a)	53.89	(a)	3499.92
	08/06/97		(a)	51.40	(a)	3502.41
	12/29/97		(a)	54.14	(a)	3499.67
	02/11/99		(a)	53.65	(a)	3500.16
	08/11/99		(a)	54.18	(a)	3499.63
SVE-8	05/14/96	3555.25 (e)	(a)	53.55	(a)	3501.70
	08/06/97		(a)	51.72	(a)	3503.53
	12/29/97		(a)	54.07	(a)	3501.18
	02/11/99		(a)	53.06	(a)	3502.19
	08/11/99		(a)	54.02	(a)	3501.23
SVE-9	05/14/96	3555.36 (e)	(a)	54.13	(a)	3501.23
	08/06/97		(a)	50.06	(a)	3505.30
	02/11/99		(a)	50.97	(a)	3504.39
	08/11/99		(a)	54.39	(a)	3500.97
SVE-10	06/04/99	3554.40 (e)	52.86	52.88	0.02	3501.54
	08/11/99		53.12	53.32	0.20	3501.24
	09/14/99		(a)	54.14	(a)	3500.26
	10/07/99		54.98	55.23	0.25	3499.37
SVE-11	06/04/99	3555.33 (e)	54.94	55.32	0.38	3500.31
	08/11/99		54.32	55.91	1.59	3500.69
	09/14/99		55.30	56.14	0.84	3499.86
	10/05/99		54.80	54.85	0.05	3500.52
SVE-12	06/04/99	3555.64 (e)	55.00	58.71	3.71	3499.90
	08/03/99		55.11	56.41	1.30	3500.27
	09/14/99		55.28	55.29	0.01	3500.36
	10/07/99		(a)	54.95	(a)	3500.69
SVE-13	06/04/99	3554.11 (e)	53.73	54.83	1.10	3500.16
	08/11/99		53.37	53.39	0.02	3500.74
	09/14/99		(a)	53.93	(a)	3500.18
	10/07/99		(a)	53.36	(a)	3500.75
SVE-14	06/04/99	3554.83 (e)	(a)	54.43	(a)	3500.40
	08/11/99		(a)	54.13	(a)	3500.70
	09/14/99		(a)	52.61	(a)	3502.22
	10/07/99		(a)	52.14	(a)	3502.69

Notes:
(a) Not Applicable
(b) No elevation data available
(c) Survey by John West Engineering, Hobbs, NM dated 11/94
(d) Survey by John West Engineering, Hobbs, NM dated 02/22/96
(e) Survey by Cypress Engineering, Houston, TX dated 08/11/99

Table 3. Summary of Ground Water Analyses
TW WT-1 Compressor Station Dehy Area

Well	Sampling Date	Field Measured Parameters				BTEX Concentration - (ug/L)			
		DO (mg/L)	pH (Units)	Temp. (C)	Conductivity (µs/cm)	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWQCC Standard		none	6-9	none	none	10	750	750	620
MW-9	11/21/94	-	-	-	-	**12**	< 0.5	< 0.5	< 0.5
	11/21/95	-	7.03	19.4	2,890	4	3	< 2	11
	02/22/96	-	6.48	22.2	2,980	**13**	< 2	< 2	< 2
	05/14/96	-	-	-	-	**14**	< 2	< 2	< 2
	08/12/96	-	6.79	27.0	3,090	**14**	< 2	< 2	< 3
	11/12/96	-	6.97	16.6	-	9	< 2	< 2	< 2
	02/05/97	3.0	7.26	16.3	3,900	**13**	< 2	< 2	< 2
	08/05/97	1.8	6.97	20.7	3,580	3	< 2	< 2	< 2
	02/24/98	4.2	7.00	20.3	3,550	**16.3**	< 5	< 5	< 5
	08/05/98	2.2	6.93	22.6	3,910	1.9	< 1	< 1	< 1
	02/12/99	-	-	-	-	6	< 1	< 1	< 1
	08/11/99	3.1	6.9	21.0	3,230	< 2	< 2	< 2	< 2
MW-10	11/18/94	-	-	-	-	**9,000**	**16,000**	620	**8,500**
	08/05/98	-	-	-	-	**4,000**	**7,500**	190	**3,100**
	02/12/99	-	-	-	-	**4,300**	**7,700**	340	**3,300**
MW-11	11/21/94	-	-	-	-	(b)	(b)	(b)	(b)
	11/21/95	-	-	-	-	< 2	< 2	< 2	< 2
	02/22/96	-	7.34	21.9	1,920	< 2	< 2	< 2	< 2
	05/14/96	-	-	-	-	< 2	< 2	< 2	< 2
	08/12/96	-	7.11	25.7	2,050	< 2	< 2	< 2	< 3
	11/11/96	6.0	7.15	19.9	-	< 2	< 2	< 2	< 2
	02/05/97	7.0	7.56	14.8	2,300	< 2	< 2	< 2	< 2
	08/05/97	5.3	7.19	21.2	2,280	< 2	< 2	< 2	< 2
	02/24/98	6.5	7.35	18.8	2,100	< 5	< 5	< 5	< 5
	08/05/98	7.2	7.15	20.4	2,250	< 1	< 1	< 1	< 1
	02/12/99	-	-	-	-	< 1	< 1	< 1	< 1
	08/11/99	8.8	7.42	20.8	1,800	< 2	< 2	< 2	< 2
MW-12	11/17/94	-	-	-	-	< 0.5	1.9	< 0.5	3.1
	11/21/95	-	6.97	19.2	3,260	< 2	< 2	< 2	< 2
	02/22/96	-	6.71	22.6	3,400	< 2	< 2	< 2	< 2
	05/14/96	-	-	-	-	< 2	< 2	< 2	< 2
	08/12/96	-	6.70	26.8	3,430	< 2	< 2	< 2	< 3
	11/12/96	6.0	7.06	19.3	-	< 2	< 2	< 2	< 2
	02/05/97	7.0	7.23	15.8	3,900	< 2	< 2	< 2	< 2
	08/05/97	4.9	6.85	21.8	3,880	< 2	< 2	< 2	< 2
	02/24/98	6.0	7.06	20.1	3,570	< 5	< 5	< 5	< 5
	08/05/98	5.6	6.96	22.1	3,830	< 1	< 1	< 1	< 1
	02/12/99	-	-	-	-	< 1	< 1	< 1	< 1
	08/11/99	6.7	7.13	20.7	3,770	< 2	< 2	< 2	< 2

Table 3. Summary of Ground Water Analyses
TW WT-1 Compressor Station Dehy Area

Well	Sampling Date	Field Measured Parameters				BTEX Concentration - (ug/L)			
		DO (mg/L)	pH (Units)	Temp. (C)	Conductivity (µs/cm)	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWQCC Standard		none	6-9	none	none	10	750	750	620
MW-13	12/01/94	-	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5
	11/21/95	-	7.63	20.3	1,530	< 2	< 2	< 2	< 2
	02/22/96	-	7.18	24.1	1,880	< 2	< 2	< 2	< 2
	05/14/96	-	-	-	-	< 2	3	< 2	7
	08/12/96	-	7.02	26.7	1,980	< 2	< 2	< 2	< 3
	11/11/96	4.0	7.18	18.8	-	< 2	< 2	< 2	< 2
	02/05/97	7	7.65	17.7	1,900	< 2	< 2	< 2	< 2
	08/05/97	5.2	7.38	21.1	1,830	< 2	< 2	< 2	< 2
	02/24/98	4.5	7.27	19.5	1,703	< 5	< 5	< 5	< 5
	08/05/98	5.5	7.28	20.30	1,840	< 1	< 1	< 1	< 1
	02/12/99	-	-	-	-	< 1	< 1	< 1	< 1
	08/11/99	6.5	7.42	20.6	1,700	< 2	< 2	< 2	< 2
SVE-14	09/08/99	1.2	6.89	22.0	2,460	**1,600**	**1,200**	360	**1,300**

NOTES:
(a) No sample collected due to presence of phase separated hydrocarbon
(b) No sample collected due to absence of water in wellbore

Table 4. Summary of SVE Emissions at Individual Extraction Points
TW WT-1 Compressor Station Dehy Area

SVE Well	Date	PID Reading	Gasoline Range VOCs		< C5	C5-C6	C6-C7	C7-C8	C8-C9	C9-C10	C10-C11	C11-C12	C12-C14	C14+
		(ppmv)	(ug/L)	(ppmv) [a]	(%)									
SVE-1	08/15/96	0	510	127	3.0	11.3	21.0	28.1	22.9	10.8	2.7	0.2	0.0	0.0
	08/06/97	4.6	25	6	0.5	0.6	2.5	5.8	12.0	16.5	27.6	18.0	12.1	4.4
SVE-2	08/15/96	0	510	127	0.9	6.0	20.9	33.7	25.3	10.3	2.4	0.2	0.0	0.3
	02/06/97		20	5	0.0	5.5	27.2	27.9	16.9	14.3	7.0	0.9	0.3	0.0
	08/06/97	14.0	210	52	0.0	0.0	1.2	9.3	30.7	33.1	15.5	7.5	1.8	0.8
	12/30/97		360	89	0.1	0.5	1.6	11.4	20.6	18.7	19.4	16.7	11.0	0.0
	08/12/98		140	35	0.0	0.2	2.4	11.6	26.9	28.5	21.4	6.7	2.3	0.0
SVE-3	08/15/96	> 2000	14,000	3,478	0.7	16.9	40.6	32.0	9.1	0.7	0.0	0.0	0.0	0.0
	02/06/97		1,900	472	0.0	6.1	33.2	56.5	4.1	0.1	0.0	0.0	0.0	0.0
	08/06/97	146.0	14,000	3,478	0.2	2.8	27.9	40.0	21.5	6.3	1.2	0.1	0.0	0.0
	12/30/97		16,000	3,974	0.2	4.8	26.9	37.6	21.9	6.8	1.2	0.5	0.1	0.0
	08/12/98		11,000	2,732	0.0	3.3	19.6	40.2	25.7	8.6	2.2	0.4	0.0	0.0
SVE-4	08/15/96	> 2000	18,000	4,471	0.5	12.6	36.6	34.6	14.3	1.3	0.1	0.0	0.0	0.0
	02/06/97		4,400	1,093	0.0	15.9	21.0	55.3	7.5	0.3	0.0	0.0	0.0	0.0
	08/06/97	107.0	7,700	1,913	0.2	2.4	17.9	35.3	28.4	11.7	3.6	0.5	0.0	0.0
	12/30/97		10,000	2,484	0.0	1.4	9.9	32.0	31.4	20.8	3.7	0.8	0.0	0.0
	08/12/98		5,600	1,391	0.0	1.1	6.4	25.9	32.0	24.9	5.1	2.9	1.3	0.4
SVE-5	08/15/96	> 2000	16,000	3,974	0.4	16.7	36.1	30.6	13.8	2.3	0.1	0.0	0.0	0.0
	02/06/97		4,200	1,043	0.0	8.3	30.3	53.2	7.3	0.9	0.0	0.0	0.0	0.0
	08/06/97	126.0	10,000	2,484	0.3	3.7	21.9	37.8	24.5	9.0	2.4	0.4	0.0	0.0
(dup)	08/06/97		11,000	2,732	0.2	3.8	22.0	37.9	24.4	9.0	2.3	0.4	0.0	0.0
	12/30/97		14,000	3,478	0.0	2.4	13.1	35.9	35.7	9.7	2.6	0.5	0.1	0.0
	08/12/98		9,400	2,335	0.0	3.0	6.3	45.1	29.1	12.0	3.5	0.8	0.2	0.0
SVE-6	08/15/96	> 2000	4,100	1,018	0.0	13.2	25.5	23.2	29.4	8.5	0.2	0.0	0.0	0.0
	02/06/97		2,000	497	0.0	1.3	14.2	55.6	27.0	1.9	0.0	0.0	0.0	0.0
	08/06/97	15.2	120	30	0.0	0.2	2.1	18.2	28.7	26.1	15.5	7.4	1.8	0.0
	12/30/97		450	112	0.0	4.6	7.9	15.5	17.2	21.4	11.7	15.7	6.0	0.0
	08/12/98		110	27	0.0	5.4	5.9	20.8	24.1	17.9	16.3	6.9	2.7	0.0
SVE-7	08/15/96	> 2000	1,400	348	0.5	2.4	13.6	33.0	35.0	14.8	0.5	0.0	0.2	0.0
	02/06/97		560	139	0.0	0.9	10.6	49.8	34.5	4.2	0.0	0.0	0.0	0.0
	08/06/97	6.7	37	9	0.0	0.4	1.5	9.6	20.5	30.1	21.8	12.5	3.6	0.0
SVE-8	08/15/96	> 2000	12,000	2,981	0.3	23.9	39.1	25.7	8.9	1.9	0.2	0.0	0.0	0.0
	02/06/97		890	221	0.0	4.0	16.4	45.7	28.6	5.2	0.1	0.0	0.0	0.0
	08/06/97	48.0	700	174	0.9	5.5	19.0	29.0	26.8	12.7	5.0	1.0	0.0	0.0
	12/30/97		2,500	621	0.7	3.1	13.1	25.9	23.5	22.8	8.0	2.4	0.5	0.0
	08/12/98		70	17	0.0	2.4	11.2	29.2	24.1	19.1	8.6	3.7	1.7	0.0
SVE-9	08/15/96	> 2000	5,700	1,416	6.7	18.2	24.3	31.0	15.0	4.2	0.2	0.1	0.1	0.1
	02/06/97		2,400	596	0.0	7.8	31.3	50.5	9.3	1.1	0.1	0.0	0.0	0.0
	08/06/97	132.0	7,600	1,888	0.0	3.6	40.0	27.7	19.2	8.1	1.1	0.3	0.0	0.0
	12/30/97		7,000	1,739	0.0	3.7	23.1	39.3	23.9	6.6	2.5	0.7	0.2	0.0
	08/12/98		5,900	1,466	0.0	4.7	29.0	37.4	19.1	6.9	2.2	0.6	0.1	0.0
MW-10	12/30/97		17,000	4,223	0.1	2.3	13.3	32.9	30.5	18.3	2.1	0.5	0.0	0.0
	08/12/98		13,000	3,229	0.0	4.5	6.2	27.4	41.2	13.8	5.1	1.2	0.6	0.0
Total														
(Core Lab)	02/10/97			6,240										
	03/20/97		6,600	1,639	0.0	2.7	29.3	32.1	23.2	9.2	3.0	0.4	0.1	0.0
(Core Lab)	03/20/97			1,740										
	08/06/97		5,000	1,242	0.3	4.0	21.2	34.8	25.3	10.2	3.5	0.7	0.0	0.0
	12/30/97		7,300	1,813	0.0	2.4	13.6	35.0	29.0	16.9	2.6	0.4	0.1	0.0
	08/05/98		6,500	1,615	0.0	1.3	15.4	32.2	30.5	13.7	5.2	1.3	0.4	0.0
	08/12/98		5,300	1,317	0.0	1.5	8.9	30.9	30.5	22.5	4.7	0.9	0.1	0.0
(dup)	08/12/98		5,000	1,242	0.1	1.5	8.8	31.8	32.9	18.0	5.0	1.4	0.4	0.1
	04/13/99		6,800	1,689	0.0	1.2	8.0	28.5	32.7	23.6	3.9	1.8	0.3	0.0

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

Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

Attachment #1

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

OAL

L12637

August 23, 1999

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

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

Re: Laboratory Sample Analysis

Project: WT-1 Dehy

Project Manager: George Robinson

Dear George Robinson:

On Friday, August 13, 1999, OAL received five (5) water samples for analysis. The samples were analyzed utilizing EPA, ASTM, or equivalent methodology.

Should you have any questions concerning the results in this report, please contact us at (503) 590-5300. Refer to OAL login number L12637.

Sincerely,

Becky Sim

for Doug McKenzie
Project Manager

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OAL

L12637

Sample Summary

Sample ID	Lab #	Description	Sampled	Received
MW-11	L12637-1	water	08/11/99 14:40	08/13/99
MW-13	L12637-2	water	08/11/99 16:20	08/13/99
MW-12	L12637-3	water	08/11/99 16:00	08/13/99
MW-9	L12637-4	water	08/11/99 17:00	08/13/99
TRIP BLANK	L12637-5	water	08/11/99	08/13/99

Definition of Terms

ND Analytical result was below the reporting limit.

Laboratory Certifications*

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

* Current Scopes of Accreditation are available upon request.

Analysts

Initials	Analyst	Title
WB	Wayne Boyle	Chemist

Method Summary

Analysis	Method
BTEX	EPA 8021

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OAL

L12637

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

Project: ***WT-1 Dehy***

BTEX
by EPA 8021

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

MW-11	*Water*				Sampled: *08/11/99* Analyzed: *08/18/99 by WB*	*L12637-1*
71-43-2	Benzene	ND	2.	µg/L		
108-88-3	Toluene	ND	2.	µg/L		
100-41-4	Ethylbenzene	ND	2.	µg/L		
1330-20-7	Total Xylenes	ND	2.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	100.%	50 - 150
4-Bromofluorobenzene	111.%	50 - 150

MW-13	*Water*				Sampled: *08/11/99* Analyzed: *08/18/99 by WB*	*L12637-2*
71-43-2	Benzene	ND	2.	µg/L		
108-88-3	Toluene	ND	2.	µg/L		
100-41-4	Ethylbenzene	ND	2.	µg/L		
1330-20-7	Total Xylenes	ND	2.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	100.%	50 - 150
4-Bromofluorobenzene	113.%	50 - 150

MW-12	*Water*				Sampled: *08/11/99* Analyzed: *08/18/99 by WB*	*L12637-3*
71-43-2	Benzene	ND	2.	µg/L		
108-88-3	Toluene	ND	2.	µg/L		
100-41-4	Ethylbenzene	ND	2.	µg/L		
1330-20-7	Total Xylenes	ND	2.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	105.%	50 - 150
4-Bromofluorobenzene	116.%	50 - 150

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

Project: ***WT-1 Dehy***

BTEX
by EPA 8021

Sample ID	*Matrix*					*Lab Number*
CAS	**Analyte**	**Result**	**Reporting Limit**	**Units (ppb)**	**Comment**	
MW-9	*Water*			**Sampled:** *08/11/99* **Analyzed:** *08/18/99 by WB*		*L12637-4*
71-43-2	Benzene	ND	2.	µg/L		
108-88-3	Toluene	ND	2.	µg/L		
100-41-4	Ethylbenzene	ND	2.	µg/L		
1330-20-7	Total Xylenes	ND	2.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	105.%	50 - 150
4-Bromofluorobenzene	114.%	50 - 150

TRIP BLANK	*Water*			**Sampled:** *08/11/99* **Analyzed:** *08/18/99 by WB*		*L12637-5*
71-43-2	Benzene	ND	2.	µg/L		
108-88-3	Toluene	ND	2.	µg/L		
100-41-4	Ethylbenzene	ND	2.	µg/L		
1330-20-7	Total Xylenes	ND	2.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	102.%	50 - 150
4-Bromofluorobenzene	112.%	50 - 150

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OAL

L12637

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

Project: ***WT-1 Dehy***

Batch Q.C.

Method Blank

BTEX/Water (ug/L)

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

Surrogates	% Recovery
Trifluorotoluene	105
Bromofluorobenzene	117

Comments: L12620-1,2,3,8 & 9.

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OAL

L12637

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

Project: ***WT-1 Dehy***

Batch Q.C.

LCS

BTEX/Water (ug/L)

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

Surrogates	% Recovery
Trifluorotoluene	93
Bromofluorobenzene	97

Comments:

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OAL

L12637

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

Project: ***WT-1 Dehy***

Batch Q.C.

MS

BTEX/Water (ug/L)

Analyte	Sample Result	MS Result	True Value	% Recovery	Q	Date Analyzed
Benzene	11	498	500	97		08/12/99
Toluene	481	969	500	98		
Ethylbenzene	929	1400	500	94		
Xylenes	4950	5930	1500	65		

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

Comments:

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OAL

L12637

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

Project: ***WT-1 Dehy***

Batch Q.C.

Duplicate
BTEX/Water (ug/L)

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

Surrogates	% Recovery Sample	% Recovery Duplicate
Trifluorotoluene	97	101
Bromofluorobenzene	115	118

Comments: L12620-8 & 9.

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Oregon Analytical Laboratory

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Beaverton, Oregon 97007
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FAX (503) 590-1404

CHAIN OF CUSTODY RECORD
LABORATORY ANALYSIS REQUEST

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

Page 1 of 1
Site Visit ☐

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

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

Project Information
Project Name: TRANSWESTERN PIPELINE
Project #: WT-1 DEHY
P.O. #:
Comments:

Sampler's Name: SANDY SHARP / GEORGE FRIEND
Signature: Sandy Sharp / George Friend
Quote #:
NOTE: If quote number is not referenced, standard pricing will be applied.
Provide Fax Results ☒ Yes ☐ No

Remarks

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

	Sample Identification	Date	Time	FOR LAB USE ONLY OAL Login #	# of Containers	Matrix: Soil	Matrix: Water	Matrix: Other (Note in Remarks)	Analyses: BTEX 602 / 8020 ☐ MTBE ☐ Naphthalene	Turnaround	Remarks
1	MW-11	8/11/99	1440	L12637-1	3		X		3/6	N	L12637-1
2	MW-13	8/11/99	1620	-2	3		X		3/6	N	-2
3	MW-12	8/11/99	1600	-3	3		X		3/6	N	-3
4	MW-9	8/11/99	1700	-4	3		X		3/6	N	-4
5	TRIP BLANK			-5	3		X		3/6	N	-5
6											
7											
8											
9											

Analyses: Volatiles 624 / 8260 / 8240 / 8010 / 8020; Semivolatiles 625 / 8270; PAH(SIM) PAH 8310; Organochlorine 608 / 8080 / 8081 PCB Pesticide; NW TPH-HCID Quantity? ☐ Yes ☐ No; NW TPH Quantification 418.1M G D; TPH 418.1 Oil & Grease 413.1 / 1664 ☐ Total ☐ NP; Metals ☐ Total ☐ TCLP ☐ Dissolved As Ba Cd Cr Pb Hg Se Ag; Other _____

Relinquished
Signature: George Friend
Print Name: GEORGE FRIEND
Company: CES
Date: 8-12-99
Time: 0730

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

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

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

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

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

☐ Courier ☐ UPS ☐ FedEx ☐ Other
Received @ -5 °C
Appropriate Containers ☐ Yes ☐ No
_____ 4oz./8oz. Jars
15 VOA Vials
_____ Plastic Bottles
_____ Glass Bottles
_____ Other _____

OAL

L10063

February 24, 1999

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

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

Re: Laboratory Sample Analysis

Project: WT-1 Dehy Area
Transwestern Pipeline

Project Manager: George Robinson

Dear George Robinson:

On Tuesday, February 16, 1999, OAL received six (6) water samples for analysis. The samples were analyzed utilizing EPA, ASTM, or equivalent methodology.

Should you have any questions concerning the results in this report, please contact us at (503) 590-5300. Refer to OAL login number L10063.

Sincerely,

for
Kami Morrow
Project Manager

Suzanne LeMay
QA/QC Officer

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OAL

L10063

Sample Summary

Sample ID	Lab #	Description	Sampled	Received
MW-10	L10063-1	water	02/12/99 17:50	02/16/99
MW-11	L10063-2	water	02/12/99 18:10	02/16/99
MW-13	L10063-3	water	02/12/99 19:05	02/16/99
MW-9	L10063-4	water	02/12/99 19:30	02/16/99
MW-12	L10063-5	water	02/12/99 19:45	02/16/99
TRIP BLANK	L10063-6	water	02/12/99	02/16/99

Definition of Terms

ND Analytical result was below the reporting limit.

P Sample was unpreserved.

Analysts

Initials	Analyst	Title
WB	Wayne Boyle	Analyst

Method Summary

Analysis	Method
BTEX	EPA 8021

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OAL

L10063

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

Project: ***WT-1 Dehy Area***
Transwestern Pipeline

BTEX
by EPA 8021

Sample ID	*Matrix*	Result	Reporting Limit	Units (ppb)	Comment	*Lab Number*
MW-10	***Water***				Sampled: *02/12/99* Analyzed: *02/23/99 by WB*	***L10063-1***
Benzene		**4,300**	**1.**	**µg/L**	**P**	
Toluene		**7,700**	**1.**	**µg/L**		
Ethylbenzene		**340**	**1.**	**µg/L**		
Total Xylenes		**3,300**	**1.**	**µg/L**		

Surrogate	Recovery	Limit
Trifluorotoluene	87.%	50 - 150
Bromofluorobenzene	102.%	50 - 150

Sample ID	*Matrix*	Result	Reporting Limit	Units (ppb)	Comment	*Lab Number*
MW-11	***Water***				Sampled: *02/12/99* Analyzed: *02/23/99 by WB*	***L10063-2***
Benzene		ND	1.	µg/L		
Toluene		ND	1.	µg/L		
Ethylbenzene		ND	1.	µg/L		
Total Xylenes		ND	1.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	93.%	50 - 150
Bromofluorobenzene	119.%	50 - 150

Sample ID	*Matrix*	Result	Reporting Limit	Units (ppb)	Comment	*Lab Number*
MW-13	***Water***				Sampled: *02/12/99* Analyzed: *02/23/99 by WB*	***L10063-3***
Benzene		ND	1.	µg/L		
Toluene		ND	1.	µg/L		
Ethylbenzene		ND	1.	µg/L		
Total Xylenes		ND	1.	µg/L		

Surrogate	Recovery	Limit
Trifluorotoluene	96.%	50 - 150
Bromofluorobenzene	113.%	50 - 150

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

Project: ***WT-1 Dehy Area***
Transwestern Pipeline

BTEX
by EPA 8021

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

MW-9 — ***Water*** — **Sampled:** *02/12/99* — **Analyzed:** *02/23/99 by WB* — *L10063-4*

Benzene	**6.**	**1.**	**µg/L**
Toluene	ND	1.	µg/L
Ethylbenzene	ND	1.	µg/L
Total Xylenes	ND	1.	µg/L

Surrogate	Recovery	Limit
Trifluorotoluene	110.%	50 - 150
Bromofluorobenzene	115.%	50 - 150

MW-12 — ***Water*** — **Sampled:** *02/12/99* — **Analyzed:** *02/23/99 by WB* — *L10063-5*

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

Surrogate	Recovery	Limit
Trifluorotoluene	98.%	50 - 150
Bromofluorobenzene	112.%	50 - 150

TRIP BLANK — ***Water*** — **Sampled:** *02/12/99* — **Analyzed:** *02/23/99 by WB* — *L10063-6*

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

Surrogate	Recovery	Limit
Trifluorotoluene	96.%	50 - 150
Bromofluorobenzene	111.%	50 - 150

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OAL

L10063

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

Project: *WT-1 Dehy Area*
Transwestern Pipeline

Batch Q.C.

Method Blank

BTEX/Water (ug/L)

Analyte	Result	Reporting Limit	Q	Date Analyzed
Benzene	ND	1		02/23/99
Toluene	ND	1		
Ethylbenzene	ND	1		
Xylenes	ND	1		

Surrogates	% Recovery
Trifluorotoluene	95
Bromofluorobenzene	113

Comments:

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OAL

L10063

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

Project: *WT-1 Dehy Area*
Transwestern Pipeline

Batch Q.C.

LCS

BTEX/Water (ug/L)

Analyte	Result	True Value	% Recovery	Q	Date Analyzed
Benzene	11.4	10.0	114		02/23/99
Toluene	11.2	10.0	112		
Ethylbenzene	11.2	10.0	112		
Xylenes	21.3	20.0	107		

Surrogates	% Recovery
Trifluorotoluene	101
Bromofluorobenzene	111

Comments:

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OAL

L10063

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

Project: *WT-1 Dehy Area*
Transwestern Pipeline

Batch Q.C.

MS

BTEX/Water (ug/L)

Analyte	Sample Result	MS Result	True Value	% Recovery	Q	Date Analyzed
Benzene	ND	10.3	10.0	103		02/23/99
Toluene	ND	11.0	10.0	110		
Ethylbenzene	ND	10.9	10.0	109		
Xylenes	ND	20.7	20.0	104		

Surrogates	% Recovery Sample	% Recovery MS
Trifluorotoluene	98	101
Bromofluorobenzene	112	110

Comments:

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OAL

L10063

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

Project: ***WT-1 Dehy Area***
Transwestern Pipeline

Batch Q.C.

Duplicate

BTEX/Water (ug/L)

Analyte	Result	Duplicate Result	RPD	Reporting Limit	Q	Date Analyzed
Benzene	968	927	4	1		02/23/99
Toluene	820	788	4	1		
Ethylbenzene	379	363	4	1		
Xylenes	727	702	3	1		

Surrogates	% Recovery Sample	% Recovery Duplicate
Trifluorotoluene	97	93
Bromofluorobenzene	106	104

Comments: L10063-1 through 5.

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OAL

L10063

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

Project: *WT-1 Dehy Area*
Transwestern Pipeline

Batch Q.C.

Duplicate

BTEX/Water (ug/L)

Analyte	Result	Duplicate Result	RPD	Reporting Limit	Q	Date Analyzed
Benzene	ND	ND	NA	1		02/23/99
Toluene	ND	ND	NA	1		
Ethylbenzene	ND	ND	NA	1		
Xylenes	ND	ND	NA	1		

Surrogates	% Recovery Sample	% Recovery Duplicate
Trifluorotoluene	98	93
Bromofluorobenzene	112	114

Comments: L10063-6.

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

Oregon Analytical Laboratory

14855 S.W. Scholls Ferry Rd.
Beaverton, Oregon 97007
(503) 590-5300
FAX (503) 590-1404

CHAIN OF CUSTODY RECORD
LABORATORY ANALYSIS REQUEST

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

Client Information
Company: CYPRESS ENGINEERING SERVICES
Contact: SANDY SHARP
Address: 10235 WEST LITTLE YORK, STE 250
HOUSTON, TX 77040
Phone# (713) 466-7252 Fax# (713) 466-7867

Billing Information
Company: ENRON
Contact: GEORGE ROBINSON
Address: SAME
Phone# (713) 646-7327 Fax# SAME

Project Information
Project Name: TRANSWESTERN PIPELINE
Project #: WT-1 DEHY AREA
P.O. #: _____
Comments: _____
Sampler's Name: SANDY SHARP
Signature: Sandy Sharp
Quote #: _____
NOTE: If quote number is not referenced, standard pricing will be applied.
Provide Fax Results [X] Yes [ ] No

	Sample Identification	Date	Time	FOR LAB USE ONLY OAL Login #	# of Containers	Matrix: Soil	Matrix: Water	Matrix: Other (Note in Remarks)	Analyses: 8021 BTEX	Turnaround	Remarks
1	MW-10	2/12/99	1750	L10063-1	3		X		X	N	
2	MW-11	2/12/99	1810	-2	3		X		X	N	
3	MW-13	2/12/99	1905	-3	3		X		X	N	
4	MW-9	2/12/99	1930	-4	3		X		X	N	
5	MW-12	2/12/99	1945	-5	3		X		X	N	
6	TRIP BLANK			-6	3		X		X	N	
7											
8											
9											

Remarks

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

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

Relinquished
Signature: Sandy Sharp
Print Name: SANDY SHARP
Company: CES
Date: 2/13/99
Time: 1300 HRS

Received
Signature: Alica Walker-Hodges
Print Name: ALICA WALKER-HODGES
Company: OAL
Date: 2/16/99
Time: 1215

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

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

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

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

[ ] Courier [ ] UPS [X] FedEx [ ] Other
Received @ 0 °C
Appropriate Containers [X] Yes [ ] No
_____ 4oz./8oz. Jars
18 VOA Vials
_____ Plastic Bottles
_____ Glass Bottles
_____ Other _____

SPL LABORATORIES

August 12, 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 August 7, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9808243 and analyzed for all parameters as listed on the chain of custody.

Sample"MW-11" (SPL#9808243-01A) was randomly selected as a Quality Control sample for the Volatile Aromatics analysis by SW-846 method 8021B. The Relative Percent Difference (RPD) between the recoveries of the Matrix Spike(MS) and Matrix Spike Duplicate(MSD) were outside of advisable quality control limits for the compounds Toluene, M & P Xylene and O-Xylene. A Laboratory control Sample (LCS) was analyzed as a Quality Control check for the analytical batch and all recoveries were within acceptable limits.

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

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

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

Southern Petroleum Laboratories

Electa Brown
Project Manager

8880 INTERCHANGE DR.
HOUSTON, TX 77054
(713) 660-0901

500 AMBASSADOR CAFFERY PKWY.
SCOTT, LA 70583-8544
(318) 237-4SPL

459 HUGHES DRIVE
TRAVERSE CITY, MI 49684
(616) 947-5777

1511 E. ORANGETHORPE AVE.
FULLERTON, CA 92631
(714) 447-6868

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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-08-243

Approved for Release by:

Electa Brown, Project Manager — 8-13-98 Date

Greg Grandits
Laboratory Director

Cynthia Schreiner
Quality Assurance Officer

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

Certificate of Analysis No. H9-9808243-01

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

08/12/98

PROJECT: TWP WT-1 DEHY
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-11

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/05/98
DATE RECEIVED: 08/07/98

ANALYTICAL DATA

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

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

ANALYZED BY: DN DATE/TIME: 08/09/98 02:50:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

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

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

Certificate of Analysis No. H9-9808243-02

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

08/12/98

PROJECT: TWP WT-1 DEHY
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-13

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/05/98
DATE RECEIVED: 08/07/98

ANALYTICAL DATA

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

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

ANALYZED BY: DN DATE/TIME: 08/09/98 03:16:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

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

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

Certificate of Analysis No. H9-9808243-03

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

08/12/98

PROJECT: TWP WT-1 DEHY
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-12

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/05/98
DATE RECEIVED: 08/07/98

ANALYTICAL DATA

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

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

ANALYZED BY: DN DATE/TIME: 08/09/98 03:42:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

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

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

Certificate of Analysis No. H9-9808243-04

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

08/12/98

PROJECT: TWP WT-1 DEHY
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-9

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/05/98
DATE RECEIVED: 08/07/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	1.9	1.0	ug/L
Toluene	ND	1.0	ug/L
Ethyl benzene	ND	1.0	ug/L
Total Xylene	ND	1.0	ug/L

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

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

COMMENTS:

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

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

Certificate of Analysis No. H9-9808243-05

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

08/12/98

PROJECT: TWP WT-1 DEHY
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: MW-10

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/05/98
DATE RECEIVED: 08/07/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	4000	50	ug/L
Toluene	7500	50	ug/L
Ethyl benzene	190	5.0	ug/L
Total Xylene	3100	5.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	1500 ug/L	93	50	150
4-Bromofluorobenzene	1500 ug/L	107	50	150

ANALYZED BY: TB DATE/TIME: 08/10/98 02:43:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

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

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

Certificate of Analysis No. H9-9808243-06

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

08/12/98

PROJECT: TWP WT-1 DEHY
SITE:
SAMPLED BY: Cypress Engineering
SAMPLE ID: Big Water Tank

PROJECT NO:
MATRIX: WATER
DATE SAMPLED: 08/05/98
DATE RECEIVED: 08/07/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	29	1.0	ug/L
Toluene	81	1.0	ug/L
Ethyl benzene	8.2	1.0	ug/L
Total Xylene	130	1.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,4-Difluorobenzene	30 ug/L	90	50	150
4-Bromofluorobenzene	30 ug/L	130	50	150

ANALYZED BY: TB DATE/TIME: 08/10/98 04:02:00
METHOD: 8021B, Volatile Organic [SW-846]
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

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

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

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

Batch Id: HP_U980809101300

Units: ug/L

LABORATORY CONTROL SAMPLE

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

MATRIX SPIKES

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

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

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

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

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

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

Matrix: Aqueous
Units: ug/L

Batch Id: HP_U980810075410

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	48	96.0	50 - 150
Toluene	ND	50	48	96.0	50 - 150
Ethyl Benzene	ND	50	48	96.0	50 - 150
M and P Xylene	ND	100	95	95.0	50 - 150
O-Xylene	ND	50	49	98.0	50 - 150

MATRIX SPIKES

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

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

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

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

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No: 9808243

47524 page 1 of 1

Client Name: CYPRESS ENGINEERING
Address/Phone: 10235 WEST LITTLE YORK, SUITE 256 HOUSTON, TX 77040 (713) 856-7980
Client Contact: SANDY SHARP (713) 466-7252
Project Name: TWP WT-1 DEMO
Project Number:
Project Location:
Invoice To: GEORGE ROBINSON

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil SL=sludge O=other:)	bottle (P=plastic A=amber glass G=glass V=vial)	size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz)	pres. (1=HCl 2=HNO3 3=H2SO4 O=other:)	Number of Containers	Requested Analysis: 8021 BTEX only
MW-11				X	W	G	40	1	3	X
~~MW-11S~~										
MW-13				X	W	G	40	1	3	X
~~MW-13S~~										
MW-12				X	W	G	40	1	3	X
~~MW-12S~~										
MW-9				X	W	G	40	1	3	X
~~MW-9S~~										
MW-10				X	W	G	40	1	3	X
BIG WATER TANK				X	W	G	40	1	3	X

Client/Consultant Remarks: SEE ERRATA W/ QUESTIONS

Laboratory remarks:

Intact? ☐ Y ☐ N
Temp: 4°C

Requested TAT
24hr ☐ 72hr ☐
48hr ☐ Standard ☒
Other ☐ _____

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

Special Detection Limits (specify):

PM review (initial): EB 8/11

	date	time	
1. Relinquished by Sampler: Sandy Sharp	8/5/98	1545	2. Received by:
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	date 8-7-98	time 1000	6. Received by Laboratory:

☐ 8880 Interchange Drive, Houston, TX 77054 (713) 660-0901
☐ 459-Hughes Drive, Traverse City, MI 49684 (616) 947-5777
☐ 500 Ambassador Caffery Parkway, Scott, LA 70583 (318) 237-4775
☐ 1501 E. Orangethorpe Avenue, Fullerton, CA 92631 (714) 447-6868

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
8-7-98	1000

SPL Sample ID:
9808243

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		4 C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	806949036176	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
[signature]	8-7-98

Hall Environmental Analysis Laboratory, Inc.

April 23,1999

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

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

Dear Mr. Robinson:

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

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

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

Sincerely,

Nancy McDuffie
Assistant Laboratory Manager

Project: 9904092/Transwestern

Hall Environmental Analysis Laboratory, Inc.

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

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

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

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

Hydrocarbon Ranges

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

** Surrogate not recoverable due to matrix interference.

Hall Environmental Analysis Laboratory, Inc.

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

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

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

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

Hydrocarbon Ranges

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

** Surrogate not recoverable due to matrix interference.

Hall Environmental Analysis Laboratory, Inc.

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

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

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

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

Hall Environmental Analysis Laboratory, Inc.

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

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

EPA Method 8015 Modified

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

CHAIN-OF-CUSTODY RECORD

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

Client: Cypress Engineering

Project Name: Transwestern

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

Project #:

Project Manager: George Robinson

Phone #: 713-646-7327

Sampler: George Robinson

Fax #: 713-646 7867

Samples Cold?: ☐ Yes ☒ No

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HCl	Preservative	HEAL No.
4-13-99	0830	Air	LOCKRIDGE NE	1-1L Manifold				9904092-1
"	0840	"	LOCKRIDGE TOTAL	1-1L				-2
"	0850	"	LOCKRIDGE DUP	1-1L				-3
"	0910	"	LOCKRIDGE NW	1-1L Manifold				-4
"	1230	"	WT-1 DEHY TOTAL	1-1L				-5
4-14-99	0810	"	BELL LAKE TOTAL	1-1L				-6

ANALYSIS REQUEST

BTEX + MTBE (602/8020)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015 MOD (Gas/Diesel)	TPH (Method 418.1)	8010/8020 Volatiles	EDB (Method 504)	EDC (Method 8010)	8310 (PNA or PAH)	RCRA 8 Metals	Cations (Na, K, Ca, Mg)	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8080 Pesticides / PCB's	8260 (VOA)	8270 (Semi-VOA)			Air Bubbles on Headspace (Y or N)
		X														
		X														
		X														
		X														
		X														
		X														

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

Remarks:

Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

Attachment #2

Well Construction Details

Cypress Engineering Services

Boring ID: SVE-10

Project: WT-1
Location:
Client: TRANSWESTERN
Driller: GEO PROJECTS (COOSE)
Drilling method: HOLLOW STEM AUGER / AIR ROTARY
Boring date: 5/26/99
Water level:

Sheet: 1 OF 1
Job number:
Total depth: 66'
Boring diameter: 6 1/4"
Logged by:
Date measured:

depth (ft)	SAMPLE interval	SAMPLE number	SAMPLE recovery (inches)	standard penetration test results	SOIL DESCRIPTION: Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS: Monitoring well installation, geotechnical properties, analytical tests, instrumentation
					OVER DRILLED SVE-4		
15					DRILLED TO TOP OF SANDSTONE ROCK @ 20' WITH 6 5/8 ID AUGER. DRILLED OUT WITH AIR ROTARY AND 6 1/4 BIT -		GROUT TO SURFACE
30							
					@ 43'-46' RED SANDSTONE CUTTINGS ARE DAMP WITH HC ODOR.		TOPLOG @ 39.0'
45							
							TO SAND @ 42.7'
60					@ 60' CUTTING ARE RED.		BO SAND @ 66.6'
					AND WHITE LAYERED SANDSTONE WITH HC ODOR.		
					TD @ 66.6'		TOS @ 47.5'
							BOS @ 62.5'

Cypress Engineering Services

Boring ID: SVE-11

Project: WT-1 | Sheet: 1 of 1
Location:
Client: TRANSWESTERN | Job number:
Driller: GEO PROBE (JOSE) | Total depth: 63.4'
Drilling method: HOLLOW STEM/ AIR ROTARY | Boring diameter: 6 1/4"
Boring date: 5/14/99 | Logged by: J. Sinclair
Water level: | Date measured:

depth (ft)	SAMPLE interval	SAMPLE number	SAMPLE recovery (inches)	standard penetration test results	SOIL DESCRIPTION: Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS: Monitoring well installation, geotechnical properties, analytical tests, instrumentation
15					DRILLED TO 14' WITH 6 5/8 ID AUGER. DRILLED OUT WITH AIR ROTARY AND 6 1/4" BIT		
30					TOP OF RED SANDSTONE ROCK @ 20'		GROUT 41.0 TO SURFACE
45					@ 40' CUTTING WITH STRONG HC ODOR, SOFT RED SAND.		TD PVC @ 41.0' BO PVC @ 44.9'
60					WATER @ 56.9' BLACK WITH STRONG H.C. ODOR		TOS AND @ 44.5' BO SAND @ 63.4'
75					TD @ 63.4'		TOS @ 47.5' BOS @ 62.5'
							4" PVC 0.020 SCREEN 8/16 SAND PACK. 3/8 BENTONITE SEAL

Cypress Engineering Services

Boring ID: SVE-12

Project: WT-1
Location:
Client: TRANSWESTERN
Driller: GEO PROJECTS (COSE)
Drilling method: HOLLOW STEM AUGER / AIR ROTARY
Boring date: 5/11/99 - 6/14/99.
Water level:

Sheet: 1 OF 1
Job number:
Total depth: 63.5'
Boring diameter: 6 1/4"
Logged by:
Date measured:

depth (ft)	SAMPLE interval	SAMPLE number	SAMPLE recovery (inches)	standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
					LOST AIR RETURN @ 5' AND STOPED DRILLING 5/11/99. 5/13/99. BACK TO 19.4' WITH 6 5/8 ID AUGER.		
15					DRILL THROUGH AUGER WITH AIR ROTARY + 6 1/4" BIT. TOP OF RED SANDSTONE ROCK @ 20'		GROUT. 30.6' TO SURFACE
30					@ 41' CUTTINGS HAVE STRONG HC ODOR. SOFT RED SAND		TOP PVC @ 30.6'. BOTTOM PVC @ 42.7'
45					WATER @ 59' STRONG HC ODOR.		TOP SAND @ 42.7' BOTTOM SAND @ 63.5'
60					TD @ 63.5'		TOS @ 47.5' BOS @ 62.5'
						4"	PVC 0.020 SCREEN. 8/16 SAND PACK. 3/8 BENTONITE SEAL

Cypress Engineering Services

Boring ID: SVE-13

Project: WT-1
Location:
Client: TRANSWESTERN PIPELINE
Driller: GEO PROBE (CLOSE)
Drilling method: HOLLOW STEM AUGER / AIR ROTARY
Boring date: 5/10/99
Water level:

Sheet: 1 OF 1
Job number:
Total depth: 64.8'
Boring diameter: 6 1/4"
Logged by:
Date measured:

depth (ft)	SAMPLE interval	SAMPLE number	SAMPLE recovery (inches)	standard penetration test results	SOIL DESCRIPTION: Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS: Monitoring well installation, geotechnical properties, analytical tests, instrumentation
					ROCK BACK FILL TO 12' BGS		
15					TOP OF RED SANDSTONE @ 20'		
30							GROUT TO SURFACE
							TO PLUG @ 37.3'
45							BO PLUG @ 42.3'
					VOID 51' TO 53'		
					VOID 56' STUCK PIPE		
					5/13/99. RUN 6 5/8" AUGER TO 20' DRILL OUT WITH 6 1/4" BIT		TO SAND @ 42.3'
60							BO SAND @ 64.8'
					WATER @ 52.8' STRONG HC ODOR AND SHEEN		
					TD @ 64.8'		TOS @ 47.3'
							BOS @ 62.6'
							PVC 4" 0.020 SCREEN
							8/16 SAND PACK
							3/8 BENTONITE SEAL

Cypress Engineering Services

Boring ID: SVE-14

Project: WT-1
Location:
Client: TARGET TEAM
Driller: GEO PROJECTS (JOSE)
Drilling method: HOLLOW STEM AUGER / AIR ROTARY
Boring date: 5/14/99.
Water level:

Sheet: 1 OF 1
Job number:
Total depth: 63.4'
Boring diameter: 6¼"
Logged by: B. Jones
Date measured:

depth (ft)	SAMPLE interval	SAMPLE number	SAMPLE recovery (inches)	standard penetration test results	SOIL DESCRIPTION: Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS: Monitoring well installation, geotechnical properties, analytical tests, instrumentation
					DRILLED TO 14' WITH 6 5/8" ID AUGER - DRILLED OUT WITH 6¼" DIT & AIR ROTARY		5/15/99. WATER @ 52.7 TD @ 63.4' WATER. HAS HC ODOR AND GREEN
15					TOP OF RED SANDSTONE @ 22'		GROUT TO SURFACE
30					@ 39' CUTTING WITH STRONG HC ODOR SOFT RED SAND		TO PLUG @ 40.5' BO PLUG @ 43.5'
45					GRAY SAND @ 59', RED SAND @ 61', WATER @ ~~45~~ 61'		TO SAND @ 43.5' BO SAND @ 63.4'
60					TD @ 63.4'		TOS @ 47.5' BOS. @ 62.5'
							4" PVC 0.020 SCREEN #6 SAND PACK 3/8 BENTONITE SEAL

Cypress Engineering Services

Boring ID: SVE-10

Project:	WT-1	Sheet:	1 OF 1
Location:			
Client:	TRANSWESTERN	Job number:	
Driller:	GEO PROJECTS (JOSE)	Total depth:	65'
Drilling method:	AIR ROTARY	Boring diameter:	7 7/8
Boring date:	5/15/99.	Logged by:	
Water level:		Date measured:	

depth (ft)	SAMPLE interval	SAMPLE number	SAMPLE recovery (inches)	standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
15					TOP OF RED SANDSTONE @ 20'		
30							GROUT 41' TO SURFACE
45					ABANDONED		TD PLUG @ 41' BO PLUG @ 44'
60							TO SAND @ 44 BO SAND @ 62'
75					TD @ 65' - 62.0 OPEN HOLE		TOS @ 46.8' BOS @ 61.8'
							4" PVC 0.020 SCREEN 8/16 SAND PACK. 3/8 BENTONITE SEAL

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

August 18, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z-274-520-700

Mr. Larry Campbell
Transwestern Pipeline Company
6381 North Main
Roswell, New Mexico 88201

RE: WT-1 COMPRESSOR STATION ENGINE ROOM DRAIN PIT AREA

Dear Mr. Campbell:

The New Mexico Oil Conservation Division has reviewed Transwestern Pipeline Company's (TPC) June 28, 1999 "REPORT OF GROUND WATER MONITORING ACTIVITIES, WT-1 STATION ENGINE ROOM DRAIN PIT AREA, TRANSWESTERN PIPELINE COMPANY LEA COUNTY, NEW MEXICO". This document contains TPC's request that the OCD reconsider the need for additional downgradient ground water monitoring wellS based upon an analysis of ground water conditions in the vicinity of the WT-1 Compressor Station engine room drain pit.

The above referenced request is approved. At this time, the OCD requires that TPC submit a remediation plan for contamination resulting related to TPC's WT-1 Compressor Station engine room drain pit. The work plan will be submitted to the OCD Santa Fe Office by October 18, 1999 with a copy provided to the OCD Hobbs District Office.

Please be advised that OCD approval does not relieve TPC of liability if the ground water monitoring fails to adequately monitor contamination related to TPC's activities. In addition, OCD approval does not relieve TPC of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Supervisor
George Robinson, Cypress Engineering Services, Inc.

Transwestern Pipeline Company
P. O. Box 1188
Houston, TX 77251-1188

June 28, 1999

Mr. William C. Olson
Environmental Bureau
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, New Mexico 87505

RE: Report of Ground Water Monitoring Activities
WT-1 Station Engine Room Drain Pit Area
Transwestern Pipeline Company
Lea County, New Mexico

Dear Bill,

In a correspondence from the NMOCD dated January 7, 1999, the OCD requested a work plan to complete the definition of the downgradient extent of halogenated organics, total dissolved solids (TDS) and chloride contamination of ground water at the subject site. Transwestern does not believe that an additional downgradient well will provide any value for the continued monitoring of ground water quality at this site and therefore requests that the OCD reconsider their request for an additional downgradient monitor well. Transwestern's consultant, Cypress Engineering, has prepared a brief discussion in support of this request. A copy of Cypress Engineering's letter and supporting information is attached.

Transwestern will continue to monitor ground water at this site on a semiannual basis in accordance with the ground water monitoring plan approved by the OCD. In the event conditions at the site change to the extent that a downgradient monitor well is warranted, then Transwestern will prepare a work plan to complete additional delineation.

If you have any questions or comments regarding this report, please contact me at (505) 625-8022 or George Robinson at (713) 646-7327.

Sincerely,

Larry Campbell

Larry Campbell
Division Environmental Specialist

LC/gcr
xc w/attachment: Chris Williams NMOCD Hobbs District Office
George Robinson Cypress Engineering Services

Cypress Engineering

10[illegible] West Little York Road, Suite 256
Houston, Texas 77040
(713) 856-7980 office
(713) 856-7981 fax

June 28, 1999

Mr. Larry Campbell
Division Environmental Specialist
Transwestern Pipeline Company
6381 North Main Street
Roswell, NM 88201

RE: Ground Water Monitoring Activities
WT-1 Station Engine Room Drain Pit Area
Transwestern Pipeline Company
Lea County, New Mexico

Dear Larry,

In a correspondence from the NMOCD dated January 7, 1999, the OCD requested a work plan to complete the definition of the downgradient extent of halogenated organics, total dissolved solids (TDS) and chloride contamination of ground water at the subject site. This letter has been prepared in response to the OCD's request.

The downgradient extent of halogenated organics is currently defined by monitor well MW-14. The location of this monitor well relative to other monitor wells and the facility is shown in an attached figure, Figure 1. Ground water quality has been monitored at well MW-14 since September, 1995. Since then, ten sample events have been completed with the last sample event completed January 27, 1999. An updated summary of ground water analytical results for organic contaminants is attached, Table 3. The lateral distribution of organic contaminants is shown in Figure 4.

Only two organic compounds have consistently been detected in ground water samples collected from well MW-14; 1,1 dichloroethane (DCA) detected in the range of 21 to 31 ppb, and trichloroethene (TCE) detected in the range of 11 to 15 ppb. The NMWQCC standards for DCA and TCE are 25 and 100 ppb, respectively. As a result, only DCA has been detected above a NMWQCC standard and at most by just 6 ppb. Furthermore, the measured concentrations of both compounds have been stable over the course of the monitored period.

In regard to total dissolved solids and chloride contamination of ground water, available information indicates that these contaminants are naturally occurring and have not been contributed to by facility operations. Available information consists of information about the management of liquids from the inlet gas scrubber, the relative distribution of TDS and chloride measured in ground water samples, and the concentration of TDS and chloride measured in ground water samples collected from monitor wells located upgradient from facility operations.

Historically, the discharge of liquids from inlet gas scrubbers at gas plants and compressor stations has been a potential source of TDS and chloride contamination of shallow ground water.

However, the inlet scrubbers at the WT-1 Station are far removed from the engine room drain pit area, see Figure 1. Liquids from the inlet scrubbers at the WT-1 Station are discharged to ASTs located in the same general vicinity of the scrubbers. The engine room drain pit would have received only "fresh" washdown water from the engine room. In support of this we find that TDS and chloride concentrations are actually lower immediately downgradient of the engine room drain pit, Figure 5 and Table 5.

The relative distribution of TDS and chloride measured in ground water samples does not indicate a specific source of these contaminants consistent with the plume of organic contaminants. Furthermore, the concentration of TDS and chloride measured in ground water samples collected from monitor wells upgradient of facility operations indicate that the concentrations of these contaminants are consistent with background concentrations, Table 5 (copied from an earlier report).

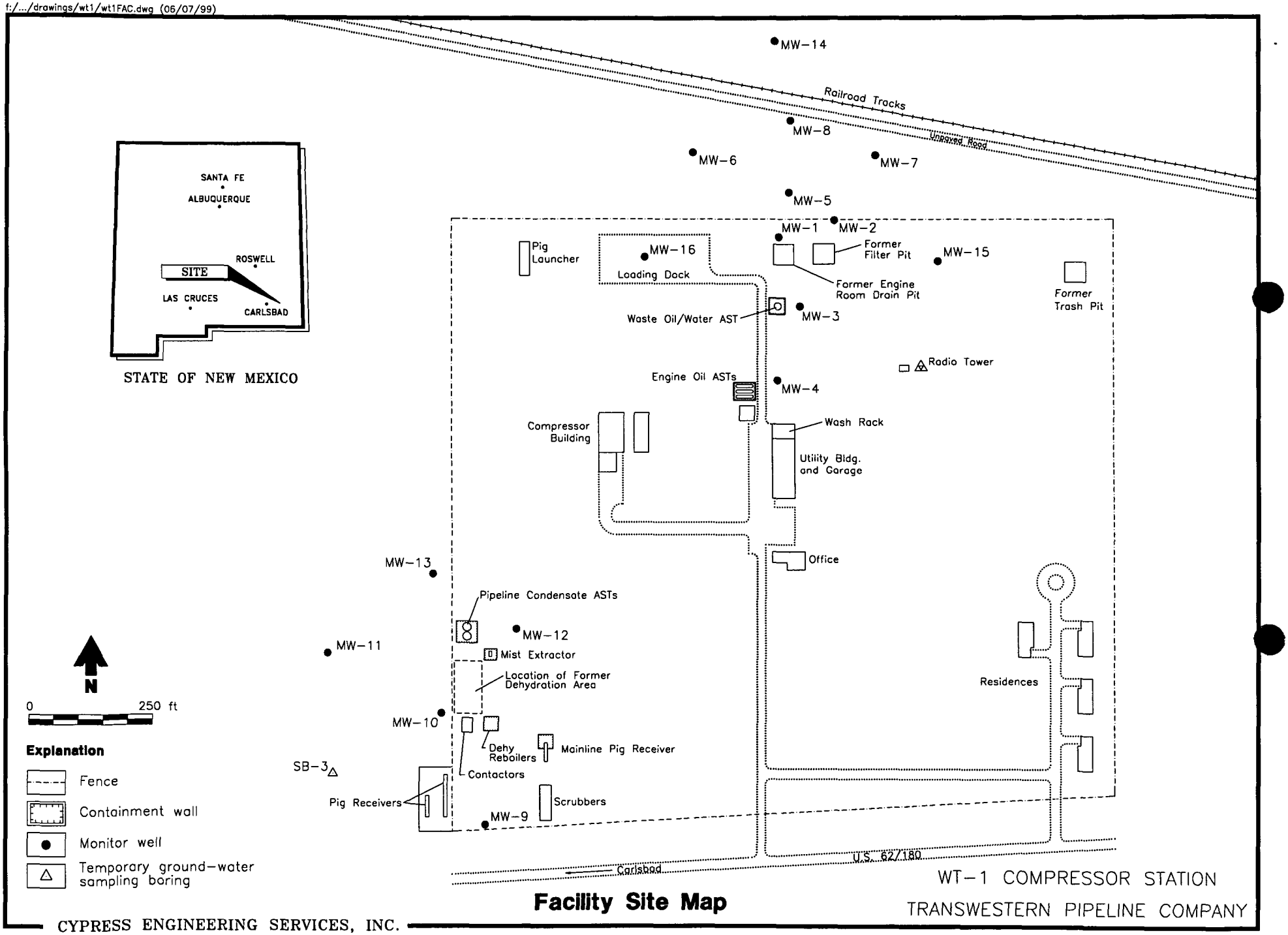
In light of the preceding discussion, I do not believe that a downgradient monitor well will provide any value for the continued monitoring of ground water quality at this site and therefore I recommend that Transwestern request that the OCD reconsider their request for an additional downgradient monitor well.

If you have any questions or comments regarding this issue, please contact me at (713) 646-7327.

Sincerely,

George C. Robinson, P.E.
President/Principal Engineer

f:/.../drawings/wt1/wt1FAC.dwg (06/07/99)



Facility Site Map

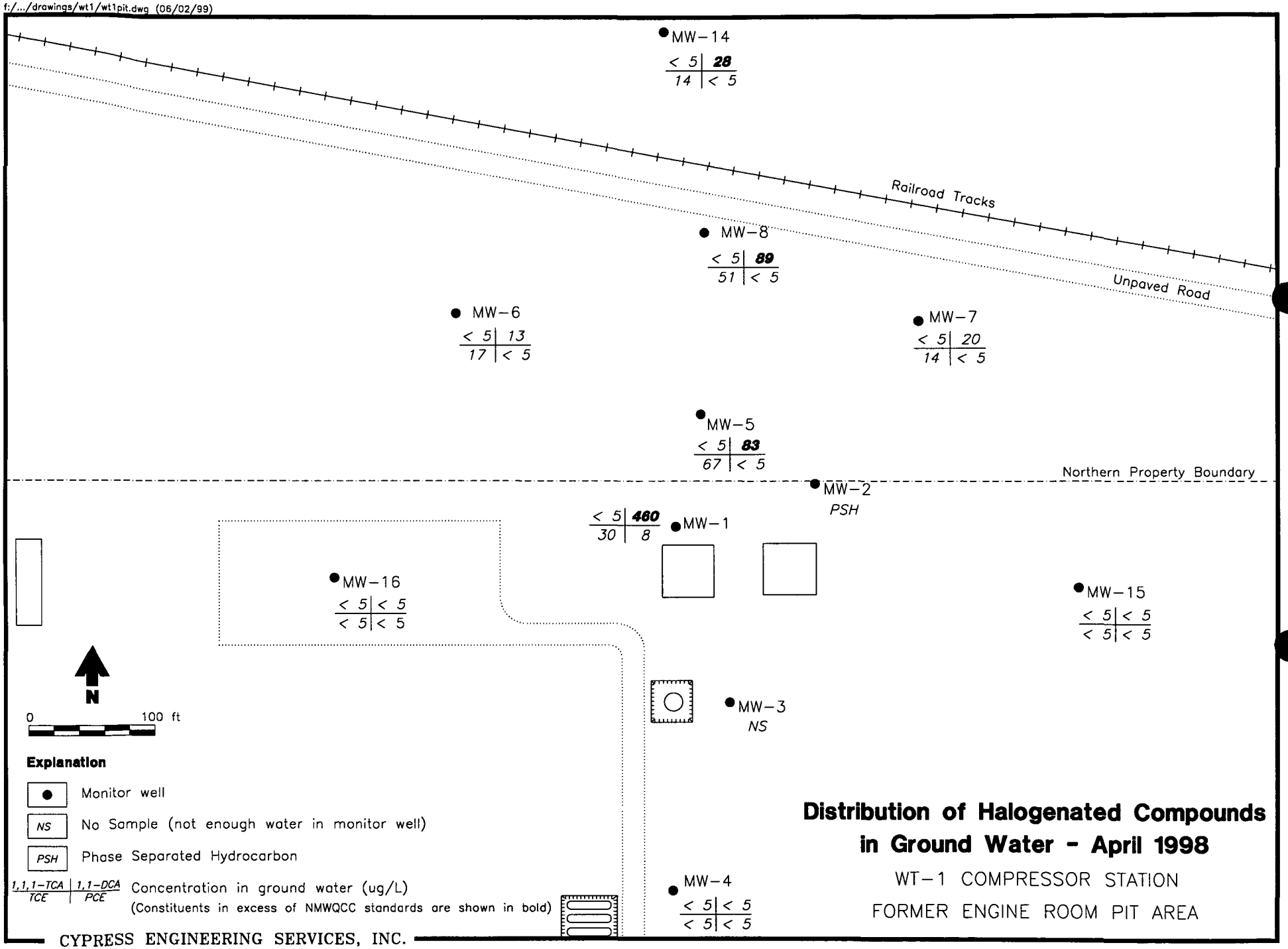
WT-1 COMPRESSOR STATION

TRANSWESTERN PIPELINE COMPANY

CYPRESS ENGINEERING SERVICES, INC.

Figure 1

f:/.../drawings/wt1/wt1pit.dwg (06/02/99)



Explanation

- ● Monitor well
- NS — No Sample (not enough water in monitor well)
- PSH — Phase Separated Hydrocarbon
- 1,1,1-TCA / TCE | 1,1-DCA / PCE — Concentration in ground water (ug/L)
  (Constituents in excess of NMWQCC standards are shown in bold)

Distribution of Halogenated Compounds in Ground Water - April 1998

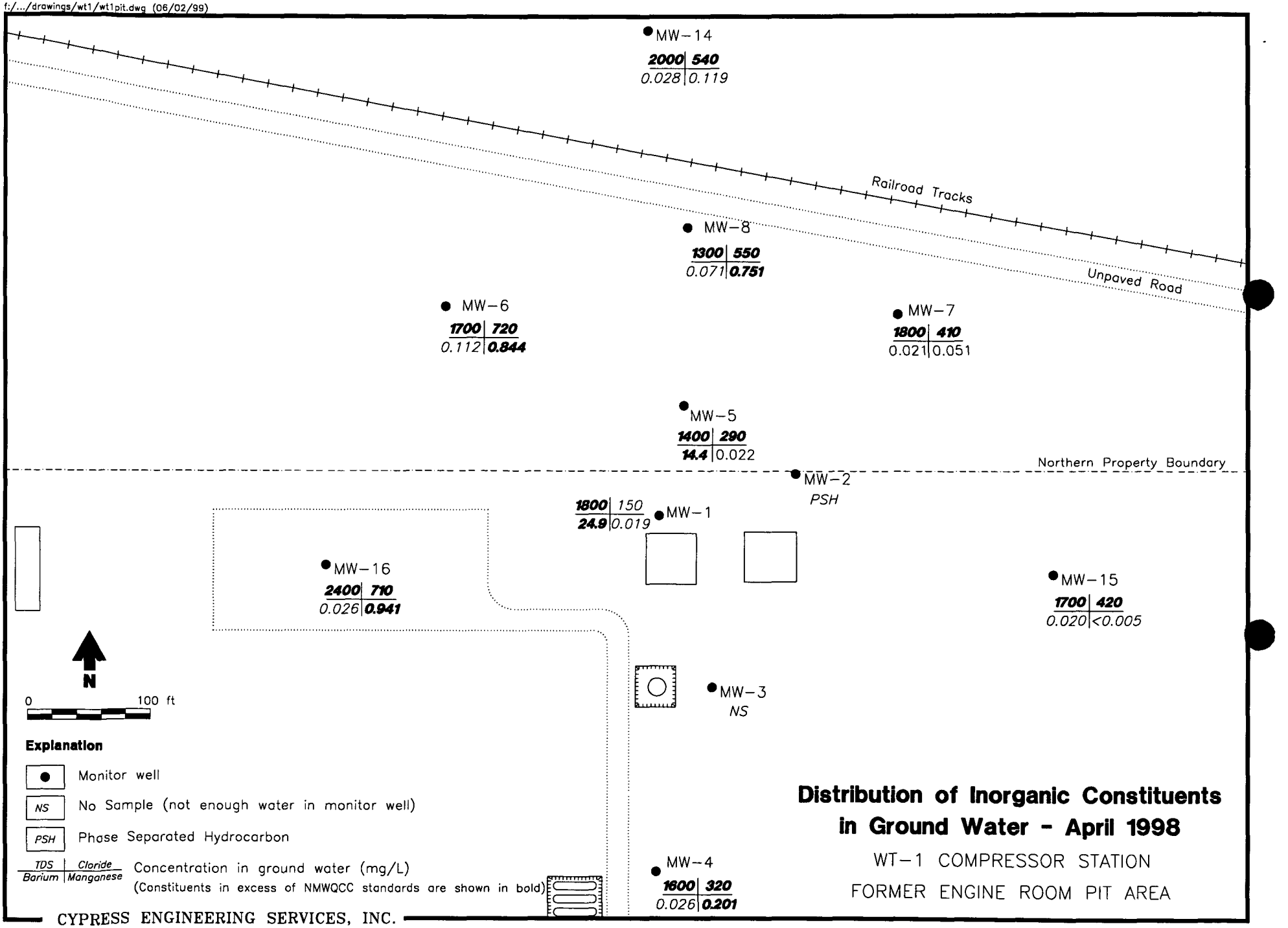
WT-1 COMPRESSOR STATION

FORMER ENGINE ROOM PIT AREA

CYPRESS ENGINEERING SERVICES, INC.

Figure 4

f:/.../drawings/wt1/wt1pit.dwg (06/02/99)



Explanation

- Monitor well
- NS — No Sample (not enough water in monitor well)
- PSH — Phase Separated Hydrocarbon
- TDS | Cloride / Barium | Manganese — Concentration in ground water (mg/L) (Constituents in excess of NMWQCC standards are shown in bold)

Distribution of Inorganic Constituents in Ground Water - April 1998

WT-1 COMPRESSOR STATION

FORMER ENGINE ROOM PIT AREA

CYPRESS ENGINEERING SERVICES, INC.

Figure 5

Table 3. 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	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
	07/17/98	**15**	93	8	97	< 2000	98	< 10	< 5	**820**	8	**12**	< 5	330	1800	14	**93**	21	< 10
	01/27/99	**15**	58	9	93	330	120	4	< 1	**460**	8	4	3	310	2100	10	18	26	< 2
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	**5.4**	< 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
	07/16/98	< 5	< 5	< 5	< 5	< 100	< 20	< 10	5	< 5	< 5	**5**	< 5	< 5	< 10	< 5	< 5	< 5	< 10
	01/26/99	< 1	< 1	< 1	< 1	< 20	< 20	< 2	4	< 1	< 1	4	< 1	< 2	< 10	< 1	< 1	< 1	< 2

Table 3. 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-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 [B]	280	< 5	< 5	**120**	**16**
	05/10/97	**24**	35	9	38	< 100	< 100	22	< 5	**140**	< 5	< 5	120	< 50	210	< 5	< 5	86	< 10
Dup (BS-99)	05/10/97	**23**	38	9	38	< 100	< 100	22	< 5	**130**	< 5	< 5	111	< 50	180	< 5	< 5	82	< 10
	08/07/97	**22**	9	< 5	15	< 100	< 100	11	< 5	**47**	< 5	< 5	53	7	50	< 5	< 5	35	< 10
	10/09/97	**19**	15	7	24	< 100	< 100	< 10	< 5	**96**	< 5	< 5	103	10	89	< 5	< 5	71	< 10
Dup (MW-17)	10/09/97	**18**	14	7	25	< 100	< 100	< 10	< 5	**102**	< 5	< 5	111	10	98	< 5	< 5	69	< 10
	01/24/98	**23**	18	9	33	< 100	< 20	< 10	< 5	**120**	< 5	**6**	140	< 5	130	< 5	< 5	75	< 10
Dup (MW-17)	01/24/98	**25**	19	9	34	< 100	< 20	10	< 5	**130**	< 5	**7**	150	< 5	120	< 5	< 5	77	< 10
	04/17/98	**16**	9	< 5	14	< 100	< 20	< 10	< 5	**83**	< 5	< 5	91	< 5	18	< 5	< 5	67	< 10
	07/17/98	**21**	10	5	17	< 100	< 20	16	< 5	**110**	< 5	**6**	100	< 5	47	< 5	< 5	91	< 10
Dup (MW-17)	01/27/99	**22**	9	7	19	< 20	< 20	7	< 1	**84**	1	**5**	85	< 2	17	4	3	**100**	< 2
	01/27/99	**22**	9	7	19	< 20	< 20	5	< 1	**81**	1	**5**	86	< 2	19	3	2	96	< 2
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
	09/12/95	2	< 5	< 5	< 5	< 100	< 100	< 10	< 5	17	< 5	< 5	na	< 5	< 50	< 5	< 5	21	< 10
	11/12/96	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	12	< 5	< 5	na	< 5	< 50	< 5	< 5	15	< 10
	02/04/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	11	< 5	< 5	6	< 50	< 50	< 5	< 5	18	< 10
	05/10/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	10	< 5	< 5	< 5	< 50	< 50	< 5	< 5	14	< 10
	08/07/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	12	< 5	< 5	7	< 5	< 50	< 5	< 5	16	< 10
	10/09/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	12	< 5	< 5	7	< 5	< 50	< 5	< 5	16	< 10
	01/23/98	< 5	< 5	< 5	< 5	< 100	< 20	< 10	< 5	14	< 5	< 5	7	< 5	< 10	< 5	< 5	15	< 10
	04/16/98	< 5	< 5	< 5	< 5	< 100	< 20	< 10	< 5	13	< 5	< 5	8	< 5	< 10	< 5	< 5	17	< 10
	07/16/98	< 5	< 5	< 5	< 5	< 100	< 20	< 10	< 5	12	< 5	< 5	7	< 5	< 10	< 5	< 5	14	< 10
	01/27/99	1	< 1	< 1	< 1	< 20	< 20	< 2	< 1	11	< 1	3	8	< 2	< 10	< 1	< 1	16	< 2

Table 3. 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-7	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
	09/12/95	6	< 5	< 5	< 5	< 100	< 100	< 10	< 5	22	< 5	< 5	na	< 5	< 50	< 5	< 5	13	< 10
	11/12/96	9	< 5	< 5	< 5	< 100	< 100	< 10	< 5	22	**24**	< 5	na	< 5	< 50	< 5	< 5	18	< 10
	02/04/97	8	< 5	< 5	< 5	< 100	< 100	< 10	< 5	18	< 5	< 5	7	< 50	< 50	< 5	< 5	15	< 10
	05/10/97	6	< 5	< 5	< 5	< 100	< 100	< 10	< 5	16	< 5	< 5	< 5	< 50	< 50	< 5	< 5	13	< 10
	08/07/97	9	< 5	< 5	< 5	< 100	< 100	< 10	< 5	22	< 5	< 5	8	< 5	< 50	< 5	< 5	17	< 10
	10/09/97	< 5	< 5	< 5	< 5	< 100	< 100	< 10	< 5	20	< 5	< 5	6	< 5	< 50	< 5	< 5	16	< 10
	01/23/98	6	< 5	< 5	< 5	< 100	< 20	< 10	< 5	21	< 5	< 5	6	< 5	< 10	< 5	< 5	13	< 10
	04/17/98	6	< 5	< 5	< 5	< 100	< 20	< 10	< 5	20	< 5	< 5	8	< 5	< 10	< 5	< 5	14	< 10
	07/16/98	7	< 5	< 5	< 5	< 100	< 20	< 10	< 5	19	< 5	< 5	7	< 5	< 10	< 5	< 5	12	< 10
	01/27/99	7	< 1	< 1	< 1	< 20	< 20	< 2	1	19	< 1	3	10	< 2	< 10	< 1	< 1	12	< 2
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 [B]	< 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
Dup (MW-17)	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 [B]	< 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
	04/17/98	**19**	< 5	< 5	< 5	< 100	< 20	< 10	< 5	**89**	< 5	< 5	33	< 5	< 10	< 5	< 5	51	< 10
	07/17/98	**20**	< 5	< 5	< 5	< 100	< 20	< 10	< 5	**91**	< 5	< 5	32	< 5	< 10	< 5	< 5	51	< 10
Dup (MW-17)	07/17/98	**20**	< 5	< 5	< 5	< 100	< 20	< 10	< 5	**88**	< 5	< 5	31	< 5	< 10	< 5	< 5	52	< 10
	01/27/99	**20**	< 1	< 1	< 1	< 20	< 20	< 2	< 1	**94**	2	**5**	37	< 2	< 10	< 1	< 1	54	< 2

Table 3. 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-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 [B]	< 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
	07/17/98	< 5	< 5	< 5	< 5	< 100	< 20	< 10	< 5	**26**	< 5	< 5	< 5	< 5	< 10	< 5	< 5	14	< 10
	01/27/99	< 1	< 1	< 1	< 1	< 20	< 20	< 2	< 1	**27**	< 1	2	5	< 2	< 10	1	< 1	14	< 2
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 [B]	< 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	13	< 5	< 5	< 100	< 20	< 10	< 5	< 5	< 5	**5**	< 5	< 5	< 10	< 5	< 5	< 5	< 10
	07/17/98	< 5	< 5	< 5	< 5	< 100	< 20	< 10	< 5	< 5	< 5	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 10
	01/26/99	< 1	< 1	< 1	< 1	< 20	< 20	< 2	2	3	< 1	**5**	< 1	< 2	< 10	< 1	1	< 1	< 2

Table 3. 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-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
	07/16/98	< 5	< 5	< 5	< 5	< 100	< 20	< 10	< 5	< 5	< 5	< 5	< 5	< 5	< 10	16	< 5	< 5	< 10
	01/26/99	< 1	< 1	< 1	< 1	< 20	< 20	< 2	< 1	3	< 1	3	< 1	< 2	< 10	16	< 1	1	< 2

NOTES:

([a]) Sample analyzed at 10x dilution

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

[B] - Blank Contamination

Table 5. 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
								(Unfiltered metals analysis)			**0.13**	**22**	< 0.01	< 0.01	< 0.01	**10**	< 0.03	< 0.0002	0.05	< 0.04	< 0.01	< 0.03
	05/10/97	**2840**	162	< 5.0	< 0.05	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
	08/07/97	**2910**	150	< 5.0	5.4	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
	10/09/97	**2690**	175	< 5.0	< 0.05	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
	01/23/98	**1890**	160	9	0.15	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	**2100**	150	200	0.90	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
Dup (MW-17)	04/17/98	**1800**	150	7	1.29	na	na	na	na	na	**0.1**	**24.9**	< 0.005	< 0.01	< 0.01	**8.92**	< 0.05	< 0.0002	0.019	< 0.1	< 0.01	< 0.02
	07/17/98	**2200**	156	9	< 0.1	na	na	na	na	na	**0.15**	**32.2**	< 0.005	< 0.01	< 0.01	**15.1**	< 0.05	< 0.0002	0.023	< 0.005	< 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
								(Unfiltered metals analysis)			< 0.03	0.03	< 0.01	< 0.01	< 0.01	0.57	< 0.03	< 0.0002	0.03	< 0.04	< 0.01	< 0.03
	05/10/97	**2660**	**410**	**778**	**10.7**	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
	08/06/97	**2620**	**435**	**863**	**12.8**	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
	10/08/97	**2470**	**380**	**879**	9.6	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
	01/23/98	**1920**	**300**	581	< 0.05	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
	04/16/98	**1600**	**320**	**800**	**11.60**	na	na	na	na	na	< 0.1	0.026	< 0.005	< 0.01	< 0.01	0.07	< 0.05	< 0.0002	**0.201**	< 0.1	< 0.01	0.03
	07/16/98	**2300**	**301**	**900**	**14.10**	na	na	na	na	na	0.011	0.020	< 0.005	< 0.01	< 0.01	< 0.02	< 0.05	< 0.0002	0.154	0.018	< 0.01	< 0.02

Table 5. 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-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	0.21	< 0.03	< 0.0002	0.02	< 0.04	< 0.01	0.04
								(Unfiltered metals analysis)			0.12	**22**	< 0.01	0.02	0.02	**27**	0.04	< 0.0002	**0.56**	< 0.04	< 0.01	0.09
	05/10/97	**2340**	**380**	< 5.0	< 0.05	na	na	na	na	na	0.05	**22.2**	< 0.01	< 0.01	< 0.01	0.12	< 0.03	< 0.0002	0.01	< 0.04	< 0.01	< 0.03
	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	0.24
	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
Dup (MW-17)	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
	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
Dup (MW-17)	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
	07/17/98	**1600**	**281**	3	< 0.1	na	na	na	na	na	0.020	**13.7**	< 0.005	< 0.01	< 0.01	**4.61**	< 0.05	< 0.0002	0.018	< 0.005	< 0.01	< 0.02
MW-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
								(Unfiltered metals analysis)			< 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
	07/16/98	**2100**	**620**	550	< 0.1	na	na	na	na	na	0.008	0.110	< 0.005	< 0.01	< 0.01	0.70	< 0.05	< 0.0002	**0.832**	< 0.005	< 0.01	< 0.02

Table 5. 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-7	11/30/94	**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
	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	**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
	02/04/97	**2100**	**380**	**779**	na	na	na	na	na	na	< 0.03	0.04	< 0.01	< 0.01	< 0.01	0.01	< 0.03	< 0.0002	0.04	< 0.04	< 0.01	< 0.03
								(Unfiltered metals analysis)			0.12	**3.2**	< 0.01	0.04	0.06	**41**	0.04	< 0.0002	**1.2**	< 0.04	< 0.01	0.14
	05/10/97	**2250**	**390**	**757**	7.3	na	na	na	na	na	< 0.03	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.0002	0.04	< 0.04	< 0.01	< 0.03
	08/07/97	**2310**	**370**	**716**	4.1	na	na	na	na	na	< 0.03	0.61	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.0002	0.09	< 0.04	< 0.01	0.22
	10/09/97	**2190**	**410**	**784**	7	na	na	na	na	na	< 0.03	0.81	< 0.01	< 0.01	< 0.01	0.19	< 0.03	< 0.0002	0.07	< 0.04	< 0.01	0.35
	01/23/98	**1700**	**400**	**646**	8.4	na	na	na	na	na	< 0.1	0.018	< 0.005	< 0.01	< 0.01	< 0.02	< 0.05	< 0.0002	0.042	< 0.1	< 0.01	< 0.02
	04/17/98	**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
	07/16/98	**1900**	**301**	**800**	8.2	na	na	na	na	na	0.007	0.019	< 0.005	< 0.01	< 0.01	< 0.02	< 0.05	< 0.0002	0.061	0.012	< 0.01	< 0.02
MW-8	11/30/94	**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
	09/13/95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	11/12/96	**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
	02/06/97	**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
								(Unfiltered metals analysis)			< 0.03	0.27	< 0.01	0.02	0.02	**8.9**	< 0.03	< 0.0002	**0.72**	< 0.04	< 0.01	0.05
	05/10/97	**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
	08/07/97	**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	**0.67**	< 0.04	< 0.01	0.24
	10/09/97	**2100**	**570**	242	< 0.05	na	na	na	na	na	< 0.03	0.7	< 0.01	< 0.01	< 0.01	0.18	< 0.03	< 0.0002	**0.86**	< 0.04	< 0.01	0.25
	01/24/98	**1740**	**500**	248	< 0.05	na	na	na	na	na	< 0.1	0.071	< 0.005	< 0.01	< 0.01	< 0.02	< 0.05	< 0.0002	**0.543**	< 0.1	< 0.01	< 0.02
	04/17/98	**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
	07/17/98	**1500**	**557**	400	< 0.1	na	na	na	na	na	0.008	0.063	< 0.005	< 0.01	< 0.01	0.03	< 0.05	< 0.0002	**0.506**	< 0.005	< 0.01	< 0.02
Dup (MW-17)	07/17/98	**1500**	**578**	30	< 0.1	na	na	na	na	na	0.008	0.070	< 0.005	< 0.01	< 0.01	0.09	< 0.05	< 0.0002	**0.654**	< 0.005	< 0.01	< 0.02

Table 5. 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	09/13/95	**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
	11/12/96	**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
	02/04/97	**2510**	**575**	**757**	na	na	na	na	na	na	< 0.03	0.07	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.0002	0.06	< 0.04	< 0.01	< 0.03
								(Unfiltered metals analysis)			< 0.03	0.13	< 0.01	< 0.01	< 0.01	**1.9**	< 0.03	< 0.0002	0.1	< 0.04	< 0.01	< 0.03
	05/10/97	**2530**	**520**	**715**	2.2	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
	08/07/97	**2420**	**520**	**662**	1.9	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
	10/08/97	**2490**	**550**	**769**	2.3	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
	01/23/98	**2200**	**500**	**663**	2.9	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
	04/17/98	**2000**	**540**	**800**	3.72	na	na	na	na	na	< 0.1	0.028	< 0.005	< 0.01	< 0.01	0.03	**0.05**	< 0.0002	0.119	< 0.1	< 0.01	0.02
	07/17/98	**1800**	**557**	**700**	2.8	na	na	na	na	na	0.011	0.021	< 0.005	< 0.01	< 0.01	< 0.02	< 0.05	< 0.0002	0.136	0.010	< 0.01	0.02
MW15	09/14/95	**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
	11/12/96	**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
	02/04/97	**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
								(Unfiltered metals analysis)			< 0.03	0.17	< 0.01	< 0.01	< 0.01	**2.3**	< 0.03	< 0.0002	0.06	< 0.04	< 0.01	< 0.03
	05/10/97	**2530**	**860**	**1020**	**10.2**	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
	08/07/97	**2510**	**410**	**825**	**10.2**	na	na	na	na	na	< 0.03	0.63	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.0002	< 0.01	< 0.04	< 0.01	0.26
	10/08/97	**2400**	**420**	**941**	5.8	na	na	na	na	na	< 0.03	0.53	< 0.01	< 0.01	< 0.01	0.19	< 0.03	< 0.0002	< 0.01	< 0.04	< 0.01	0.23
	01/23/98	**2150**	**400**	**766**	**12.54**	na	na	na	na	na	< 0.1	0.014	< 0.005	< 0.01	< 0.01	< 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
	07/17/98	**1800**	**386**	**1000**	**11.9**	na	na	na	na	na	0.012	0.018	< 0.005	< 0.01	< 0.01	0.24	< 0.05	< 0.0002	< 0.005	0.020	< 0.01	< 0.02

Table 5. 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
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
	07/16/98	**2500**	**620**	**1100**	1.2	na	na	na	na	na	< 0.005	0.023	< 0.005	< 0.01	< 0.01	< 0.02	< 0.05	< 0.0002	**0.913**	< 0.005	< 0.01	0.03

NOTES:

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

Table 5. Summary of Ground-Water Analyses for Inorganic Constituents Dehydration Area

Constituent	Detection Limit	Well No. (Sample Date) MW-9 (11/21/94)	MW-10 (11/18/94)	MW-12 (11/18/94)	MW-13 (12/01/94)	NMWQCC Standard
Major ions (mg/L)						
Calcium	0.1	452	348	506	491	None
Potassium	1.0	9.6	5.6	12.6	9.3	None
Magnesium	0.1	222	201	244	184	None
Sodium	0.1	295	165	247	116	None
Total alkalinity (as $CaCO_3$)	1.0	326	804	228	273	None
Chloride	0.5	**860**	**650**	**980**	**340**	250
NO_2/NO_3-N, total	0.06	8.4	ND	**17**	NA	10.0
Sulfate	5	**850**	12	**1,100**	**1,400**	600
Total dissolved solids	10	**2,800**	**2,500**	**3,300**	**2,900**	1,000
Metals (mg/L)						
Silver	0.010	ND	ND	ND	ND	0.05
Arsenic	0.005	ND	0.019	ND	0.006	0.1
Barium	0.01	0.043	0.580	0.049	0.048	1.0
Cadmium	0.0005	ND	ND	ND	ND	0.01
Chromium	0.010	ND	ND	ND	ND	0.05
Copper	0.010	ND	ND	0.012	ND	1.0
Iron	0.050	ND	**1.87**	**1.22**	ND	1.0
Mercury	0.0002	ND	ND	ND	ND	0.002
Manganese	0.010	**0.229**	**2.41**	**0.352**	ND	0.2
Lead	0.002	ND	ND	ND	ND	0.05
Selenium	0.005	0.009	ND	0.016	0.009	0.05
Zinc	0.050	0.092	0.057	0.082	ND	10

Notes: All analyses performed by Analytical Technologies, Inc., Albuquerque, NM
Bold values indicate concentration exceeds NMWQCC ground-water standard.
Metals samples were field filtered and acidified.

NMWQCC = New Mexico Water Quality Control Commission
ND = Not detected
NA = Not analyzed

STATE OF NEW MEXICO
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January 7, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z-274-520-584

Mr. Larry Campbell
Transwestern Pipeline Company
6381 North Main
Roswell, New Mexico 88201

RE: GROUND WATER INVESTIGATION AND MONITORING
WT-1 COMPRESSOR STATION

Dear Mr. Campbell:

The New Mexico Oil Conservation Division has reviewed Transwestern Pipeline Company's (TPC) August 10, 1998 "REPORT OF GROUND WATER MONITORING ACTIVITIES TRANSWESTERN PIPELINE COMPANY - WT-1 STATION ENGINE ROOM DRAIN PIT AREA, LEA COUNTY, NEW MEXICO". This document contains the results of TPC's ground water investigation and monitoring activities at TPC's WT-1 Compressor Station. The document also contains a proposal for modification of the ground water monitoring program.

The above referenced ground water monitoring proposal is approved with the following conditions:

1. TPC will submit a work plan to complete the definition of the downgradient extent of halogenated organics, total dissolved solids and chloride contamination of ground water. The work plan will be submitted to the OCD Santa Fe Office by March 5, 1999 with a copy provided to the OCD Hobbs District Office.

Please be advised that OCD approval does not relieve TPC of liability if the ground water monitoring plan fails to adequately monitor contamination related to TPC's activities or if contamination exists which is beyond the scope of the plan. In addition, OCD approval does not relieve TPC of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrogeologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Supervisor
George Robinson, Cypress Engineering Services, Inc.

Z 274 520 584

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PS Form **3800**, April 1995

Transwestern Pipeline Company
P. O. Box 1188
Houston, TX 77251-1188

August 10, 1998

Mr. William C. Olson
Environmental Bureau
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, New Mexico 87505

RE: Report of Ground Water Monitoring Activities
Transwestern Pipeline Company - WT-1 Station Engine Room Drain Pit Area
Lea County, New Mexico

Dear Bill,

The attached report is submitted pursuant to the NMOCD's requirements for reporting of ground water monitoring activities at the subject facility.

If you have any questions or comments regarding this report, please contact me at (505) 625-8022 or George Robinson at (713) 646-7327.

Sincerely,

Larry Campbell

Larry Campbell
Division Environmental Specialist

LC/gcr

xc w/attachment:

Jerry Sexton	NMOCD Hobbs District Office
Randy Smith	TW Operations
George Robinson	Cypress Engineering Services

Transwestern Pipeline Company
P. O. Box 1188
Houston, TX 77251-1188

August 10, 1998

Mr. William C. Olson
Environmental Bureau
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, New Mexico 87505

RE: Report of Ground Water Remediation Activities
Transwestern Pipeline Company - WT-1 Station Dehy Area
Lea County, New Mexico

Dear Bill,

The attached report is submitted pursuant to the NMOCD's requirements for reporting of ground water remediation activities at the subject facility.

If you have any questions or comments regarding this report, please contact me at (505) 625-8022 or George Robinson at (713) 646-7327.

Sincerely,

Larry Campbell

Larry Campbell
Division Environmental Specialist

LC/gcr

xc w/attachment:

Jerry Sexton	NMOCD Hobbs District Office
Randy Smith	TW Operations
George Robinson	Cypress Engineering Services

Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area
Lea County, New Mexico

Submitted to:
New Mexico Oil Conservation Division

August 10, 1998

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

Prepared by:
Cypress Engineering Services, Inc.
16300 Katy Freeway, Suite 210
Houston, Texas 77094-1610

Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

I. Ground Water Monitoring Activities

Semiannual Ground Water Sampling Events

Transwestern Pipeline Company has completed three sampling events since the last report of ground water remediation activities. These events were completed on February 5, 1997, August 5, 1997, and February 24, 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.

In the course of each sample event, ground water samples were collected from each of the monitor wells at the site. Samples were not collected from monitor wells with PSH accumulated in the well casing. Ground water samples were delivered to a laboratory for analysis by EPA Method 8020 for benzene, toluene, ethylbenzene, and xylenes (BTEX). A summary of the laboratory results and field measured parameters is presented in Table 2.

Approximately 30 gallons of purge water were generated during the semiannual sampling events. The purge water has been contained in the facilities on-site condensate AST.

Results/Conclusions from Ground Water Sampling Events

Occurrence and Direction of Ground Water Flow

A ground water surface elevation map, based on measurements obtained on February 24, 1998, is included as Figure 2. Consistent with previous sampling events, there is very little shallow ground water present just west of the hydrocarbon release area as indicated by the low level of ground water measured in monitor well MW-11.

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-10 and the absence of PSH in all other monitor wells. Based on the information currently available, the volume and lateral extent of PSH in the area appears to be relatively limited.

At this time, the presence of PSH does not appear to require a modification of the existing remediation plan due to the relatively limited lateral extent of PSH and the SVE operation currently in progress.

Condition of Affected Ground water

The condition of affected ground water, based on the recent sampling event, has not changed significantly from previous sampling events as evidenced by the information presented in Table 2. The three monitor wells downgradient of the release area continue to yield ground water samples that are non-detect for BTEX constituents. Monitor well MW-9, located about 200 feet south of the release area, continues to yield samples that are near non-detect for BTEX constituents with a detected concentration for benzene of 16.3 ppb for the February 24, 1998 sampling event.

II. Planned Changes to the Ground Water Monitoring Program

Disposal of Monitor Well Purge Water

Transwestern anticipates that approximately 10 gallons (total) of purge water will be generated from the five monitor wells in the course of each sampling event. The purge water generated from all five monitor wells will be stored in the facilities on-site condensate AST.

Frequency of Ground Water Monitoring

No changes are proposed at this time.

Routine Reporting of Monitoring Activities

No changes are proposed at this time. The next annual report will be submitted to the OCD by September 1, 1998.

III. Status of Remediation Activities

Remediation Activities Completed

The following remediation activities were completed through July 1998:

1) Transwestern obtained approval from the NMED Air Quality Bureau to relocate the Baker Furnace blower/incinerator unit from the WT-1 Station Dehy Area site to the Atoka-1 facility. At the same time, Transwestern obtained approval of a Notice of Intent application for the installation of a SVE blower unit, without an emission control component, to replace the blower/incinerator unit (Notice of Intent No. 1998, AIRS No. 35-025-00225). The equipment replacement was completed in September 1997.

2) Transwestern installed a liquid recovery pump in well MW-10 in an effort to accelerate the removal of PSH accumulated at the water table. The estimated recovery rate is 0.1 gpm. Vapor extraction will continue during liquid recovery (dual phase extraction). Recovered water will be stored in the on-site condensate AST pending disposal in an OCD permitted injection well.

3) Transwestern completed three ground water sampling events; and

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

Current Status of Remediation Activities

Routine operation and maintenance of the SVE system is ongoing.

Remediation Activities Planned for 1997

Transwestern anticipates that the SVE system will be in operation at least through mid-1999 in order to achieve its cleanup objectives. In addition, Transwestern plans to complete the ground water sampling program as outlined above.

Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

Figures

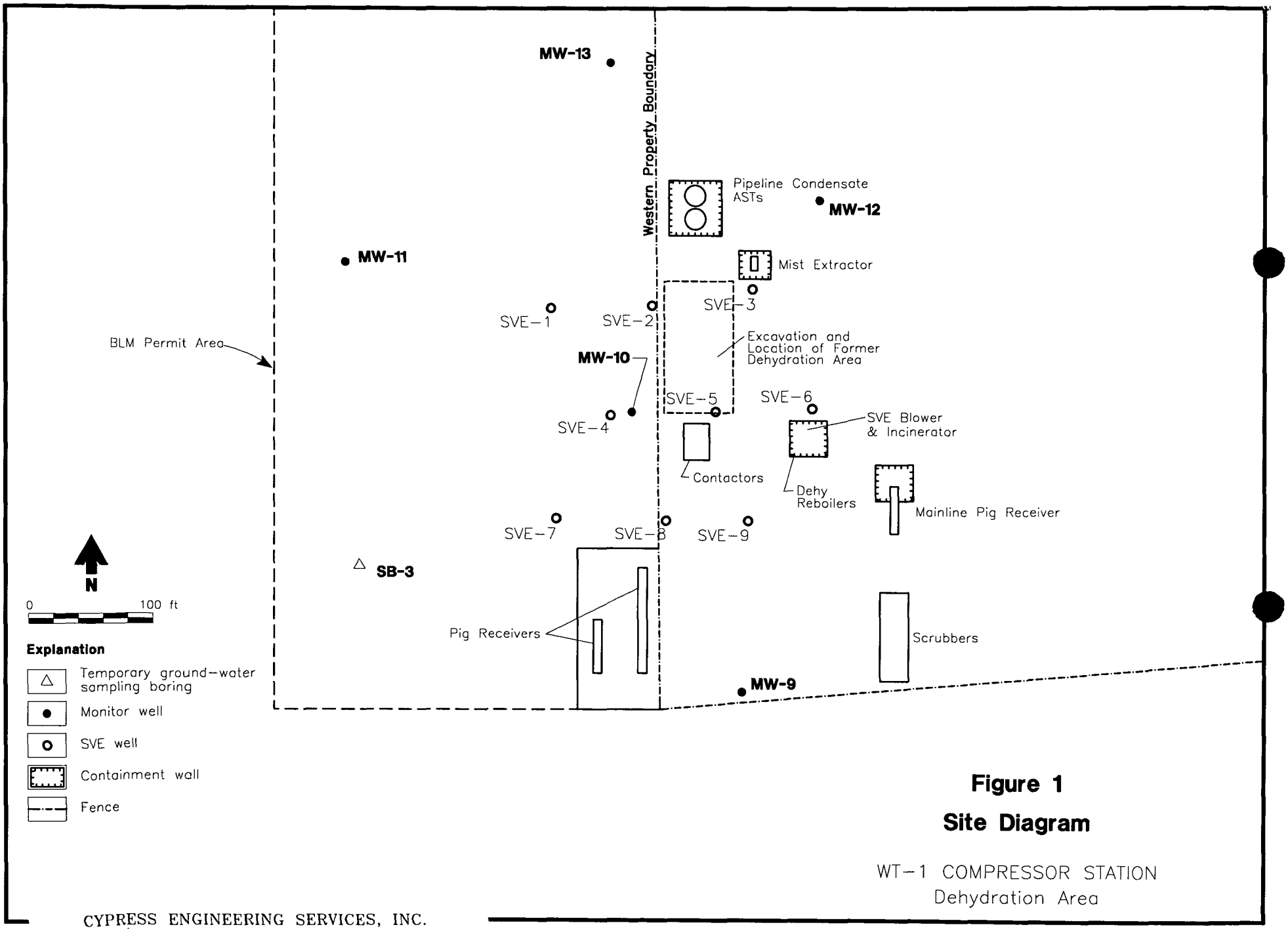


Figure 1

Site Diagram

WT-1 COMPRESSOR STATION
Dehydration Area

CYPRESS ENGINEERING SERVICES, INC.
8/98

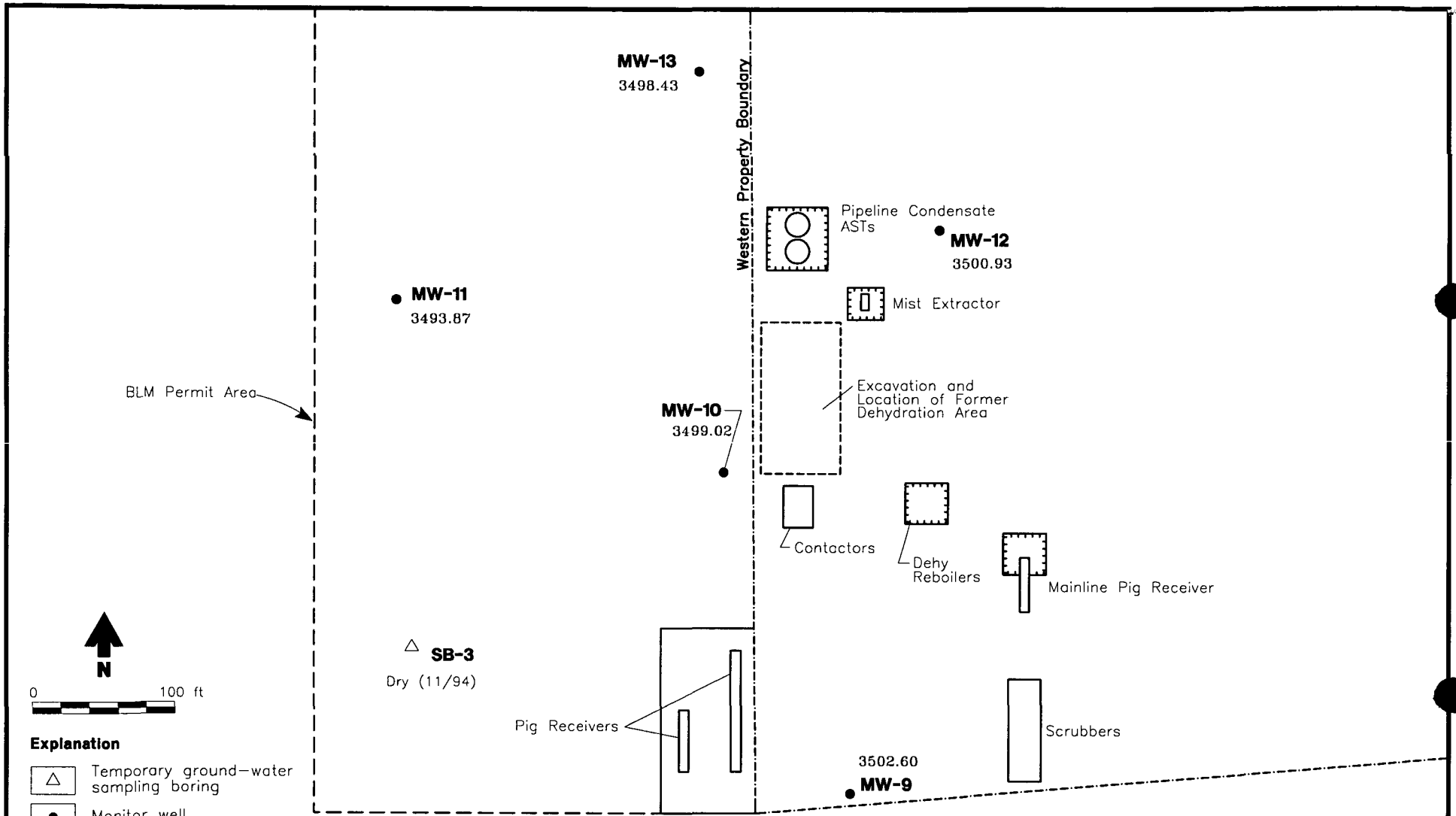


Figure 2

Ground Water Elevations, Feb. 1998

WT-1 COMPRESSOR STATION
Dehydration Area

CYPRESS ENGINEERING SERVICES, INC.
8/98

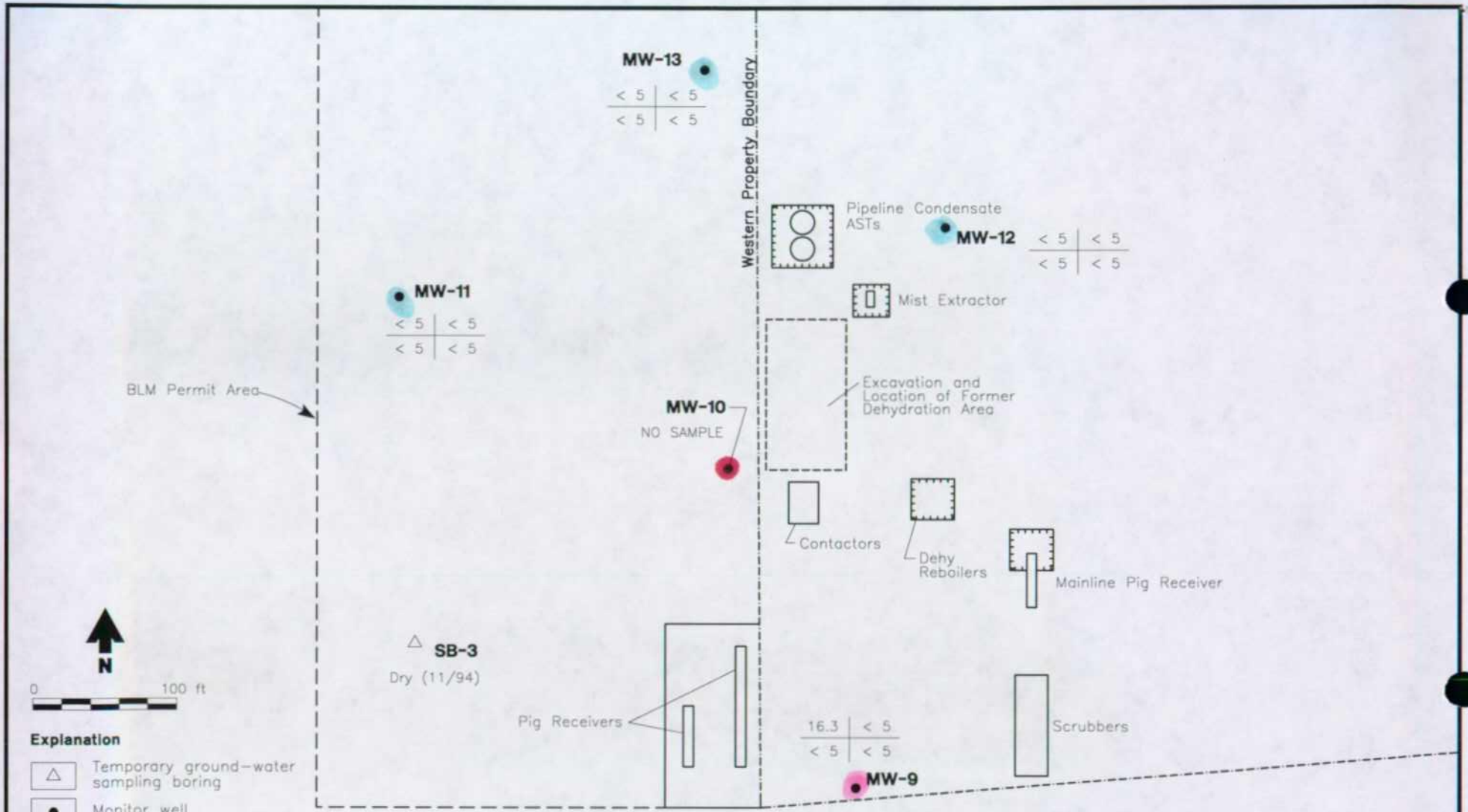


Figure 3

Distribution of BTEX, Feb. 1998

WT-1 COMPRESSOR STATION
Dehydration Area

CYPRESS ENGINEERING SERVICES, INC.
8/98

Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

Tables

Table 1. Summary of Ground Water Surface Elevations
TW WT-1 Compressor Station Dehy Area

Well	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Water (ft)	PSH (ft)	Surface Elevation (ft)
MW-9	11/21/94	3557.31	(a)	55.14	(a)	3502.17
	11/21/95		(a)	55.67	(a)	3501.64
	02/22/96		(a)	55.27	(a)	3502.04
	05/14/96		(a)	55.18	(a)	3502.13
	08/12/96		(a)	55.53	(a)	3501.78
	11/12/96		(a)	55.25	(a)	3502.06
	02/05/97		(a)	55.20	(a)	3502.11
	08/05/97		(a)	55.25	(a)	3502.06
	12/29/97		(a)	55.19	(a)	3502.12
	02/23/98		(a)	54.71	(a)	3502.60
MW-10	11/18/94	3553.45	(a)	52.63	(a)	3500.82
	11/21/95		52.31	54.21	1.90	3500.76
	02/22/96		52.08	53.75	1.67	3501.04
	05/14/96		51.93	53.58	1.65	3501.19
	08/12/96		52.25	53.40	1.15	3500.97
	11/12/96		52.48	52.82	0.34	3500.90
	02/05/97		52.57	52.98	0.41	3500.80
	08/05/97		52.38	53.08	0.70	3500.93
	08/29/98		52.15	52.57	0.42	3501.22
	12/29/97		54.52	54.63	0.11	3498.91
	02/23/98		(a)	54.43	(a)	3499.02
MW-11	11/21/94	3547.84	(a)	DRY	(a)	DRY
	11/21/95		(a)	58.10	(a)	3489.74
	02/22/96		(a)	56.70	(a)	3491.14
	05/14/96		(a)	57.33	(a)	3490.51
	08/12/96		(a)	56.96	(a)	3490.88
	11/12/96		(a)	56.66	(a)	3491.18
	02/05/97		(a)	57.09	(a)	3490.75
	08/05/97		(a)	54.93	(a)	3492.91
	12/29/97		(a)	54.53	(a)	3493.31
	02/23/98		(a)	53.97	(a)	3493.87
MW-12	11/17/94	3551.19	(a)	49.31	(a)	3501.88
	11/21/95		(a)	50.49	(a)	3500.70
	02/22/96		(a)	50.13	(a)	3501.06
	05/14/96		(a)	49.96	(a)	3501.23
	08/12/96		(a)	50.31	(a)	3500.88
	11/12/96		(a)	50.41	(a)	3500.78
	02/05/97		(a)	50.53	(a)	3500.66
	08/05/97		(a)	50.39	(a)	3500.80
	12/29/97		(a)	50.35	(a)	3500.84
	02/23/98		(a)	50.26	(a)	3500.93

Table 1. Summary of Ground Water Surface Elevations
TW WT-1 Compressor Station Dehy Area

Well	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Water (ft)	PSH (ft)	Surface Elevation (ft)
MW-13	12/01/94	3547.78	(a)	49.70	(a)	3498.08
	11/21/95		(a)	49.55	(a)	3498.23
	02/22/96		(a)	49.27	(a)	3498.51
	05/14/96		(a)	49.15	(a)	3498.63
	08/12/96		(a)	49.40	(a)	3498.38
	11/12/96		(a)	49.42	(a)	3498.36
	02/05/97		(a)	49.40	(a)	3498.38
	08/05/97		(a)	49.37	(a)	3498.41
	12/29/97		(a)	49.50	(a)	3498.28
	02/23/98		(a)	49.35	(a)	3498.43

NOTES:
PSH - Phase separated hydrocarbon
Corrections to ground water surface elevation for presence of hydrocarbon is calculated assuming a specific gravity of 0.8
(a) Not applicable since no measurable thickness of hydrocarbon is present

Table 2. Summary of Ground Water Analyses
TW WT-1 Compressor Station Dehy Area

Well	Sampling Date	Field Measured Parameters				BTEX Concentration - (ug/L)			
		DO (mg/l)	pH (Units)	Temperature (C)	Conductivity (µs/cm)	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWQCC Standard		none	6-9	none	none	10	750	750	620
MW-9	11/21/94	-	-	-	-	**12**	< 0.5	< 0.5	< 0.5
	11/21/95	-	7.03	19.4	2,890	4	3	< 2	11
	02/22/96	-	6.48	22.2	2,980	**13**	< 2	< 2	< 2
	05/14/96	-	-	-	-	**14**	< 2	< 2	< 2
	08/12/96	-	6.79	27.0	3,090	**14**	< 2	< 2	< 3
	11/12/96	-	6.97	16.6	-	9	< 2	< 2	< 2
	02/05/97	3.0	7.26	16.3	3,900	**13**	< 2	< 2	< 2
	08/05/97	1.8	6.97	20.7	3,580	3	< 2	< 2	< 2
kabis	08/05/97	-	-	-	-	< 2	< 2	< 2	< 2
	02/24/98	4.2	7.00	20.3	3,550	**16.3**	< 5	< 5	< 5
MW-10	11/18/94	-	-	-	-	**9000**[b]	**16000**[b]	620[b]	**8500**[b]
	11/21/95	-	-	-	-	(a)	(a)	(a)	(a)
	02/22/96	-	-	-	-	(a)	(a)	(a)	(a)
	05/14/96	-	-	-	-	(a)	(a)	(a)	(a)
	08/12/96	-	-	-	-	(a)	(a)	(a)	(a)
	11/11/96	-	-	-	-	(a)	(a)	(a)	(a)
	02/05/97	-	-	-	-	(a)	(a)	(a)	(a)
	08/05/97	-	-	-	-	(a)	(a)	(a)	(a)
	02/24/98	-	-	-	-	(d)	(d)	(d)	(d)
MW-11	11/21/94	-	-	-	-	(c)	(c)	(c)	(c)
	11/21/95	-	-	-	-	< 2	< 2	< 2	< 2
	02/22/96	-	7.34	21.9	1,920	< 2	< 2	< 2	< 2
	05/14/96	-	-	-	-	< 2	< 2	< 2	< 2
	08/12/96	-	7.11	25.7	2,050	< 2	< 2	< 2	< 3
	11/11/96	6.0	7.15	19.9	-	< 2	< 2	< 2	< 2
	02/05/97	7.0	7.56	14.8	2,300	< 2	< 2	< 2	< 2
	08/05/97	5.3	7.19	21.2	2,280	< 2	< 2	< 2	< 2
	02/24/98	6.5	7.35	18.8	2,100	< 5	< 5	< 5	< 5
MW-12	11/17/94	-	-	-	-	< 0.5	1.9	< 0.5	3.1
	11/21/95	-	6.97	19.2	3,260	< 2	< 2	< 2	< 2
	02/22/96	-	6.71	22.6	3,400	< 2	< 2	< 2	< 2
	05/14/96	-	-	-	-	< 2	< 2	< 2	< 2
	08/12/96	-	6.70	26.8	3,430	< 2	< 2	< 2	< 3
	11/12/96	6.0	7.06	19.3	-	< 2	< 2	< 2	< 2
	02/05/97	7.0	7.23	15.8	3,900	< 2	< 2	< 2	< 2
	08/05/97	4.9	6.85	21.8	3,880	< 2	< 2	< 2	< 2
	02/24/98	6.0	7.06	20.1	3,570	< 5	< 5	< 5	< 5

Table 2. Summary of Ground Water Analyses
TW WT-1 Compressor Station Dehy Area

Well	Sampling Date	Field Measured Parameters				BTEX Concentration - (ug/L)			
		DO (mg/l)	pH (Units)	Temperature (C)	Conductivity (µs/cm)	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWQCC Standard		none	6-9	none	none	10	750	750	620
MW-13	12/01/94	-	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5
	11/21/95	-	7.63	20.3	1,530	< 2	< 2	< 2	< 2
	02/22/96	-	7.18	24.1	1,880	< 2	< 2	< 2	< 2
	05/14/96	-	-	-	-	< 2	3	< 2	7
	08/12/96	-	7.02	26.7	1,980	< 2	< 2	< 2	< 3
	11/11/96	4.0	7.18	18.8	-	< 2	< 2	< 2	< 2
	02/05/97	7	7.65	17.7	1,900	< 2	< 2	< 2	< 2
	08/05/97	5.2	7.38	21.1	1,830	< 2	< 2	< 2	< 2
	02/24/98	4.5	7.27	19.5	1,703	< 5	< 5	< 5	< 5

NOTES:
(a) No sample collected due to presence of phase separated hydrocarbon
(b) Sample analyzed at 25x dilution
(c) No sample collected due to absence of water in wellbore
(d) No sample collected

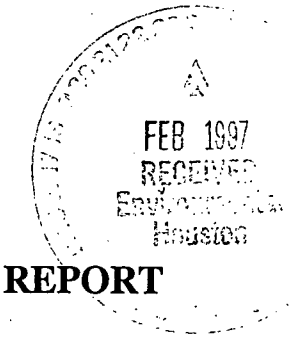
Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

Attachment #1

Laboratory Reports for the February 1997 Ground Water Sampling Event

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

02/18/1997

EPIC Job Number: 97.00382

Project Description:
Job Description: WT-1 Dehy 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
328287	MW-9	02/05/1997	12:10	02/08/1997
328288	MW-11	02/05/1997	11:10	02/08/1997
328289	MW-12	02/05/1997	12:40	02/08/1997
328290	MW-13	02/05/1997	11:45	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
Debby Skogen
Project Coordinator

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

1548 Valwood Parkway, Suite 118, Carrollton, Texas 75006 (972) 406-8100 Fax: (972) 484-2969
2621 Ridgepoint Drive, Suite 135, Austin, Texas 78754 (512) 928-8905 Fax: (512) 928-3208
13802 Placid Brook Court, Houston, Texas 77059 (281) 286-1400 Fax: (281) 256-2424

ANALYTICAL RESULTS REPORT

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

02/18/1997

EPIC Job Number: 97.00382
Sample Number: 328287

Project Description:
Job Description: WT-1 Dehy Area

Sample Description: MW-9

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		13	ug/L	S-8020M		02/11/1997	zst		2711	2
Ethylbenzene		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
Toluene		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
Xylenes, Total		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
SURR: a,a,a-TFT		98	% Rec	S-8020M		02/11/1997	zst		2711	60-125

ANALYTICAL RESULTS REPORT

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

02/18/1997

EPIC Job Number: 97.00382
Sample Number: 328288

Project Description:
Job Description: WT-1 Dehy Area

Sample Description: MW-11

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
Ethylbenzene		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
Toluene		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
Xylenes, Total		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
SURR: a,a,a-TFT		113	% Rec	S-8020M		02/11/1997	zst		2711	60-125

ANALYTICAL RESULTS REPORT

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

02/18/1997

EPIC Job Number: 97.00382
Sample Number: 328289

Project Description:
Job Description: WT-1 Dehy Area

Sample Description: MW-12

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
Ethylbenzene		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
Toluene		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
Xylenes, Total		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
SURR: a,a,a-TFT		114	% Rec	S-8020M		02/11/1997	zst		2711	60-125

ANALYTICAL RESULTS REPORT

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

02/18/1997

EPIC Job Number: 97.00382
Sample Number: 328290

Project Description:
Job Description: WT-1 Dehy Area

Sample Description: MW-13

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
Ethylbenzene		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
Toluene		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
Xylenes, Total		<2	ug/L	S-8020M		02/11/1997	zst		2711	2
SURR: a,a,a-TFT		104	% Rec	S-8020M		02/11/1997	zst		2711	60-125

QUALITY CONTROL REPORT
BLANKS

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

02/18/1997

EPIC Job Number: 97.00382

Project Description:
Job Description: WT-1 Dehy Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
EPA-8020 AQ (PRESERVED)							
Benzene		<2	ug/L	2	02/11/1997		2711
Ethylbenzene		<2	ug/L	2	02/11/1997		2711
Toluene		<2	ug/L	2	02/11/1997		2711
Xylenes, Total		<2	ug/L	2	02/11/1997		2711

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

02/18/1997

EPIC Job Number: 97.00382

Project Description:
Job Description: WT-1 Dehy Area

Parameter	Flag	CCVS True Concentration	Units	CCVS Concentration Found	CCVS Percent Recovery	Date Analyzed	Run Batch Number
EPA-8020 AQ (PRESERVED)							
Benzene		20	ug/L	17	85.0	02/11/1997	2711
Ethylbenzene		20	ug/L	23	115.0	02/11/1997	2711
Toluene		20	ug/L	19	95.0	02/11/1997	2711
Xylenes, Total		60	ug/L	60	100.0	02/11/1997	2711

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

02/18/1997

EPIC Job Number: 97.00382

Project Description:
Job Description: WT-1 Dehy Area

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch Number	Run Batch Number
EPA-8020 AQ (PRESERVED)													
Benzene		ug/L	<2	20	29	145.0	20	28	140.0	3.5	02/11/1997		2711
Ethylbenzene		ug/L	<2	20	29	145.0	20	23	115.0	23.1	02/11/1997		2711
Toluene		ug/L	<2	20	28	140.0	20	27	135.0	3.6	02/11/1997		2711
Xylenes, Total		ug/L	<2	40	60	150.0	40	57	142.5	5.1	02/11/1997		2711

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
LABORATORY CONTROL STANDARD

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

02/18/1997

EPIC Job Number: 97.00382

Project Description:
Job Description: WT-1 Dehy 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
EPA-8020 AQ (PRESERVED)											
Benzene		2711	20	ug/L	26	130.0					02/11/1997
Ethylbenzene		2711	20	ug/L	25	125.0					02/11/1997
Toluene		2711	20	ug/L	25	125.0					02/11/1997
Xylenes, Total		2711	40	ug/L	52	130.0					02/11/1997

LCS - Laboratory Control Standard

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

CHAIN OF CUSTODY RECORD

EPIC LABORATORIES, INC.

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

COMPANY Enron Operations Corp
ADDRESS P.O. Box 1188 Houston TX 77251
PHONE (713) 646-7327 FAX X 7867
PROJECT NAME/LOCATION WT-1 Delhi Area
PROJECT NUMBER
PROJECT MANAGER

Enron Operations Corp.
Attn: George Robinson 3AC3122
REPORT TO: P.O. Box 1188
INVOICE TO: Houston, TX 77251
P.O. NO.
EPIC QUOTE NO.

SAMPLED BY Sandy Sharp (PRINT NAME) Sandy Sharp SIGNATURE
(PRINT NAME) SIGNATURE

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	# and Type of Containers: HCl	NaOH	HNO_3	H_2SO_4	OTHER	ANALYSES: BTEX - 8020
2/5/97	1210	MW-9	A	X		3/6					X
	1110	MW-11	"	"		"					"
	1240	MW-12	"	"		"					"
	1145	MW-13	"	"		"					"

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 UST X Other NPDES Wastewater Drinking Water 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: 1.4°C
Bottles supplied by EPIC? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA
I REQUEST EPIC TO DISPOSE OF ALL SAMPLE REMAINDERS
DATE 2/6/97

RELINQUISHED BY	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR EPIC BY:
Sandy Sharp	2/7/97	0600			2/8/97	100	Barbara Walker

METHOD OF SHIPMENT

REMARKS:

Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

Attachment #2

Laboratory Reports for the August 1997 Ground Water Sampling Event

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

08/11/1997

EPIC Job Number: 97.03309

Project Description:
Job Description: TWP WT-1 Dehy

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
337519	MW-19A	08/05/1997	13:15	08/07/1997
337520	MW-9	08/05/1997	19:10	08/07/1997
337521	MW-11	08/05/1997	16:45	08/07/1997
337522	MW-12	08/05/1997	15:55	08/07/1997
337523	MW-13	08/05/1997	17:00	08/07/1997
337524	Trip Blank			08/07/1997

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

08/11/1997

EPIC Job Number: 97.03309
Sample Number: 337519

Project Description:
Job Description: TWP WT-1 Dehy

Sample Description: MW-19A

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Ethylbenzene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Toluene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Xylenes, Total		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
SURR: a,a,a-TFT		98	% Rec	S-8020M		08/09/1997	zst		2836	60-125

ANALYTICAL RESULTS REPORT

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

08/11/1997

EPIC Job Number: 97.03309
Sample Number: 337520

Project Description:
Job Description: TWP WT-1 Dehy

Sample Description: MW-9

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		3	ug/L	S-8020M		08/09/1997	zst		2836	2
Ethylbenzene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Toluene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Xylenes, Total		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
SURR: a,a,a-TFT		107	% Rec	S-8020M		08/09/1997	zst		2836	60-125

ANALYTICAL RESULTS REPORT

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

08/11/1997

EPIC Job Number: 97.03309
Sample Number: 337521

Project Description:
Job Description: TWP WT-1 Dehy

Sample Description: MW-11

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Ethylbenzene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Toluene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Xylenes, Total		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
SURR: a,a,a-TFT		99	% Rec	S-8020M		08/09/1997	zst		2836	60-125

ANALYTICAL RESULTS REPORT

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

08/11/1997

EPIC Job Number: 97.03309
Sample Number: 337522

Project Description:
Job Description: TWP WT-1 Dehy

Sample Description: MW-12

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Ethylbenzene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Toluene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Xylenes, Total		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
SURR: a,a,a-TFT		110	% Rec	S-8020M		08/09/1997	zst		2836	60-125

ANALYTICAL RESULTS REPORT

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

08/11/1997

EPIC Job Number: 97.03309
Sample Number: 337523

Project Description:
Job Description: TWP WT-1 Dehy

Sample Description: MW-13

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Ethylbenzene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Toluene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Xylenes, Total		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
SURR: a,a,a-TFT		104	% Rec	S-8020M		08/09/1997	zst		2836	60-125

ANALYTICAL RESULTS REPORT

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

08/11/1997

EPIC Job Number: 97.03309
Sample Number: 337524

Project Description:
Job Description: TWP WT-1 Dehy

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Ethylbenzene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Toluene		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
Xylenes, Total		<2	ug/L	S-8020M		08/09/1997	zst		2836	2
SURR: a,a,a-TFT		104	% Rec	S-8020M		08/09/1997	zst		2836	60-125

QUALITY CONTROL REPORT
BLANKS

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

08/11/1997

EPIC Job Number: 97.03309

Project Description:
Job Description: TWP WT-1 Dehy

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
EPA-8020 AQ (PRESERVED)							
Benzene		<2	ug/L	2	08/09/1997		2836
Ethylbenzene		<2	ug/L	2	08/09/1997		2836
Toluene		<2	ug/L	2	08/09/1997		2836
Xylenes, Total		<2	ug/L	2	08/09/1997		2836

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

08/11/1997

EPIC Job Number: 97.03309

Project Description:
Job Description: TWP WT-1 Dehy

Parameter	Flag	CCVS True Concentration	Units	CCVS Concentration Found	CCVS Percent Recovery	Date Analyzed	Run Batch Number
EPA-8020 AQ (PRESERVED)							
Benzene		20	ug/L	20	100.0	08/09/1997	2836
Ethylbenzene		20	ug/L	21	105.0	08/09/1997	2836
Toluene		20	ug/L	23	115.0	08/09/1997	2836
Xylenes, Total		60	ug/L	54	90.0	08/09/1997	2836

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

08/11/1997

EPIC Job Number: 97.03309

Project Description:
Job Description: TWP WT-1 Dehy

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch Number	Run Batch Number
EPA-8020 AQ (PRESERVED)													
Benzene		ug/L	<2	20	19	95.0	20	21	105.0	9.9	08/09/1997		2836
Ethylbenzene		ug/L	<2	20	19	95.0	20	21	105.0	9.9	08/09/1997		2836
Toluene		ug/L	<2	20	22	110.0	20	24	120.0	8.7	08/09/1997		2836
Xylenes, Total		ug/L	<2	60	53	88.3	60	57	95.0	7.3	08/09/1997		2836

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
LABORATORY CONTROL STANDARD

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

08/11/1997

EPIC Job Number: 97.03309

Project Description:
Job Description: TWP WT-1 Dehy

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
EPA-8020 AQ (PRESERVED)											
Benzene		2836	20	ug/L	20	100.0	20	100.0	0.0		08/09/1997
Ethylbenzene		2836	20	ug/L	21	105.0	21	105.0	0.0		08/09/1997
Toluene		2836	20	ug/L	23	115.0	22	110.0	4.4		08/09/1997
Xylenes, Total		2836	60	ug/L	56	93.3	57	95.0	1.8		08/09/1997

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 OPERATIONS CORP
ADDRESS P.O. BOX 1188 HOUSTON, TX 77251
PHONE (713) 646-7327 FAX (713) 646-7867
PROJECT NAME/LOCATION TWP WIT-L DEPY
PROJECT NUMBER
PROJECT MANAGER

REPORT TO: C/O ENRON Operations Corp
INVOICE TO: ATTN: 3AC3142
P.O. NO. P.O. BOX 1188
EPIC QUOTE NO. Houston, TX 77251

SAMPLED BY
Andy Sharp (PRINT NAME) Andy Sharp (SIGNATURE)
(PRINT NAME) (SIGNATURE)

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	# and Type of Containers: HCl	NaOH	HNO_3	H_2SO_4	OTHER	ANALYSES: BTEX 8020
8/5/97	1315	MW-19A	A	X						2/G	X
	1910	MW-9				2/G					
	1646	MW-11				X					
	1555	MW-12				X					
	1700	MW-13				X					
		TRIP BLANK				X					

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

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
DATE 8/5/97

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR EPIC BY:
Andy Sharp	8/6/97	0615			8-7-97	12:00	

METHOD OF SHIPMENT
REMARKS:

PT 1 - ORIGINAL - WHITE PT 2 - EPIC PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

Attachment #3

Laboratory Reports for the February 1998 Ground Water Sampling Event

Pace Analytical

Pace Analytical Services, Inc.
1000 Riverbend Blvd, Suite F
St. Rose, LA 70087
Tel: 504-469-0333
Fax: 504-469-0555

Larry Campbell
Transwestern Pipeline
6381 N. Main Street
Roswell, NM 88201

Project: TWP WT-1 DEHY
Site:
Episode: LBP

To: Larry Campbell

Enclosed please find the analytical results for sample(s) received by Pace Analytical Services, Inc. - New Orleans.

This report contains a summary of the quality control data associated with the analyses as well as copies of the chain-of-custody documents.

You may direct any inquires concerning this report to your Project Manager, or any one of the Project Managers listed below:

Ms. Karen H. Brown, Manager, Ext. 325
Mr. William R. Shackelford, Ext. 326
Ms. Cindy Olavesen, Ext. 327

Sincerely,

Cindy Olavesen
Project Manager

3/6/98
Date

Enclosures

Pace Analytical Services, Inc. - New Orleans
Sample Cross Reference Summary

Episode: LBP Client: Transwestern Pipeline

Project: TWP WT-1 DEHY

Site:

Lab ID	Client ID	Description	Matrix	Collected	Received
LBP-001	MW-11		Water	02/24/98	02/26/98
LBP-002	MW-13		Water	02/24/98	02/26/98
LBP-003	MW-12		Water	02/24/98	02/26/98
LBP-004	MW-9		Water	02/24/98	02/26/98
LBP-005	TRIP BLANK		Water	02/24/98	02/26/98

Report of Laboratory Analysis

Pace Analytical Services, Inc. - New Orleans

Single Sample - Protocol

Client ID:	MW-11	**Client:**	TRANSWESTERN PIPELINE
Project:	TWP WT-1 DEHY	**Site:**	None
Lab ID:	LBP-001	**Episode:**	LBP
Description:	None	**Matrix:**	Water
Method:	Water SW 8020 BTEX	**Batch:**	25391

Sample Qu:

% Moisture: n/a

Units: ug/l

Prep Factor: 1.00 **Leached:** n/a **Prepared:** **Analyzed:** 04-Mar-98 15:06 SLF

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
71-43-2	Benzene	1	ND		5.00	
100-41-4	Ethylbenzene	1	ND		5.00	
108-88-3	Toluene	1	ND		5.00	
1330-20-7	m-p-Xylene	1	ND		5.00	
1330-20-7	o-Xylene	1	ND		5.00	

5 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.

Report of Laboratory Analysis

Pace Analytical Services, Inc. - New Orleans

Single Sample - Protocol

Client ID:	MW-13	**Client:**	TRANSWESTERN PIPELINE
Project:	TWP WT-1 DEHY	**Site:**	None
Lab ID:	LBP-002	**Episode:**	LBP
Description:	None	**Matrix:**	Water
Method:	Water SW 8020 BTEX	**Batch:**	25391

Sample Qu:
% Moisture: n/a
Units: ug/l

Prep Factor: 1.00 **Leached:** n/a **Prepared:** **Analyzed:** 04-Mar-98 15:32 SLF

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
71-43-2	Benzene	1	ND		5.00	
100-41-4	Ethylbenzene	1	ND		5.00	
108-88-3	Toluene	1	ND		5.00	
1330-20-7	m-p-Xylene	1	ND		5.00	
1330-20-7	o-Xylene	1	ND		5.00	

5 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.

Report of Laboratory Analysis

Pace Analytical Services, Inc. - New Orleans

Single Sample - Protocol

Client ID:	MW-12	**Client:**	TRANSWESTERN PIPELINE
Project:	TWP WT-1 DEHY	**Site:**	None
Lab ID:	LBP-003	**Episode:**	LBP
Description:	None	**Matrix:**	Water
Method:	Water SW 8020 BTEX	**Batch:**	25391

Sample Qu:
% Moisture: n/a
Units: ug/l

Prep Factor: 1.00 **Leached:** n/a **Prepared:** **Analyzed:** 04-Mar-98 15:59 SLF

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
71-43-2	Benzene	1	ND		5.00	
100-41-4	Ethylbenzene	1	ND		5.00	
108-88-3	Toluene	1	ND		5.00	
1330-20-7	m-p-Xylene	1	ND		5.00	
1330-20-7	o-Xylene	1	ND		5.00	

5 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.

Report of Laboratory Analysis

Pace Analytical Services, Inc. - New Orleans

Single Sample - Protocol

Client ID:	MW-9	**Client:**	TRANSWESTERN PIPELINE
Project:	TWP WT-1 DEHY	**Site:**	None
Lab ID:	LBP-004	**Episode:**	LBP
Description:	None	**Matrix:**	Water
Method:	Water SW 8020 BTEX	**Batch:**	25391

Sample Qu:
% Moisture: n/a
Units: ug/l

Prep Factor: 1.00 **Leached:** n/a **Prepared:** **Analyzed:** 04-Mar-98 16:25 SLF

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
71-43-2	Benzene	1	16.3		5.00	
100-41-4	Ethylbenzene	1	ND		5.00	
108-88-3	Toluene	1	ND		5.00	
1330-20-7	m-p-Xylene	1	ND		5.00	
1330-20-7	o-Xylene	1	ND		5.00	

5 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.

Report of Laboratory Analysis

Pace Analytical Services, Inc. - New Orleans

Single Sample - Protocol

Client ID:	TRIP BLANK	**Client:**	TRANSWESTERN PIPELINE
Project:	TWP WT-1 DEHY	**Site:**	None
Lab ID:	LBP-005	**Episode:**	LBP
Description:	None	**Matrix:**	Water
Method:	Water SW 8020 BTEX	**Batch:**	25391

Sample Qu:
% Moisture: n/a
Units: ug/l

Prep Factor: 1.00 **Leached:** n/a **Prepared:** **Analyzed:** 04-Mar-98 16:51 SLF

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
71-43-2	Benzene	1	ND		5.00	
100-41-4	Ethylbenzene	1	ND		5.00	
108-88-3	Toluene	1	ND		5.00	
1330-20-7	m-p-Xylene	1	ND		5.00	
1330-20-7	o-Xylene	1	ND		5.00	

5 compound(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.

Pace Analytical Services, Inc. - New Orleans
Laboratory Quality Control Definitions

Our laboratory employs quality control (QC) measures to ensure the quality of our analytical data by defining its accuracy and precision. Presentation of the QC data with the report allows the data user the opportunity to evaluate these results and to gauge the method performance. In order to assist the understanding of these data, routine components of our QC program are defined below.

BATCH - A batch is a group of 20 samples or less of a given matrix and analysis by a specific protocol or analytical method.

BLANK - A method blank is a "clean" laboratory sample carried through the entire analytical process. One or more method blanks are prepared with each batch of samples. The analysis of method blanks demonstrates that method interferences caused by contaminants, reagents and glassware are known and minimized. A method blank should not contain any analytes of interest above the reporting limit. There are method allowances for common laboratory artifacts such as methylene chloride, acetone and bis-2-ethylhexyl phthalate.

LABORATORY CONTROL SPIKE - A laboratory control spike (LCS or blank spike) is a blank which has been spiked with known concentrations of target analytes. The LCS is carried through the entire analytical process. One or more LCS are prepared with each batch of samples. The percent recovery of the spiked analytes provides a measure of the accuracy of the analytical process in the absence of matrix effects.

MATRIX SPIKE - A matrix spike (MS) is a client sample which is spiked with known concentrations of target analytes. The MS is carried through the entire analytical process. One or more matrix spikes are prepared with every batch of samples. For organic methods, a matrix spike duplicate (MSD) is also prepared. The percent recovery of the spiked analytes provides a measure of the method accuracy in the selected sample and matrix.

DUPLICATE - A duplicate is a sample for which replicate aliquouts are carried through the entire analytical process. Comparison of the original results to those of the duplicate results provides a measure of the method precision in the sample and matrix. By convention, precision is measured for inorganic analyses using a sample and a sample duplicate, whereas for organics analyses, an MS/MSD are used.

SURROGATE - A surrogate is a non-target analyte which is added to all samples and QC samples prior to extraction or analysis. The percent recovery of the surrogate provides a measure of the method accuracy in each sample tested. Surrogates are used for organics methods only.

QC LIMITS - QC limits specify the expected percent recovery range for a spiked compound. QC limits may be set by method criteria or calculated from laboratory generated data. For many methods, these limits are advisory and do not require corrective action if exceeded.

Report of Quality Control

Pace Analytical Services, Inc. - New Orleans

Organic Protocol - Single Batch

Episode: LBP

Method: Water GC Aromatic/TPH Volatile Organics Batch: 25391 Units: ug/l

Parameter Name	LCS Spike	LCS %Rec	LCSD %Rec	MS Spike	MS %Rec	MSD %Rec	RPD %	QC Limits LCS	QC Limits MS/MSD	RPD Max	Qu
Benzene	20.0	70		20.0	65	70	7	39-150	39-150	25	
Ethylbenzene	20.0	99		20.0	90	92	2	32-160	32-160	25	
Methyl tert-butyl ether (MTBE)	20.0	77		20.0	73	48	41 *	40-150	40-150	25	
Toluene	20.0	92		20.0	87	93	7	46-148	46-148	25	
m-p-Xylene	*40.0*	*104*		*40.0*	99	*106*	7	40-150	40-150	25	
o-Xylene	20.0	111		20.0	103	110	7	40-150	40-150	25	

6 compound(s) reported

* denotes recovery outside of QC limits.
MS spike concentrations are not corrected for moisture content of the spiked sample.

Report of Batch Surrogate Recovery

Pace Analytical Services, Inc. - New Orleans

Organic Protocol - Single Batch

Episode: LBP

Method: Water GC Aromatic/TPH Volatile Organics **Batch:** 25391

Lab ID	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
25391B1	100	94						
25391B2	95	93						
25391B3	94	92						
25391B4	92	90						
25391B5	96	91						
25391MS	96	95						
25391MSD	96	92						
25391S1	97	92						
LAV-001	101	99						
LAV-002	94	96						
LBJ-001	93	90						
LBJ-002	101	97						
LBO-001	97	95						
LBO-002	96	94						
LBO-003	96	97						
LBO-004	81	86						
LBO-005	115	108						
LBO-006	158 *	204 *						
LBO-007	103	98						
LBO-008	100	95						
LBP-001	96	92						
LBP-002	95	92						
LBP-003	88	88						
LBP-004	94	89						
LBP-005	91	90						
LCH-001	99	96						
LCH-002	96	94						
LCO-001	90	89						
LCO-002	92	90						
QC limits:	**38 - 144**	**38 - 144**						

Sur 1: SS 4-Bromofluorobenzene (PID)
Sur 2: SS 4-Bromofluorobenzene (PID confirmation)

* denotes surrogate recovery outside of QC limits.
D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.
A Lab ID consisting of a batch number with a B suffix is a method blank.
A Lab ID consisting of a batch number with a S suffix is an LCS.
A Lab ID with a MS suffix is a matrix spike.
A Lab ID with a MSD suffix is a matrix spike duplicate.

Report of Method Blank

Pace Analytical Services, Inc. - New Orleans

Organic Protocol - Single Batch

Lab ID: 25391B1

Description: Water Method Blank **Episode:** LBP **% Moisture:** n/a

Method: Water GC Aromatic/TPH Volatile Organics **Batch:** 25391 **Units:** ug/l

Prep Factor: 1 **Leached:** n/a **Prepared:** **Analyzed:** 26-Feb-98 11:48 SLF

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit
71-43-2	Benzene	1	ND		0.500
100-41-4	Ethylbenzene	1	ND		0.500
108-88-3	Toluene	1	ND		0.500
1330-20-7	m-p-Xylene	1	ND		0.500
1330-20-7	o-Xylene	1	ND		0.500

5 compound(s) reported

ND denotes Not Detected at or above the reporting limit.
DF denotes Dilution Factor.
RL denotes sample Reporting Limit.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.

Pace Analytical

388942

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: Transwestern Pipeline Co. (Red Bluff)	Report To: Mike Johnson	Turn around Time: ☐ 24 Hours ☐ 48 Hours ☐ 3-5 Days ☐ 1 Week ☐ 2 Weeks ☒ Normal 14 Days	Pace Client No.
Address: 2435 West Loop South Suite 250 Houston, TX 77027	Bill To:		Pace Project Manager
	P.O. # / Billing Reference		Pace Project No.
Phone: 713-627-5217	Project Name / No.: TRP GW Monitoring		*Requested Due Date:

Sampled By (PRINT): Andy Hill

Sampler Signature: Andy Hill — Date Sampled: 12/4/13

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA (HCL)	NaOH	$Na_2S_2O_3$	ANALYSES REQUEST: BTEX (8260)	REMARKS
1	MW-11	0915	H_2O		2				2			X	
2	MW-13	0930											
3	MW-12	1045											
4	MW-9	1100											
5	Trip Blank												
6													
7													
8													

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT/DATE	SHIPMENT METHOD RETURNED/DATE

Additional Comments

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Andy Hill / LDIX	12/5/13	0630	LDIX / Anna Holstein/Pace	12/5/13	10:45

SAMPLE CONDITION

Temp: 1 °C	Received on Ice: (Y)/N	Sealed Cooler: Y/N	Samples Intact: (Y)/N	pH

SEE REVERSE SIDE FOR INSTRUCTIONS

Bill Olson

From: Robinson, George[SMTP:grobins@enron.com]
Sent: Thursday, January 15, 1998 4:50 PM
To: Bill Olson
Cc: Wayne Price
Subject: Transwestern WT-1 Station

Dear Bill,

Cypress Engineering will be collecting ground water samples at the Transwestern WT-1 Station on or about January 20 through January 22, 1998. If you have any questions or comments regarding this notice please call Sandy Sharp at 713-646-7252.

Thanks,

George Robinson

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

April 10, 1997

CERTIFIED MAIL
RETURN RECEIPT NO: P-269-269-298

Mr. Larry Campbell
Transwestern Pipeline Company
6381 North Main
Roswell, New Mexico 88201

RE: TRANSWESTERN PIPELINE CO. WT-1 COMPRESSOR STATION DEHY AREA

Dear Mr. Campbell:

The New Mexico Oil Conservation Division (OCD) has completed a review of Transwestern Pipeline Company's (TPC) March 7, 1997 "SEMI-ANNUAL REPORT OF GROUND WATER REMEDIATION ACTIVITIES, TRANSWESTERN PIPELINE COMPANY WT-1 COMPRESSOR STATION DEHY AREA, EDDY COUNTY, NEW MEXICO". This document contains the results of TPC's remedial actions at the WT-1 Compressor Station dehy area during the second half of 1996. The document also contains TPC's proposal to modify the sampling schedule from quarterly to semi-annually; report on the remedial actions and monitoring on an annual basis; and dispose on the ground surface monitor well purge water which is less than New Mexico Water Quality Control Commission standards.

The proposed disposal, sampling and reporting modifications, as contained in the above referenced documents, are approved.

Please be advised that OCD approval does not relieve TPC of liability should contamination exist which is outside the scope of work plan, or if the proposed work plan fails to the adequately remediate and monitor contamination at the site. In addition, OCD approval does not relieve TPC of responsibility for compliance with any other federal, state or local laws and/or regulations.

If you have any questions, please contact me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrogeologist
Environmental Bureau

xc: Jerry Sexton, OCD Hobbs District Supervisor
Wayne Price, OCD Hobbs District
George Robinson, Cypress Engineering Services, Inc.

P 269 269 298

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PS Form **3800**, April 1995

FAX (505) 625-8060

Phone (505) 623-2761

Transwestern Pipeline Company
TECHNICAL OPERATIONS
6381 North Main • Roswell, New Mexico 88201

March 7, 1997

Mr. William C. Olson
Environmental Bureau
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, New Mexico 87505

RE: Semi-annual Report of Ground Water Remediation Activities
Transwestern Pipeline Company WT-1 Compressor Station Dehy Area
Lea County, New Mexico

Dear Bill,

The attached report is submitted pursuant to the NMOCD's requirement for semi-annual reporting of ground water remediation activities at the subject facility.

If you have any questions or comments regarding this report, please contact me at (505) 625-8022 or George Robinson at (713) 646-7327.

Sincerely,

Larry Campbell

Larry Campbell
Division Environmental Specialist

LC/sls

xc w/attachment:

Jerry Sexton	NMOCD Hobbs District Office
Randy Smith	TW Operations
George Robinson	Cypress Engineering Services

Semi-Annual Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area
Lea County, New Mexico

Submitted to:
New Mexico Oil Conservation Division

March 3, 1997

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

Prepared by:
Cypress Engineering Services, Inc.
16300 Katy Freeway, Suite 210
Houston, Texas 77094-1610

Semi-Annual Report of Ground Water Remediation Activities

Transwestern Pipeline Company

WT-1 Compressor Station Dehy Area

I. Ground Water Monitoring Activities

4th Quarter, 1996, Ground Water Sampling Event

Transwestern Pipeline Company (TW) completed the 4th quarter, 1996, sampling event on November 11, 1996.

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. Table 1 presents a summary of ground water and PSH surface elevation information. A ground water surface elevation map for the November, 1996, sampling event is included as Figure 2.

Ground water samples were collected from four of the five monitor wells at the site. Samples were not collected from monitor well MW-10 due to the presence of PSH in the well casing. Ground water samples were delivered to a laboratory for analysis by EPA Method 8020 for benzene, toluene, ethylbenzene, and xylenes (BTEX). A summary of the laboratory results is presented in Table 2. A BTEX distribution map for the November, 1996, sampling event is included as Figure 3.

Approximately 20 gallons of purge water were generated during the 4th quarter, 1996, sampling event. The purge water has been contained on-site in an approved DOT drum.

Results/Conclusions from Ground Water Sampling Events

Occurrence and Direction of Ground Water Flow

Water table elevations measured during the 4th quarter 1996 sampling event are indicated on Figure 2. Consistent with previous sampling events, there is very little shallow ground water present just west of the hydrocarbon release area as indicated by the low level of ground water measured in monitor well MW-11.

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-10 and the absence of PSH in all other monitor wells. The thickness of accumulated PSH in monitor well MW-10 was measured in November, 1996, at 0.34 feet. Based on the information currently available, the volume and lateral extent of PSH in the area appears to be relatively limited.

At this time, the presence of PSH does not appear to require a modification of the existing remediation plan due to the relatively limited lateral extent of PSH and the SVE operation currently in progress.

Condition of Affected Ground water

The condition of affected ground water, based on the recent sampling event, has not changed significantly from previous sampling events as evidenced by the information presented in Table 2. The three monitor wells downgradient of the release area continue to yield ground water samples that are non-detect for BTEX constituents. Monitor well MW-9, located about 200 feet south of the release area, continues to yield samples that are near non-detect for BTEX constituents with a detected concentration for benzene of 9 ppb for the 4th quarter 1996.

II. Planned Changes to the Ground Water Monitoring Program

Disposal of Monitor Well Purge Water

TW anticipates that approximately 20 gallons (total) of purge water will be generated from the five monitor wells in the course of each sampling event. The purge water generated from all five monitor wells will be stored on-site in one or more 55-gallon drums. A water sample will be collected from each drum containing purge water prior to a determination regarding disposal. Purge water samples will be delivered to a laboratory for analysis for BTEX compounds (Method 8020). In the event analytical results indicate the concentration of all BTEX compounds to be below WQCC standards, the contents of the associated drum will be emptied to the ground surface on-site. In the event analytical results indicate the concentration of any BTEX compound to be above WQCC Standards, the contents of the associated drum will be placed into the on-site condensate AST.

Frequency of Ground Water Monitoring

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

Routine Reporting of Monitoring Activities

TW proposes to move from semi-annual reporting to annual reporting. The next annual report will be submitted to the OCD by March 1, 1998.

III. Status of Remediation Activities

Remediation Activities Completed During the 4th Quarter of 1996

The following remediation activities were completed during the 4th quarter of 1996: 1) Transwestern completed one quarterly ground water sampling event as required by the remediation plan; 2) Transwestern has continued routine O&M of the remediation system to ensure efficient and effective operation; and 3) Transwestern modified the SVE system blower to facilitate operation at a lower extraction rate.

Transwestern modified the SVE system blower in order to lower the extraction rate from approximately 160 cfm to 100 cfm (both rates at 60" H_2O vacuum). The lower extraction rate allows Transwestern to

Semi-Annual Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

Figures

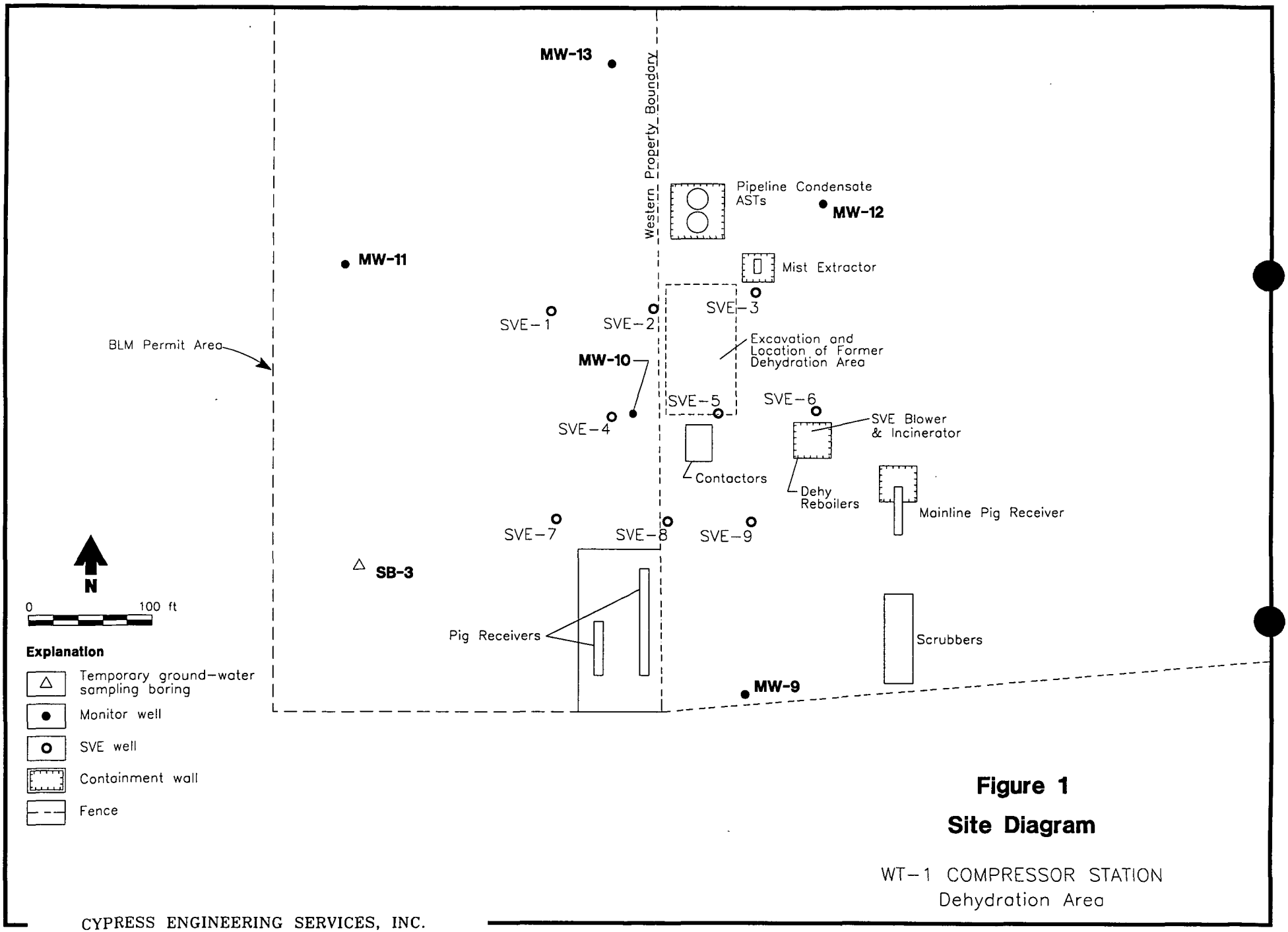


Figure 1

Site Diagram

WT-1 COMPRESSOR STATION
Dehydration Area

CYPRESS ENGINEERING SERVICES, INC.
2-97

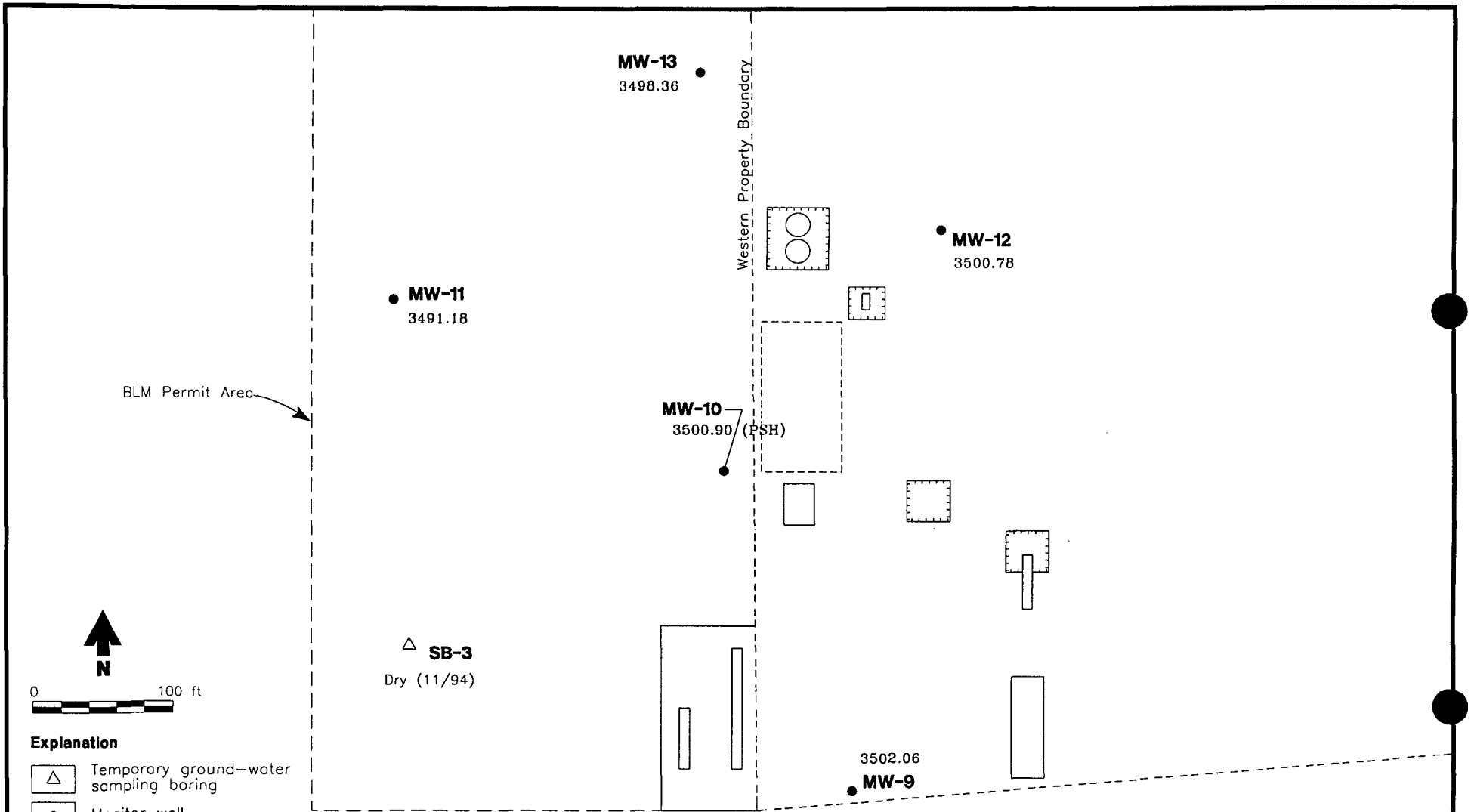


Figure 2

Ground Water Elevations, Nov. 1996

WT-1 COMPRESSOR STATION
Dehydration Area

CYPRESS ENGINEERING SERVICES, INC.
2-97

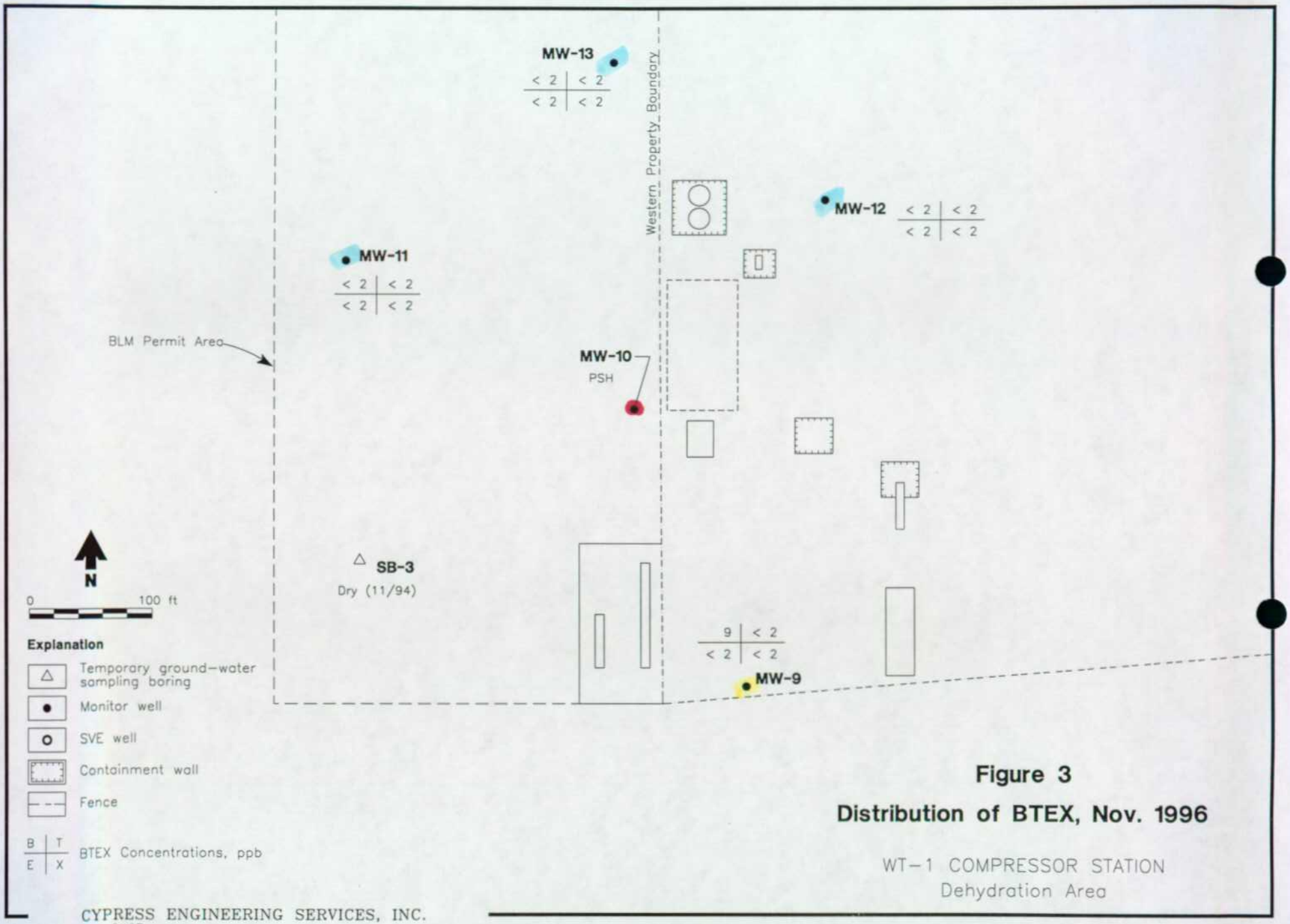


Figure 3

Distribution of BTEX, Nov. 1996

WT-1 COMPRESSOR STATION
Dehydration Area

CYPRESS ENGINEERING SERVICES, INC.
2-97

Semi-Annual Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

Tables

Table 1. Summary of Ground Water Surface Elevations
TW WT-1 Compressor Station Dehy Area

Well	Sampling Date	PSH Thickness (ft)	Groundwater Surface Elevation (ft)
MW-9	11/94	(a)	3502.17
	11/95	(a)	3501.64
	2/96	(a)	3502.04
	5/96	(a)	3502.13
	8/96	(a)	3501.78
	11/96	(a)	3502.06
MW-10	11/94	(a)	3500.82
	11/95	1.90	3500.76
	2/96	1.67	3501.04
	5/96	1.65	3501.19
	8/96	1.15	3500.97
	11/96	0.34	3500.90
MW-11	11/94	(a)	DRY
	11/95	(a)	3489.74
	2/96	(a)	3491.14
	5/96	(a)	3490.51
	8/96	(a)	3490.88
	11/96	(a)	3491.18
MW-12	11/94	(a)	3501.88
	11/95	(a)	3500.70
	2/96	(a)	3501.06
	5/96	(a)	3501.23
	8/96	(a)	3500.88
	11/96	(a)	3500.78
MW-13	11/94	(a)	3498.08
	11/95	(a)	3498.23
	2/96	(a)	3498.51
	5/96	(a)	3498.63
	8/96	(a)	3498.38
	11/96	(a)	3498.36

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

Table 2. Summary of Ground Water Analyses
TW WT-1 Compressor Station Dehy Area

Well	Sampling Date	General Water Quality			BTEX Concentration - (ug/L)			
		pH (Units)	DO (mg/l)	Conductivity (µmhos/cm) x 1000	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWQCC Standard		6-9	none	none	10	750	750	620
MW-9	11/94	-	-	-	**12**	<0.5	<0.5	<0.5
	11/95	7.03	-	2.89	4	3	<2	11
	2/96	6.48	-	2.98	**13**	<2	<2	<2
	5/96	-	-	-	**14**	<2	<2	<2
	8/96	6.79	-	3.09	**14**	<2	<2	<3
	11/96	6.97	-	-	9	<2	<2	<2
MW-10	11/94	-	-	-	**9000[b]**	**16000[b]**	620[b]	**8500[b]**
	11/95	-	-	-	(a)	(a)	(a)	(a)
	2/96	-	-	-	(a)	(a)	(a)	(a)
	5/96	-	-	-	(a)	(a)	(a)	(a)
	8/96	-	-	-	(a)	(a)	(a)	(a)
	11/96	-	-	-	(a)	(a)	(a)	(a)
MW-11	11/94	-	-	-	(c)	(c)	(c)	(c)
	11/95	-	-	-	<2	<2	<2	<2
	2/96	7.34	-	1.92	<2	<2	<2	<2
	5/96	-	-	-	<2	2	<2	3
	8/96	7.11	-	2.05	<2	<2	<2	<3
	11/96	7.15	6	-	<2	<2	<2	<2
MW-12	11/94	-	-	-	<0.5	1.9	<0.5	3.1
	11/95	6.97	-	3.26	<2	<2	<2	<2
	2/96	6.71	-	3.4	<2	<2	<2	<2
	5/96	-	-	-	<2	<2	<2	<2
	8/96	6.7	-	3.43	<2	<2	<2	<3
	11/96	7.06	6	-	<2	<2	<2	<2
MW-13	11/94	-	-	-	<0.5	<0.5	<0.5	<0.5
	11/95	7.63	-	1.53	<2	<2	<2	<2
	2/96	7.18	-	1.88	<2	<2	<2	<2
	5/96	-	-	-	<2	3	<2	7
	8/96	7.02	-	1.98	<2	<2	<2	<3
	11/96	7.18	4	-	<2	<2	<2	<2

NOTES:
(a) No sample collected due to presence of phase separated hydrocarbon
(b) Sample analyzed at 25x dilution
(c) No sample collected due to absence of water in wellbore

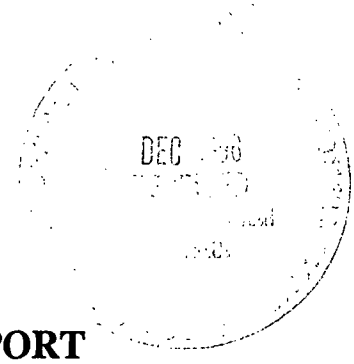
Semi-Annual Report of Ground Water Remediation Activities

Transwestern Pipeline Company
WT-1 Compressor Station Dehy Area

Attachment #1

Laboratory Reports for the November 1996 Ground Water Sampling Event

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

11/25/1996

EPIC Job Number: 96.08388

Project Description:
Job Description: TWP/WT-1 Dehy

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
323003	MW-11	11/11/1996	17:05	11/14/1996
323004	MW-13	11/11/1996	16:50	11/14/1996
323005	MW-9	11/12/1996	09:05	11/14/1996
323006	MW-12	11/12/1996	09:20	11/14/1996
323007	Trip Blank			11/14/1996

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

11/25/1996

EPIC Job Number: 96.08388
Sample Number: 323003

Project Description:
Job Description: TWP/WT-1 Dehy

Sample Description: MW-11

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		<2	ug/L	S-8020M		11/21/1996	zst		2645	2
Ethylbenzene		<2	ug/L	S-8020M		11/21/1996	zst		2645	2
Toluene		<2	ug/L	S-8020M		11/21/1996	zst		2645	2
Xylenes, Total		<2	ug/L	S-8020M		11/21/1996	zst		2645	2
SURR: a,a,a-TFT		86	ug/L	S-8020M		11/21/1996	zst		2645	60-125

ANALYTICAL RESULTS REPORT

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

11/25/1996

EPIC Job Number: 96.08388
Sample Number: 323004

Project Description:
Job Description: TWP/WT-1 Dehy

Sample Description: MW-13

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		<2	ug/L	S-8020M		11/21/1996	zst		2645	2
Ethylbenzene		<2	ug/L	S-8020M		11/21/1996	zst		2645	2
Toluene		<2	ug/L	S-8020M		11/21/1996	zst		2645	2
Xylenes, Total		<2	ug/L	S-8020M		11/21/1996	zst		2645	2
SURR: a,a,a-TFT		77	ug/L	S-8020M		11/21/1996	zst		2645	60-125

ANALYTICAL RESULTS REPORT

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

11/25/1996

EPIC Job Number: 96.08388
Sample Number: 323005

Project Description:
Job Description: TWP/WT-1 Dehy

Sample Description: MW-9

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		9	ug/L	S-8020M		11/21/1996	zst		2646	2
Ethylbenzene		<2	ug/L	S-8020M		11/21/1996	zst		2646	2
Toluene		<2	ug/L	S-8020M		11/21/1996	zst		2646	2
Xylenes, Total		<2	ug/L	S-8020M		11/21/1996	zst		2646	2
SURR: a,a,a-TFT		121	ug/L	S-8020M		11/21/1996	zst		2646	60-125

ANALYTICAL RESULTS REPORT

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

11/25/1996

EPIC Job Number: 96.08388
Sample Number: 323006

Project Description:
Job Description: TWP/WT-1 Dehy

Sample Description: MW-12

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		<2	ug/L	S-8020M		11/21/1996	zst		2646	2
Ethylbenzene		<2	ug/L	S-8020M		11/21/1996	zst		2646	2
Toluene		<2	ug/L	S-8020M		11/21/1996	zst		2646	2
Xylenes, Total		<2	ug/L	S-8020M		11/21/1996	zst		2646	2
SURR: a,a,a-TFT		86	ug/L	S-8020M		11/21/1996	zst		2646	60-125

ANALYTICAL RESULTS REPORT

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

11/25/1996

EPIC Job Number: 96.08388
Sample Number: 323007

Project Description:
Job Description: TWP/WT-1 Dehy

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch Number	Run Batch Number	Reporting Limit
EPA-8020 AQ (PRESERVED)										
Benzene		<2	ug/L	S-8020M		11/21/1996	zst		2646	2
Ethylbenzene		<2	ug/L	S-8020M		11/21/1996	zst		2646	2
Toluene		<2	ug/L	S-8020M		11/21/1996	zst		2646	2
Xylenes, Total		<2	ug/L	S-8020M		11/21/1996	zst		2646	2
SURR: a,a,a-TFT		82	ug/L	S-8020M		11/21/1996	zst		2646	60-125

QUALITY CONTROL REPORT
BLANKS

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

11/25/1996

EPIC Job Number: 96.08388

Project Description:
Job Description: TWP/WT-1 Dehy

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
EPA-8020 AQ (PRESERVED)							
Benzene		<2	ug/L	2	11/20/1996		2645
Ethylbenzene		<2	ug/L	2	11/20/1996		2645
Toluene		<2	ug/L	2	11/20/1996		2645
Xylenes, Total		<2	ug/L	2	11/20/1996		2645
EPA-8020 AQ (PRESERVED)							
Benzene		<2	ug/L	2	11/21/1996		2646
Ethylbenzene		<2	ug/L	2	11/21/1996		2646
Toluene		<2	ug/L	2	11/21/1996		2646
Xylenes, Total		<2	ug/L	2	11/21/1996		2646

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

11/25/1996

EPIC Job Number: 96.08388

Project Description:
Job Description: TWP/WT-1 Dehy

Parameter	Flag	CCVS True Concentration	Units	CCVS Concentration Found	CCVS Percent Recovery	Date Analyzed	Run Batch Number
EPA-8020 AQ (PRESERVED)							
Benzene		20	ug/L	23	115.0	11/20/1996	2645
Ethylbenzene		20	ug/L	25	125.0	11/20/1996	2645
Toluene		20	ug/L	24	120.0	11/20/1996	2645
Xylenes, Total		60	ug/L	75	125.0	11/20/1996	2645
EPA-8020 AQ (PRESERVED)							
Benzene		20	ug/L	18	90.0	11/21/1996	2646
Ethylbenzene		20	ug/L	15	75.0	11/21/1996	2646
Toluene		20	ug/L	17	85.0	11/21/1996	2646
Xylenes, Total		60	ug/L	53	88.3	11/21/1996	2646

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

11/25/1996

EPIC Job Number: 96.08388

Project Description:
Job Description: TWP/WT-1 Dehy

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch Number	Run Batch Number
EPA-8020 AQ (PRESERVED)													
Benzene		ug/L	<2	20	20	100.0	20	22	110.0	9.5	11/20/1996		2645
Ethylbenzene		ug/L	<2	20	19	95.0	20	21	105.0	9.9	11/20/1996		2645
Toluene		ug/L	<2	20	19	95.0	20	21	105.0	9.9	11/20/1996		2645
Xylenes, Total		ug/L	<2	40	33	82.5	40	37	92.5	11.4	11/20/1996		2645
EPA-8020 AQ (PRESERVED)													
Benzene		ug/L	29	20	45	80.0	20	51	110.0	12.5	11/21/1996		2646
Ethylbenzene		ug/L	<2	20	19	95.0	20	22	110.0	14.6	11/21/1996		2646
Toluene		ug/L	<2	20	19	95.0	20	22	110.0	14.6	11/21/1996		2646
Xylenes, Total		ug/L	<2	40	35	87.5	40	42	105.0	18.2	11/21/1996		2646

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
LABORATORY CONTROL STANDARD

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

11/25/1996

EPIC Job Number: 96.08388

Project Description:
Job Description: TWP/WT-1 Dehy

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
EPA-8020 AQ (PRESERVED)											
Benzene		2645	20	ug/L	14	70.0	18	90.0	25.0		11/20/1996
Ethylbenzene		2645	20	ug/L	15	75.0	19	95.0	23.5		11/20/1996
Toluene		2645	20	ug/L	14	70.0	19	95.0	30.3		11/20/1996
Xylenes, Total		2645	40	ug/L	27	67.5	35	87.5	25.8		11/20/1996
EPA-8020 AQ (PRESERVED)											
Benzene		2646	20	ug/L	22	110.0	18	90.0	19.9		11/21/1996
Ethylbenzene		2646	20	ug/L	19	95.0	16	80.0	17.1		11/21/1996
Toluene		2646	20	ug/L	21	105.0	17	85.0	21.0		11/21/1996
Xylenes, Total		2646	40	ug/L	35	87.5	28	70.0	22.2		11/21/1996

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 OPERATIONS CORP 77251
ADDRESS P.O. BOX 1188 HOUSTON TX 77001
PHONE (713) 646-7252 FAX 713/646-7867
PROJECT NAME/LOCATION TWP / WT-1 Dehy
PROJECT NUMBER
PROJECT MANAGER

REPORT TO: HOUSTON TX
INVOICE TO: AHN 3AC3142
P.O. NO.
EPIC QUOTE NO.

SAMPLED BY Savoy Sharp (PRINT NAME) SIGNATURE
(PRINT NAME) SIGNATURE

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	# and Type of Containers: HCl	NaOH	HNO_3	H_2SO_4	OTHER	ANALYSES: BTEX - 8020
11/11/96	1705	MW-11	A	X		3/6					
11/12/96	1650	MW-13	"	"		"					
11/12/96	0905	MW-9	"	"		"					
11/12/96	0920	MW-12	"	"		"					
		Trip Blank*									

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

* TB received in cooler. Add to job per George.
11/14/96 - RS

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 SS
DATE 11/12/96

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR EPIC BY:
Savoy Sharp	11/13/96	0600			11/14/96	10:15	

METHOD OF SHIPMENT

REMARKS:

PT 1 - ORIGINAL - WHITE PT 2 - EPIC PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

March 24, 1997

CERTIFIED MAIL
RETURN RECEIPT NO: P-269-269-289

Mr. Bill Kendrick
ENRON Operations Corp.
P.O. Box 1188
Houston, Texas 77251-1188

RE: GROUND WATER MONITORING
ENGINE ROOM DRAIN PIT AREA
WT-1 COMPRESSOR STATION

Dear Mr. Kendrick:

The New Mexico Oil Conservation Division (OCD) has completed a review of Transwestern Pipeline Company's (TPC) January 13, 1997 "REPORT OF GROUND WATER MONITORING ACTIVITIES, WT-1 COMPRESSOR STATION: ENGINE ROOM DRAIN PIT AREA, TRANSWESTERN PIPELINE COMPANY". This document contains the results of TPC's recent ground water monitoring actions and a proposed long term ground water monitoring plan for ground water contamination related to the former engine room drain pit area at TPC's WT-1 Compressor Station.

The above referenced monitoring plan is approved with the following conditions:

1. All water quality sampling and analysis will be conducted according to EPA and OCD approved methods.

2. All wastes generated will be disposed of only at an OCD approved site or in an OCD approved manner.

3. TPC will notify the OCD at least one week in advance of scheduled activities such that the OCD has the opportunity to witness the events and/or split samples.

4. All original documents submitted for approval will be sent to the OCD Santa Fe Office with copies provided to the OCD Hobbs District Office.

Please be advised that OCD approval does not relieve TPC of liability should the work plan fail to adequately monitor contamination related to TPC's activities or if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve TPC of responsibility for compliance with any other federal, state or local laws and/or regulations.

If you have any questions, please contact me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrogeologist
Environmental Bureau

xc: Jerry Sexton, OCD Hobbs District Supervisor
Wayne Price, OCD Hobbs District Office
George Robinson, Cypress Engineering Services, Inc.

P 269 269 289

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PS Form **3800**, April 1995

ENRON
OPERATIONS CORP.

P. O. Box 1188 Houston, Texas 77251-1188 (713) 853-6161

February 13, 1997

Mr. William C. Olson
Environmental Bureau
New Mexico Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, New Mexico 87505

RE: Report of Ground Water Monitoring Activities
WT-1 Compressor Station: Engine Room Drain Pit Area
Transwestern Pipeline Company

Dear Bill,

Transwestern previously submitted to your office a Phase II assessment report for the subject site. This report presented the most recent assessment work completed to delineate affected ground water in the vicinity of a former impoundment located at the facility. Transwestern is continuing in its effort to develop a "Corrective Action Plan" (CAP) to address this issue. In the meantime, Transwestern has implemented a quarterly ground water monitoring program. The attached report presents the field and laboratory data obtained in the course of the first quarterly ground water sampling event which was completed in November, 1996. In addition, the attached report presents Transwestern's ground water monitoring plan for subsequent sampling events.

If you have any questions or comments regarding this issue, please contact me at (713) 646-7644 or George Robinson at (713) 646-7327.

Sincerely,

Bill Kendrick
Manager, Environmental Affairs

gcr/BK

xc: Jerry Sexton OCD Hobbs District Office
Larry Campbell Transwestern Pipeline Co.

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

January 27, 1997

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

Prepared by:
Cypress Engineering Services, Inc.
16300 Katy Freeway, Suite 210
Houston, Texas 77094-1610

Report of Ground Water Monitoring Activities

Transwestern Pipeline Company

WT-1 Compressor Station: Engine Room Drain Pit Area

I. Ground Water Monitoring Activities

4th Quarter 1996 Ground Water Sampling Event

Transwestern has implemented a quarterly ground water monitoring program with the completion of the 4th quarter, 1996, sampling event. This event was completed in November, 1996.

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. Table 1 presents a summary of ground water surface elevation information. A ground water surface elevation map for the November, 1996, sampling event is included as Figure 2.

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), nine 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. Distribution maps for BTEX, selected halogenated compounds, and selected inorganic constituents are included as Figure 3, Figure 4, and Figure 5, respectively.

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 4th quarter, 1996, 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 0.09 feet. 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 event, 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.

II. Ground Water Monitoring Plan for Subsequent Sampling Events

Frequency of Sampling Events

Transwestern will continue to collect ground water samples from the engine room pit area monitor wells on a quarterly basis until an alternative schedule is proposed within the scope of a corrective action plan for this site and approved by the OCD.

Ground water samples will be collected from all monitor wells which are capable of producing a sufficient volume of water for collection of samples and do not indicate the presence of accumulated PSH. There are a total of eleven ground water monitor wells at this site. Based on experience obtained in the course of previous sampling events as described above, Transwestern anticipates that ground water samples will be collected from a total of nine monitor wells during each subsequent sampling event.

General Sampling Procedures

The depth to water (and depth to PSH at MW-2) will be measured at each monitor well prior to sampling activities.

Prior to collection of samples for analyses, each ground water monitor well will be purged by hand bailing a minimum of three well casing volumes of water or until the well is bailed dry. The water removed with the last bailer full of purge water will be used for obtaining general water quality parameters: pH, temperature, conductivity, and turbidity.

Appropriate sample volume, sample containers, sample preservatives, and chain-of-custody procedures will be utilized for all ground water samples collected.

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").

Analytical Program

Ground water samples will be collected and submitted to a laboratory for analysis as follows:

- Volatile Organic Compounds (method 8240)
- Total Dissolved Solids (method 160.1)
- Chloride (method 325.2)
- Sulfate (method 375.2)
- Nitrite & Nitrate as Nitrogen (method 353.2)
- Arsenic, Barium, Cadmium, Chromium (total), Lead, Mercury, Selenium, Silver, Copper, Iron, Manganese, & Zinc (method 7470 for Hg & method 6010 for all others)

Notes:

1. Analysis for polynuclear aromatic hydrocarbons (PAH) are not proposed based on the results from a previous sampling event which indicate that PAH compounds were detected in only three of nine ground water samples and in each case were detected at trace concentrations which were well below NMWQCC standards. These results were previously reported by Transwestern in a report titled "Supplemental Environmental Investigation; WT-1 Compressor Station; Former Engine Room Drain and Filter Pit Area" and dated March 28, 1995.

2. The analyte list for VOC analyses will include the two geometric isomers of 1,2-dichloroethene (*cis-* & *trans-*) and the three isomers of dichlorobenzene (*o-*, *m-*, & *p-*) which were not reported by the laboratory for the previous two sample events.
3. Ground water samples collected from monitor wells which produce samples with a measured turbidity of 5 NTU or greater may be filtered at the laboratory prior to analyses for metal constituents.

Reporting

Transwestern will prepare and submit to the OCD an annual ground water monitoring report which will include the following:

- A description of all ground water monitoring activities completed during the reporting period including any recommendations for modifications to the monitoring plan if deemed necessary;
- A summary table of measured depth to water and depth to PSH where present;
- A water table elevation map using information obtained in the course of the most recent sampling event;
- Summary tables listing analytical results of all constituents detected in ground water samples (including previously reported results);
- Copies of all laboratory reports not previously provided; and
- Contaminant distribution maps for the primary constituents of concern reported by the laboratory for samples collected in the course of the most recent sampling event.

The first report will be submitted by March 1, 1998.

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	Elevation (feet above msl)	Sampling Date 11/94			Sampling Date 9/95			Sampling Date 11/96		
		Depth to Hydrocarbon (HC) (ft)	Depth to Water or HC/Water Interface (ft)	Groundwater Surface Elevation (ft)	Depth to Hydrocarbon (HC) (ft)	Depth to Water or HC/Water Interface (ft)	Groundwater Surface Elevation (ft)	Depth to Hydrocarbon (HC) (ft)	Depth to Water or HC/Water Interface (ft)	Groundwater Surface Elevation (ft)
MW-1	3547.67	(a)	47.59	3500.08	(a)	48.82	3498.85	(a)	49.79	3497.88
MW-2	3546.28	PSH	-	NA *	PSH	-	NA *	49.91	-	NA *
MW-3	3548.99	(a)	48.71	3500.28	(a)	49.49	3499.50	(a)	49.76	3499.23
MW-4	3548.29	(a)	47.18	3501.11	(a)	47.50	3500.79	(a)	47.50	3500.79
MW-5	3543.59	(a)	48.68	3494.91	(a)	49.48	3494.11	(a)	50.12	3493.47
MW-6	3543.29	(a)	50.22	3493.07	(a)	50.97	3492.32	(a)	51.93	3491.36
MW-7	3541.97	(a)	47.67	3494.30	(a)	48.54	3493.43	(a)	48.67	3493.30
MW-8	3541.47	(a)	49.20	3492.27	(a)	50.14	3491.33	(a)	50.73	3490.74
MW-14	3539.71				(a)	51.53	3488.18	(a)	51.96	3487.75
MW-15	3542.82				(a)	46.43	3496.39	(a)	46.61	3496.21
MW-16	3546.01				(a)	48.86	3497.15	(a)	49.42	3496.59

NOTES:

(a) Not applicable since no measurable thickness of hydrocarbon is present

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	Bromodichloromethane	Methyl ethyl ketone (2-butanone)	Chloroethane	Chloroform	1,2-Dichlorobenzene	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	none	100.0	none	25.0	10.0	5	none	none	none	20	60	100	1
MW-1	11/94	**12**[a]	100[a]	10[a]	110[a]	na	<2.0[a]	na	<2.0[a]	<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]
	9/95	**13**	90	8	110	2000	<5	400	<10	<5	na	**730**	**13**	**9**	na	170	1800	19	57	24	<10
	11/96	9	66	<5	39	630	<5	100	<10	<5	na	**480**	9	<5	na	88	1500	12	<5	20	<10
MW-3	11/94	5	<0.5	<0.5	0.5	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
MW-4	12/94	<0.5	<0.5	<0.5	<0.5	na	0.2	na	<0.2	7.6	<0.2	0.9	<0.2	4.7	<0.2	<2.0	na	0.5	<0.2	<0.2	<0.2
	9/95	<1	<5	<5	<5	<100	<5	<100	<10	6	na	<5	<5	<5	na	<5	<50	<5	<5	<5	<10
	11/96	<5	<5	<5	<5	<100	<5	<100	<10	6	na	<5	<5	<5	na	<5	<50	<5	<5	<5	<10
MW-5	12/94	**20**	19	8.3	26	na	<0.2	na	8.9	<0.2	0.5	18	1.1	<0.2	12	43	na	0.8	<0.2	3.2	<0.2
	9/95	**12**	24	<5	24	1000	<5	200	100	<5	na	**200**	7	<5	na	190	520	<5	<5	67	<10
	11/96	**20**	44	18	44	<100	94	<100	31	<5	na	**150**	<5	<5	na	5	300	<5	<5	<5	**11**
MW-6	11/94	1.8	<0.5	<0.5	0.5	na	<0.2	na	0.5	<0.2	0.2	13	<0.2	2.9	6.8	<2.0	na	0.4	<0.2	15	<0.2
	9/95	2	<5	<5	<5	<100	<5	<100	<10	<5	na	17	<5	<5	na	<5	<50	<5	<5	21	<10
	11/96	<5	<5	<5	<5	<100	<5	<100	<10	<5	na	12	<5	<5	na	<5	<50	<5	<5	15	<10
MW-7	11/94	7	<0.5	<0.5	<0.5	na	<0.2	na	<0.2	<0.2	<0.2	23	0.3	2.3	7.3	<2.0	na	0.4	1.6	14	0.3
	9/95	6	<5	<5	<5	<100	<5	<100	<10	<5	na	22	<5	<5	na	<5	<50	<5	<5	13	<10
	11/96	9	<5	<5	<5	<100	<5	<100	<10	<5	na	22	24	<5	na	<5	<50	<5	<5	18	<10
MW-8	11/94	**12**	<0.5	<0.5	<0.5	na	<0.2	na	0.5	<0.2	0.4	**71**	0.9	1.3	18	<2.0	na	<0.2	<0.2	17	0.2
	9/95	**18**	<5	<5	<5	<100	<5	<100	<10	<5	na	**92**	<5	<5	na	<5	<50	<5	<5	45	<10
	11/96	**19**	<5	<5	<5	<100	<5	<100	<10	<5	na	**86**	<5	**6**	na	<5	<50	<5	<5	59	<10

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	Bromodichloromethane	Methyl ethyl ketone (2-butanone)	Chloroethane	Chloroform	1,2-Dichlorobenzene	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	none	100.0	none	25.0	10.0	5	none	none	none	20	60	100	1
MW-14	9/95	1	<5	<5	<5	<100	<5	<100	<10	<5	na	24	<10	<5	na	<5	<50	<5	<5	11	<10
	11/96	<5	<5	<5	<5	<100	<5	<100	<10	<5	na	**25**	<10	<5	na	<5	<50	<5	<5	13	<10
MW-15	9/95	<1	<5	<5	<5	<100	<5	<100	<10	<5	na	<5	<5	**5**	na	<5	<50	<5	<5	<5	<10
	11/96	<5	<5	<5	<5	<100	<5	<100	<10	<5	na	<5	<5	**5**	na	<5	<50	<5	<5	<5	<10
MW-16	9/95	<1	<5	<5	<5	<100	<5	<100	<10	<5	na	6	<5	<5	na	<5	<50	6	<5	<5	<10
	11/96	<5	<5	<5	<5	<100	<5	<100	<10	<5	na	6	<5	<5	na	<5	<50	**21**	<5	<5	<10

NOTES:

(a) Sample analyzed at 10x dilution

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

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
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
MW-1	11/94	**2900**	190	<5	<.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
	9/95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	11/96	**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
MW-4	12/94	**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
	9/95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	11/96	**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
MW-5	12/94	**2000**	**360**	<5	<.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
	9/95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	11/96	**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
MW-6	11/94	**2400**	**700**	410	<.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
	9/95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	11/96	**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
MW-7	11/94	**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
	9/95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	11/96	**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
MW-8	11/94	**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
	9/95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	11/96	**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

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
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
MW-14	9/95	**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
	11/96	**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
MW15	9/95	**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
	11/96	**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
MW16	9/95	**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
	11/96	**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

NOTES:

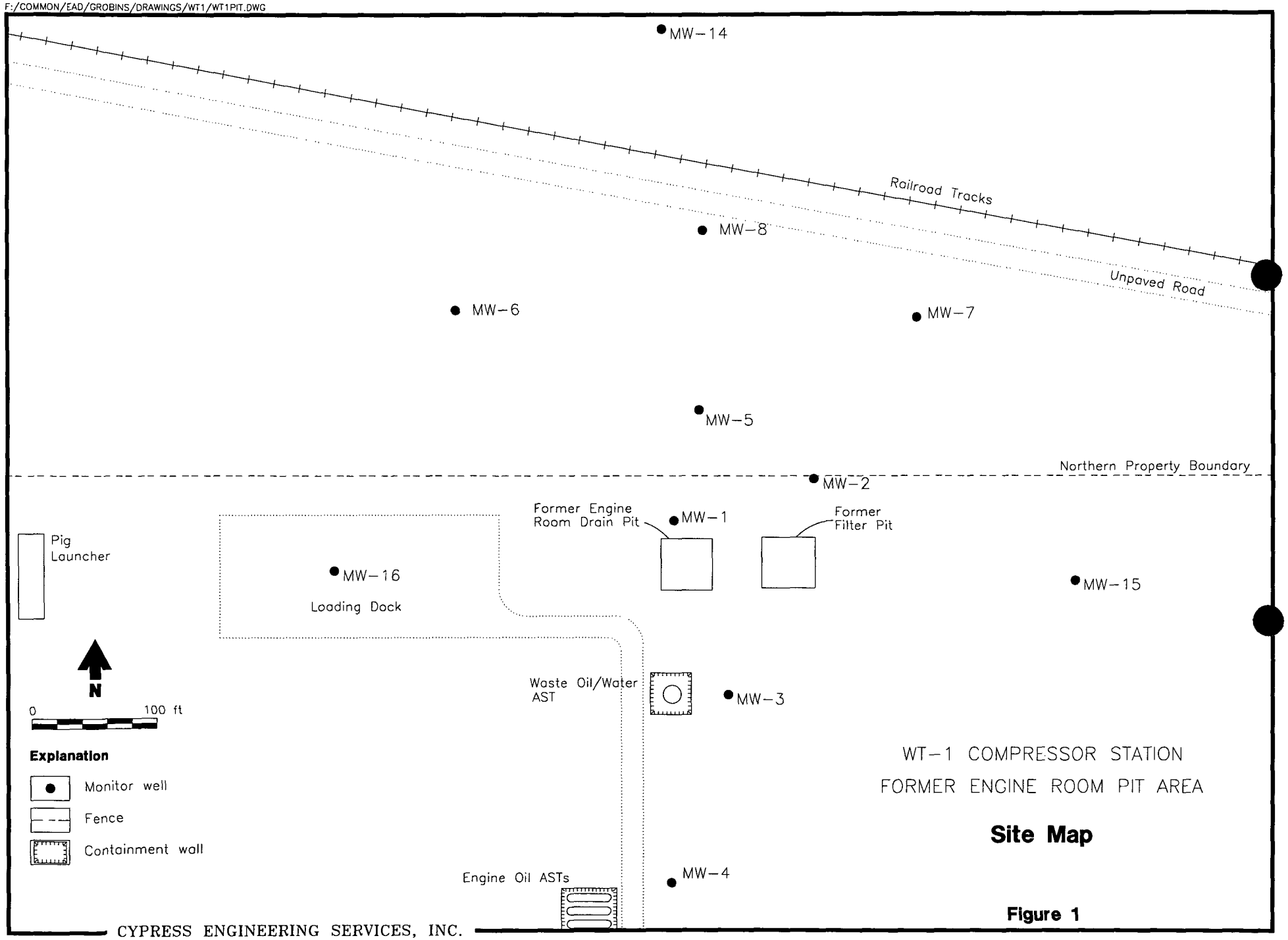
na - Analysis for this constituent was not run on samples collected during this sample event

Report of Ground Water Monitoring Activities

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

Figures

F:/COMMON/EAD/GROBINS/DRAWINGS/WT1/WT1PIT.DWG



WT-1 COMPRESSOR STATION

FORMER ENGINE ROOM PIT AREA

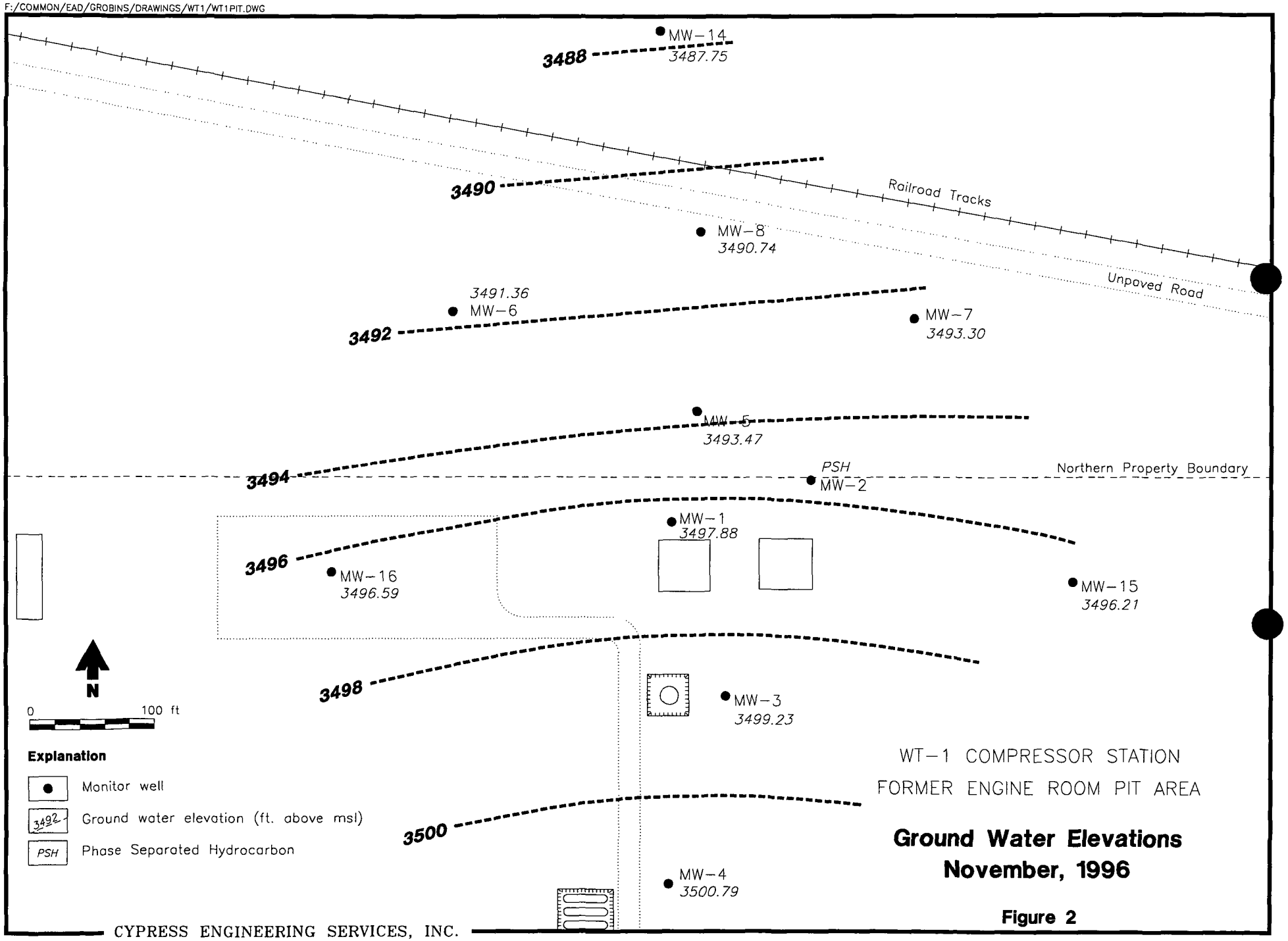
Site Map

Figure 1

CYPRESS ENGINEERING SERVICES, INC.

12-18-96

F:/COMMON/EAD/GROBINS/DRAWINGS/WT1/WT1PIT.DWG



CYPRESS ENGINEERING SERVICES, INC.
12-18-96

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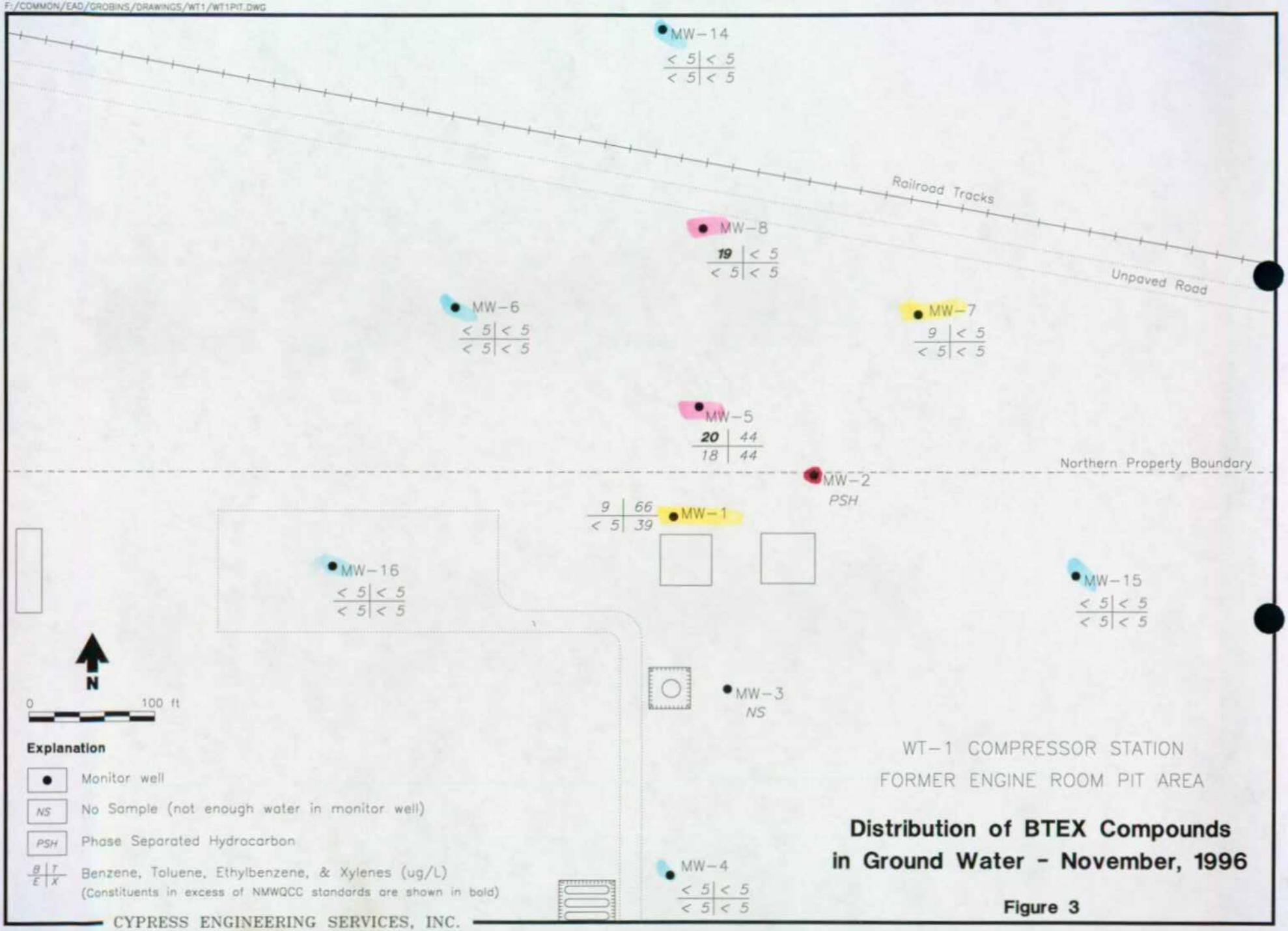


Explanation

- Monitor well
- NS — No Sample (not enough water in monitor well)
- PSH — Phase Separated Hydrocarbon
- B | T / E | X — Benzene, Toluene, Ethylbenzene, & Xylenes (ug/L)
  (Constituents in excess of NMWQCC standards are shown in bold)

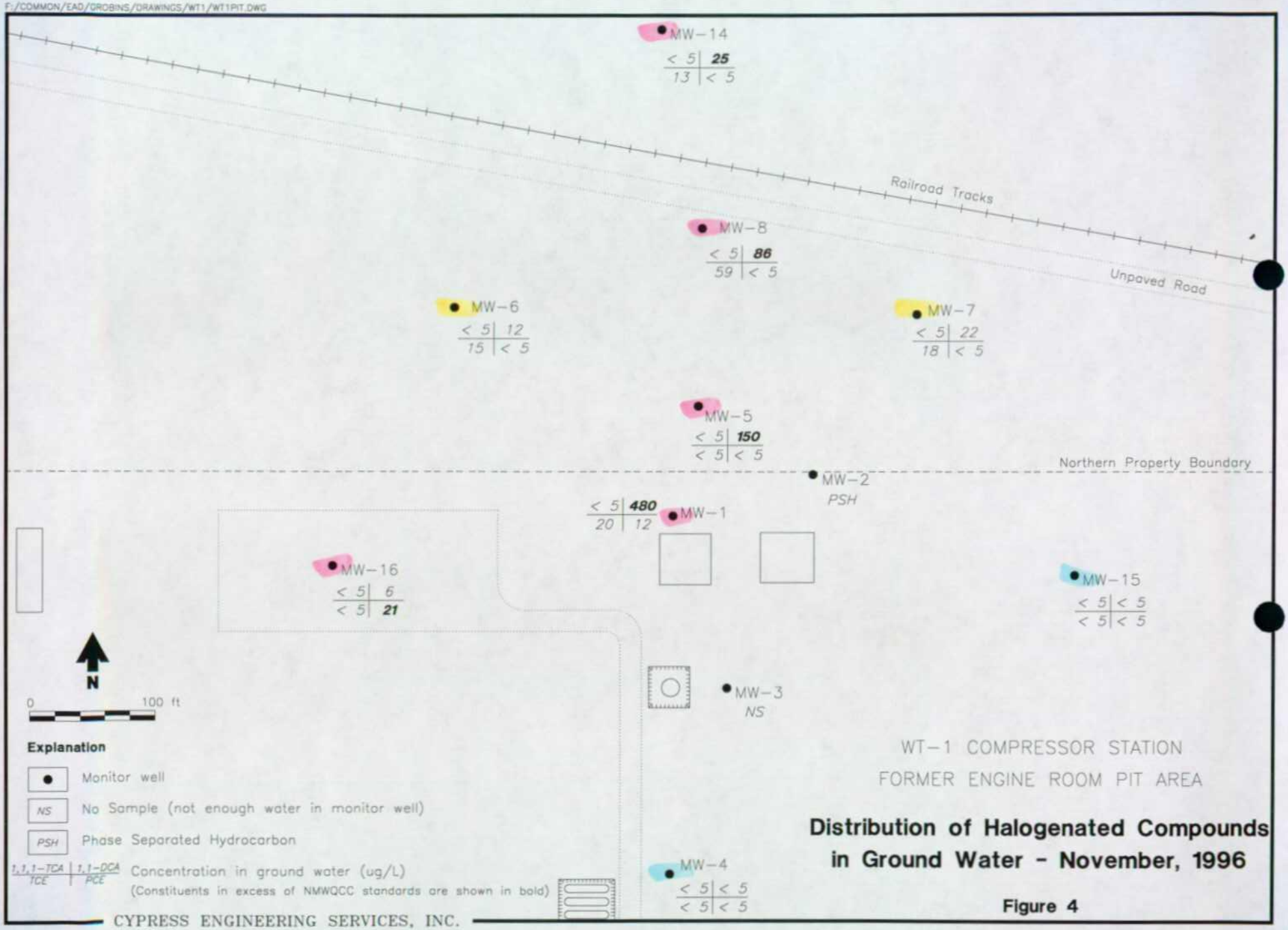
WT-1 COMPRESSOR STATION
FORMER ENGINE ROOM PIT AREA

Distribution of BTEX Compounds in Ground Water - November, 1996

Figure 3

CYPRESS ENGINEERING SERVICES, INC.
12-18-96

F:/COMMON/EAD/GROBINS/DRAWINGS/WT1/WT1PIT.DWG



Explanation

- Monitor well
- NS — No Sample (not enough water in monitor well)
- PSH — Phase Separated Hydrocarbon
- 1,1,1-TCA / TCE | 1,1-DCA / PCE — Concentration in ground water (ug/L)
  (Constituents in excess of NMWQCC standards are shown in bold)

WT-1 COMPRESSOR STATION

FORMER ENGINE ROOM PIT AREA

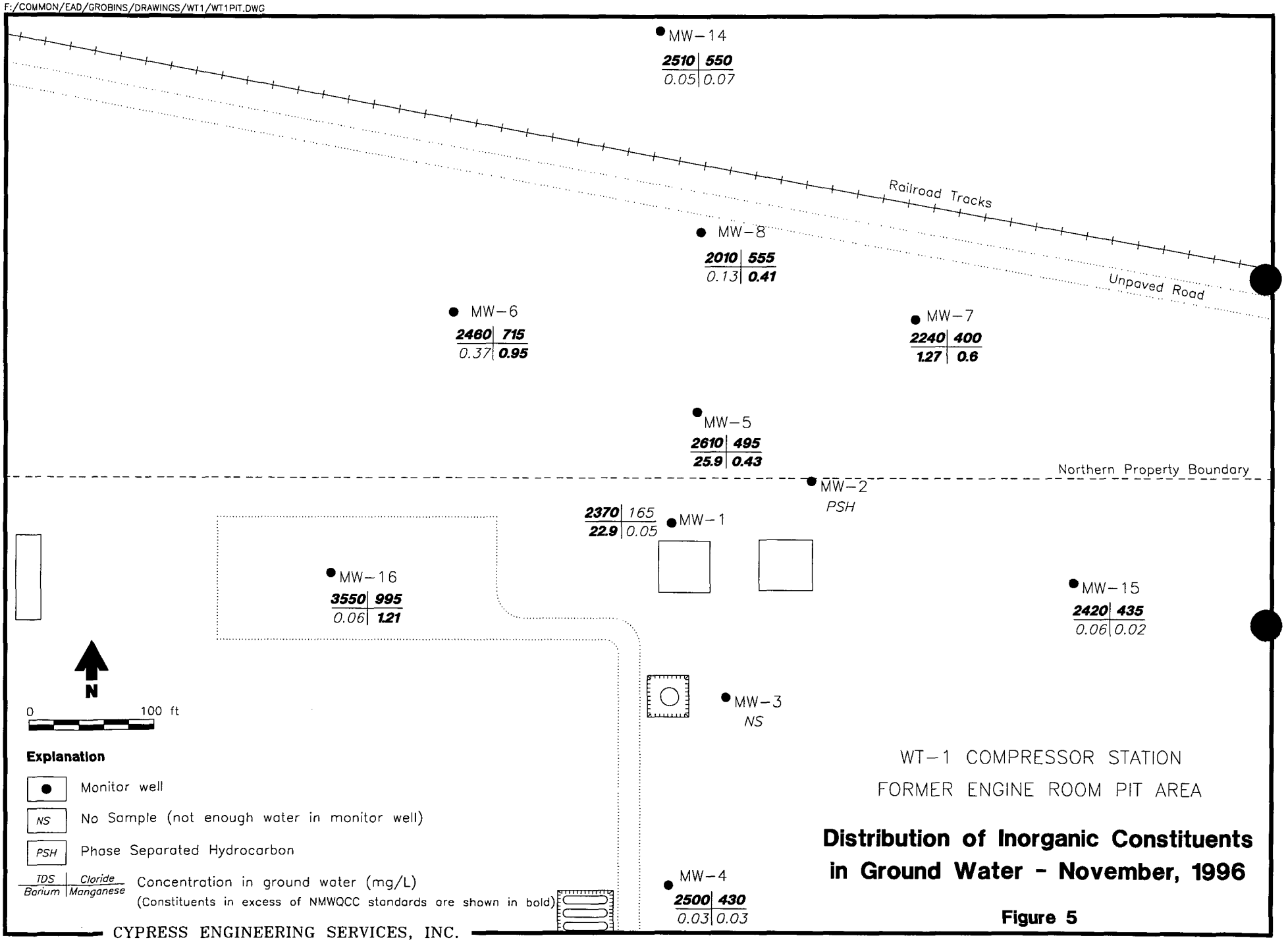
Distribution of Halogenated Compounds in Ground Water - November, 1996

Figure 4

CYPRESS ENGINEERING SERVICES, INC.

12-18-96

F:/COMMON/EAD/GROBINS/DRAWINGS/WT1/WT1PIT.DWG



Explanation

- ● Monitor well
- NS — No Sample (not enough water in monitor well)
- PSH — Phase Separated Hydrocarbon
- TDS | Cloride / Barium | Manganese — Concentration in ground water (mg/L)

(Constituents in excess of NMWQCC standards are shown in bold)

WT-1 COMPRESSOR STATION

FORMER ENGINE ROOM PIT AREA

Distribution of Inorganic Constituents in Ground Water - November, 1996

Figure 5

CYPRESS ENGINEERING SERVICES, INC.

12-18-96

Report of Ground Water Monitoring Activities

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

Attachment #1

Lab Reports for November 1996
Ground Water Sampling Event

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

12/05/1996

EPIC Job Number: 96.08371

Project Description:
Job Description: TWP/WT-1 Engine Room 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
322967	MW-1	11/12/1996	15:05	11/14/1996
322968	MW-4	11/12/1996	13:55	11/14/1996
322969	MW-5	11/12/1996	14:50	11/14/1996
322970	MW-6	11/12/1996	16:30	11/14/1996
322971	MW-7	11/12/1996	15:50	11/14/1996
322972	MW-8	11/12/1996		11/14/1996
322973	MW-14	11/12/1996		11/14/1996
322974	MW-15	11/12/1996		11/14/1996
322975	MW-16	11/12/1996		11/14/1996

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

12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322967

Project Description:
Job Description: TWP/WT-1 Engine Room 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		165	mg/L	SM-4500Cl.C		11/20/1996	cgl		736	5.0
Sulfate	EDL	<50	mg/L	S-9038		11/20/1996	kwo		571	5.0
Arsenic		0.13	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1442	0.03
Barium	BS	22.9	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1329	0.01
Cadmium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1504	0.01
Chromium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1503	0.01
Lead		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1512	0.03
Manganese		0.05	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1478	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		11/20/1996	bwb		1288	0.0002
Selenium		<0.04	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1441	0.04
Silver		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1494	0.01
Total Dissolved Solids		2370	mg/L	E-160.1		11/19/1996	cgl		653	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		630	ug/L	S-8240A		11/20/1996	acg		1329	100
Benzene		9	ug/L	S-8240A		11/20/1996	acg		1329	5
Bromodichloromethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Bromoform		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Bromomethane		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
2-Butanone (MEK)		100	ug/L	S-8240A		11/20/1996	acg		1329	100
Carbon disulfide		<100	ug/L	S-8240A		11/20/1996	acg		1329	100
Carbon tetrachloride		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Chlorobenzene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Chloroethane		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		11/20/1996	acg		1329	20
Chloroform		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Chloromethane		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
Dibromochloromethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1-Dichloroethane		480	ug/L	S-8240A		11/20/1996	acg		1329	5
1,2-Dichloroethane		9	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1-Dichloroethene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,2-Dichloropropane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5

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

12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322967

Project Description:
Job Description: TWP/WT-1 Engine Room 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
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Ethyl benzene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
2-Hexanone		<50	ug/L	S-8240A		11/20/1996	acg		1329	50
Methylene chloride		88	ug/L	S-8240A		11/20/1996	acg		1329	5
4-Methyl-2-pentanone (MIBK)		1500	ug/L	S-8240A		11/20/1996	acg		1329	50
Styrene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Tetrachloroethene		12	ug/L	S-8240A		11/20/1996	acg		1329	5
Toluene		66	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Trichloroethene		20	ug/L	S-8240A		11/20/1996	acg		1329	5
Vinyl acetate		<50	ug/L	S-8240A		11/20/1996	acg		1329	50
Vinyl chloride		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
Xylenes, Total		39	ug/L	S-8240A		11/20/1996	acg		1329	5
SURR: 1,2-Dichloroethane-d4		91	% Rec	S-8240A		11/20/1996	acg		1329	76-114
SURR: Toluene-d8		97	% Rec	S-8240A		11/20/1996	acg		1329	88-110
SURR: 4-Bromofluorobenzene		95	% Rec	S-8240A		11/20/1996	acg		1329	86-115

ANALYTICAL RESULTS REPORT

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

12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322968

Project Description:
Job Description: TWP/WT-1 Engine Room 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		430	mg/L	SM-4500Cl.C		11/20/1996	cgl		736	5.0
Sulfate		1000	mg/L	S-9038		11/20/1996	kwo		571	5.0
Arsenic		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1442	0.03
Barium		0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1329	0.01
Cadmium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1504	0.01
Chromium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1503	0.01
Lead		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1512	0.03
Manganese		0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1478	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A			bwb		1287	0.0002
Selenium		<0.04	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1441	0.04
Silver		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1494	0.01
Total Dissolved Solids		2500	mg/L	E-160.1		11/19/1996	cgl		653	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		11/20/1996	acg		1329	100
Benzene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Bromodichloromethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Bromoform		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Bromomethane		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
2-Butanone (MEK)		<100	ug/L	S-8240A		11/20/1996	acg		1329	100
Carbon disulfide		<100	ug/L	S-8240A		11/20/1996	acg		1329	100
Carbon tetrachloride		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Chlorobenzene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Chloroethane		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		11/20/1996	acg		1329	20
Chloroform		6	ug/L	S-8240A		11/20/1996	acg		1329	5
Chloromethane		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
Dibromochloromethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1-Dichloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,2-Dichloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1-Dichloroethene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,2-Dichloropropane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5

ANALYTICAL RESULTS REPORT

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

12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322968

Project Description:
Job Description: TWP/WT-1 Engine Room 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
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Ethyl benzene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
2-Hexanone		<50	ug/L	S-8240A		11/20/1996	acg		1329	50
Methylene chloride		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		11/20/1996	acg		1329	50
Styrene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Tetrachloroethene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Toluene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Trichloroethene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Vinyl acetate		<50	ug/L	S-8240A		11/20/1996	acg		1329	50
Vinyl chloride		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
Xylenes, Total		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
SURR: 1,2-Dichloroethane-d4		91	% Rec	S-8240A		11/20/1996	acg		1329	76-114
SURR: Toluene-d8		99	% Rec	S-8240A		11/20/1996	acg		1329	88-110
SURR: 4-Bromofluorobenzene		93	% Rec	S-8240A		11/20/1996	acg		1329	86-115

ANALYTICAL RESULTS REPORT

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

12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322969

Project Description:
Job Description: TWP/WT-1 Engine Room 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		495	mg/L	SM-4500Cl.C		11/20/1996	cgl		736	5.0
Sulfate	EDL	<25	mg/L	S-9038		11/20/1996	kwo		571	5.0
Arsenic		0.06	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1442	0.03
Barium		25.9	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1329	0.01
Cadmium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1504	0.01
Chromium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1503	0.01
Lead		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1512	0.03
Manganese		0.43	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1478	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		11/20/1996	bwb		1288	0.0002
Selenium		<0.04	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1441	0.04
Silver		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1494	0.01
Total Dissolved Solids		2610	mg/L	E-160.1		11/19/1996	cgl		653	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		11/20/1996	acg		1329	100
Benzene		20	ug/L	S-8240A		11/20/1996	acg		1329	5
Bromodichloromethane		94	ug/L	S-8240A		11/20/1996	acg		1329	5
Bromoform		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Bromomethane		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
2-Butanone (MEK)		<100	ug/L	S-8240A		11/20/1996	acg		1329	100
Carbon disulfide		<100	ug/L	S-8240A		11/20/1996	acg		1329	100
Carbon tetrachloride		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Chlorobenzene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Chloroethane		31	ug/L	S-8240A		11/20/1996	acg		1329	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		11/20/1996	acg		1329	20
Chloroform		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Chloromethane		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
Dibromochloromethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1-Dichloroethane		150	ug/L	S-8240A		11/20/1996	acg		1329	5
1,2-Dichloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1-Dichloroethene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,2-Dichloropropane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5

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

12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322969

Project Description:
Job Description: TWP/WT-1 Engine Room 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
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Ethyl benzene		18	ug/L	S-8240A		11/20/1996	acg		1329	5
2-Hexanone		<50	ug/L	S-8240A		11/20/1996	acg		1329	50
Methylene chloride		5	ug/L	S-8240A		11/20/1996	acg		1329	5
4-Methyl-2-pentanone (MIBK)		300	ug/L	S-8240A		11/20/1996	acg		1329	50
Styrene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Tetrachloroethene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Toluene		44	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Trichloroethene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Vinyl acetate		<50	ug/L	S-8240A		11/20/1996	acg		1329	50
Vinyl chloride		11	ug/L	S-8240A		11/20/1996	acg		1329	10
Xylenes, Total		44	ug/L	S-8240A		11/20/1996	acg		1329	5
SURR: 1,2-Dichloroethane-d4		91	% Rec	S-8240A		11/20/1996	acg		1329	76-114
SURR: Toluene-d8		95	% Rec	S-8240A		11/20/1996	acg		1329	88-110
SURR: 4-Bromofluorobenzene		95	% Rec	S-8240A		11/20/1996	acg		1329	86-115

ANALYTICAL RESULTS REPORT

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

12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322970

Project Description:
Job Description: TWP/WT-1 Engine Room 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		715	mg/L	SM-4500Cl.C		11/20/1996	cgl		736	5.0
Sulfate		527	mg/L	S-9038		11/20/1996	kwo		571	5.0
Arsenic		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1442	0.03
Barium		0.37	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1329	0.01
Cadmium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1504	0.01
Chromium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1503	0.01
Lead		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1512	0.03
Manganese		0.95	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1478	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		11/20/1996	bwb		1288	0.0002
Selenium		<0.04	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1441	0.04
Silver		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1494	0.01
Total Dissolved Solids		2460	mg/L	E-160.1		11/19/1996	cgl		653	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		11/20/1996	acg		1329	100
Benzene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Bromodichloromethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Bromoform		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Bromomethane		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
2-Butanone (MEK)		<100	ug/L	S-8240A		11/20/1996	acg		1329	100
Carbon disulfide		<100	ug/L	S-8240A		11/20/1996	acg		1329	100
Carbon tetrachloride		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Chlorobenzene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Chloroethane		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		11/20/1996	acg		1329	20
Chloroform		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Chloromethane		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
Dibromochloromethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1-Dichloroethane		12	ug/L	S-8240A		11/20/1996	acg		1329	5
1,2-Dichloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1-Dichloroethene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,2-Dichloropropane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5

ANALYTICAL RESULTS REPORT

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

12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322970

Project Description:
Job Description: TWP/WT-1 Engine Room 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
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Ethyl benzene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
2-Hexanone		<50	ug/L	S-8240A		11/20/1996	acg		1329	50
Methylene chloride		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		11/20/1996	acg		1329	50
Styrene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Tetrachloroethene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Toluene		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
Trichloroethene		15	ug/L	S-8240A		11/20/1996	acg		1329	5
Vinyl acetate		<50	ug/L	S-8240A		11/20/1996	acg		1329	50
Vinyl chloride		<10	ug/L	S-8240A		11/20/1996	acg		1329	10
Xylenes, Total		<5	ug/L	S-8240A		11/20/1996	acg		1329	5
SURR: 1,2-Dichloroethane-d4		89	% Rec	S-8240A		11/20/1996	acg		1329	76-114
SURR: Toluene-d8		99	% Rec	S-8240A		11/20/1996	acg		1329	88-110
SURR: 4-Bromofluorobenzene		92	% Rec	S-8240A		11/20/1996	acg		1329	86-115

ANALYTICAL RESULTS REPORT

George Robinson
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Env. Affairs, Rm 3 AC 3142
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12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322971

Project Description:
Job Description: TWP/WT-1 Engine Room 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		400	mg/L	SM-4500Cl.C		11/20/1996	cgl		736	5.0
Sulfate		823	mg/L	S-9038		11/20/1996	kwo		571	5.0
Arsenic		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1442	0.03
Barium		1.27	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1329	0.01
Cadmium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1504	0.01
Chromium		0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1503	0.01
Lead		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1512	0.03
Manganese		0.60	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1478	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		11/20/1996	bwb		1288	0.0002
Selenium		<0.04	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1441	0.04
Silver		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1494	0.01
Total Dissolved Solids		2240	mg/L	E-160.1		11/19/1996	cgl		653	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		11/22/1996	acg		1329	100
Benzene		9	ug/L	S-8240A		11/22/1996	acg		1329	5
Bromodichloromethane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Bromoform		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Bromomethane		<10	ug/L	S-8240A		11/22/1996	acg		1329	10
2-Butanone (MEK)		<100	ug/L	S-8240A		11/22/1996	acg		1329	100
Carbon disulfide		<100	ug/L	S-8240A		11/22/1996	acg		1329	100
Carbon tetrachloride		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Chlorobenzene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Chloroethane		<10	ug/L	S-8240A		11/22/1996	acg		1329	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		11/22/1996	acg		1329	20
Chloroform		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Chloromethane		<10	ug/L	S-8240A		11/22/1996	acg		1329	10
Dibromochloromethane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
1,1-Dichloroethane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
1,2-Dichloroethane		24	ug/L	S-8240A		11/22/1996	acg		1329	5
1,1-Dichloroethene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
1,2-Dichloropropane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
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12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322971

Project Description:
Job Description: TWP/WT-1 Engine Room 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
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Ethyl benzene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
2-Hexanone		<50	ug/L	S-8240A		11/22/1996	acg		1329	50
Methylene chloride		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		11/22/1996	acg		1329	50
Styrene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Tetrachloroethene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Toluene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Trichloroethene		18	ug/L	S-8240A		11/22/1996	acg		1329	5
Vinyl acetate		<50	ug/L	S-8240A		11/22/1996	acg		1329	50
Vinyl chloride		<10	ug/L	S-8240A		11/22/1996	acg		1329	10
Xylenes, Total		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
SURR: 1,2-Dichloroethane-d4		92	% Rec	S-8240A		11/22/1996	acg		1329	76-114
SURR: Toluene-d8		101	% Rec	S-8240A		11/22/1996	acg		1329	88-110
SURR: 4-Bromofluorobenzene		100	% Rec	S-8240A		11/22/1996	acg		1329	86-115

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
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12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322972

Project Description:
Job Description: TWP/WT-1 Engine Room 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		555	mg/L	SM-4500Cl.C		11/20/1996	cgl		736	5.0
Sulfate		395	mg/L	S-9038		11/20/1996	kwo		571	5.0
Arsenic		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1442	0.03
Barium		0.13	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1329	0.01
Cadmium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1504	0.01
Chromium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1503	0.01
Lead		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1512	0.03
Manganese		0.41	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1478	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		11/20/1996	bwb		1288	0.0002
Selenium		<0.04	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1441	0.04
Silver		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1494	0.01
Total Dissolved Solids		2010	mg/L	E-160.1		11/19/1996	cgl		653	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		11/22/1996	acg		1329	100
Benzene		19	ug/L	S-8240A		11/22/1996	acg		1329	5
Bromodichloromethane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Bromoform		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Bromomethane		<10	ug/L	S-8240A		11/22/1996	acg		1329	10
2-Butanone (MEK)		<100	ug/L	S-8240A		11/22/1996	acg		1329	100
Carbon disulfide		<100	ug/L	S-8240A		11/22/1996	acg		1329	100
Carbon tetrachloride		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Chlorobenzene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Chloroethane		<10	ug/L	S-8240A		11/22/1996	acg		1329	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		11/22/1996	acg		1329	20
Chloroform		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Chloromethane		<10	ug/L	S-8240A		11/22/1996	acg		1329	10
Dibromochloromethane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
1,1-Dichloroethane		86	ug/L	S-8240A		11/22/1996	acg		1329	5
1,2-Dichloroethane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
1,1-Dichloroethene		6	ug/L	S-8240A		11/22/1996	acg		1329	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
1,2-Dichloropropane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
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12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322972

Project Description:
Job Description: TWP/WT-1 Engine Room 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
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Ethyl benzene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
2-Hexanone		<50	ug/L	S-8240A		11/22/1996	acg		1329	50
Methylene chloride		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		11/22/1996	acg		1329	50
Styrene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Tetrachloroethene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Toluene		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
Trichloroethene		59	ug/L	S-8240A		11/22/1996	acg		1329	5
Vinyl acetate		<50	ug/L	S-8240A		11/22/1996	acg		1329	50
Vinyl chloride		<10	ug/L	S-8240A		11/22/1996	acg		1329	10
Xylenes, Total		<5	ug/L	S-8240A		11/22/1996	acg		1329	5
SURR: 1,2-Dichloroethane-d4		90	% Rec	S-8240A		11/22/1996	acg		1329	76-114
SURR: Toluene-d8		101	% Rec	S-8240A		11/22/1996	acg		1329	88-110
SURR: 4-Bromofluorobenzene		101	% Rec	S-8240A		11/22/1996	acg		1329	86-115

ANALYTICAL RESULTS REPORT

George Robinson
ENRON CORPORATION
Env. Affairs, Rm 3 AC 3142
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12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322973

Project Description:
Job Description: TWP/WT-1 Engine Room 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		550	mg/L	SM-4500Cl.C		11/20/1996	cgl		736	5.0
Sulfate		837	mg/L	S-9038		11/20/1996	kwo		571	5.0
Arsenic		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1442	0.03
Barium		0.05	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1329	0.01
Cadmium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1504	0.01
Chromium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1503	0.01
Lead		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1512	0.03
Manganese		0.07	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1478	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		11/15/1996	bwb		1287	0.0002
Selenium		<0.04	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1441	0.04
Silver		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1494	0.01
Total Dissolved Solids		2510	mg/L	E-160.1		11/19/1996	cgl		653	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		11/21/1996	acg		1329	100
Benzene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Bromodichloromethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Bromoform		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Bromomethane		<10	ug/L	S-8240A		11/21/1996	acg		1329	10
2-Butanone (MEK)		<100	ug/L	S-8240A		11/21/1996	acg		1329	100
Carbon disulfide		<100	ug/L	S-8240A		11/21/1996	acg		1329	100
Carbon tetrachloride		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Chlorobenzene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Chloroethane		<10	ug/L	S-8240A		11/21/1996	acg		1329	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		11/21/1996	acg		1329	20
Chloroform		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Chloromethane		<10	ug/L	S-8240A		11/21/1996	acg		1329	10
Dibromochloromethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1-Dichloroethane		25	ug/L	S-8240A		11/21/1996	acg		1329	5
1,2-Dichloroethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1-Dichloroethene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,2-Dichloropropane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5

ANALYTICAL RESULTS REPORT

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

12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322973

Project Description:
Job Description: TWP/WT-1 Engine Room 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
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Ethyl benzene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
2-Hexanone		<50	ug/L	S-8240A		11/21/1996	acg		1329	50
Methylene chloride		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		11/21/1996	acg		1329	50
Styrene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Tetrachloroethene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Toluene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Trichloroethene		13	ug/L	S-8240A		11/21/1996	acg		1329	5
Vinyl acetate		<50	ug/L	S-8240A		11/21/1996	acg		1329	50
Vinyl chloride		<10	ug/L	S-8240A		11/21/1996	acg		1329	10
Xylenes, Total		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
SURR: 1,2-Dichloroethane-d4		92	% Rec	S-8240A		11/21/1996	acg		1329	76-114
SURR: Toluene-d8		99	% Rec	S-8240A		11/21/1996	acg		1329	88-110
SURR: 4-Bromofluorobenzene		101	% Rec	S-8240A		11/21/1996	acg		1329	86-115

ANALYTICAL RESULTS REPORT

George Robinson
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12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322974

Project Description:
Job Description: TWP/WT-1 Engine Room 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		435	mg/L	SM-4500Cl.C		11/20/1996	cgl		736	5.0
Sulfate		892	mg/L	S-9038		11/20/1996	kwo		571	5.0
Arsenic		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1442	0.03
Barium		0.06	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1329	0.01
Cadmium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1504	0.01
Chromium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1503	0.01
Lead		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1512	0.03
Manganese		0.02	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1478	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		11/15/1996	bwb		1287	0.0002
Selenium		<0.04	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1441	0.04
Silver		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1494	0.01
Total Dissolved Solids		2420	mg/L	E-160.1		11/19/1996	cgl		653	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		11/21/1996	acg		1329	100
Benzene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Bromodichloromethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Bromoform		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Bromomethane		<10	ug/L	S-8240A		11/21/1996	acg		1329	10
2-Butanone (MEK)		<100	ug/L	S-8240A		11/21/1996	acg		1329	100
Carbon disulfide		<100	ug/L	S-8240A		11/21/1996	acg		1329	100
Carbon tetrachloride		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Chlorobenzene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Chloroethane		<10	ug/L	S-8240A		11/21/1996	acg		1329	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		11/21/1996	acg		1329	20
Chloroform		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Chloromethane		<10	ug/L	S-8240A		11/21/1996	acg		1329	10
Dibromochloromethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1-Dichloroethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,2-Dichloroethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1-Dichloroethene		5	ug/L	S-8240A		11/21/1996	acg		1329	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,2-Dichloropropane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5

ANALYTICAL RESULTS REPORT

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

12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322974

Project Description:
Job Description: TWP/WT-1 Engine Room 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
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Ethyl benzene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
2-Hexanone		<50	ug/L	S-8240A		11/21/1996	acg		1329	50
Methylene chloride		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		11/21/1996	acg		1329	50
Styrene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Tetrachloroethene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Toluene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Trichloroethene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Vinyl acetate		<50	ug/L	S-8240A		11/21/1996	acg		1329	50
Vinyl chloride		<10	ug/L	S-8240A		11/21/1996	acg		1329	10
Xylenes, Total		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
SURR: 1,2-Dichloroethane-d4		89	% Rec	S-8240A		11/21/1996	acg		1329	76-114
SURR: Toluene-d8		99	% Rec	S-8240A		11/21/1996	acg		1329	88-110
SURR: 4-Bromofluorobenzene		99	% Rec	S-8240A		11/21/1996	acg		1329	86-115

ANALYTICAL RESULTS REPORT

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

12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322975

Project Description:
Job Description: TWP/WT-1 Engine Room 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		995	mg/L	SM-4500Cl.C		11/20/1996	cgl		736	5.0
Sulfate		1020	mg/L	S-9038		11/20/1996	kwo		571	5.0
Arsenic		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1442	0.03
Barium		0.06	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1329	0.01
Cadmium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1504	0.01
Chromium		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1503	0.01
Lead		<0.03	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1512	0.03
Manganese		1.21	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1478	0.01
Mercury, CVAA		<0.0002	mg/L	S-7470A		11/15/1996	bwb		1287	0.0002
Selenium		<0.04	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1441	0.04
Silver		<0.01	mg/L	S-6010A	11/15/1996	11/15/1996	des	1934	1494	0.01
Total Dissolved Solids		3550	mg/L	E-160.1		11/19/1996	cgl		653	5
VOLATILES-8240 AQ(PRESERVED)										complete
Acetone		<100	ug/L	S-8240A		11/21/1996	acg		1329	100
Benzene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Bromodichloromethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Bromoform		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Bromomethane		<10	ug/L	S-8240A		11/21/1996	acg		1329	10
2-Butanone (MEK)		<100	ug/L	S-8240A		11/21/1996	acg		1329	100
Carbon disulfide		<100	ug/L	S-8240A		11/21/1996	acg		1329	100
Carbon tetrachloride		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Chlorobenzene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Chloroethane		<10	ug/L	S-8240A		11/21/1996	acg		1329	10
2-Chloroethylvinyl ether		<20	ug/L	S-8240A		11/21/1996	acg		1329	20
Chloroform		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Chloromethane		<10	ug/L	S-8240A		11/21/1996	acg		1329	10
Dibromochloromethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1-Dichloroethane		6	ug/L	S-8240A		11/21/1996	acg		1329	5
1,2-Dichloroethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1-Dichloroethene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
trans-1,2-Dichloroethene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,2-Dichloropropane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
cis-1,3-Dichloropropene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5

ANALYTICAL RESULTS REPORT

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

12/05/1996

EPIC Job Number: 96.08371
Sample Number: 322975

Project Description:
Job Description: TWP/WT-1 Engine Room 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
trans-1,3-Dichloropropene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Ethyl benzene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
2-Hexanone		<50	ug/L	S-8240A		11/21/1996	acg		1329	50
Methylene chloride		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
4-Methyl-2-pentanone (MIBK)		<50	ug/L	S-8240A		11/21/1996	acg		1329	50
Styrene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1,2,2-Tetrachloroethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Tetrachloroethene		21	ug/L	S-8240A		11/21/1996	acg		1329	5
Toluene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1,1-Trichloroethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
1,1,2-Trichloroethane		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Trichloroethene		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
Vinyl acetate		<50	ug/L	S-8240A		11/21/1996	acg		1329	50
Vinyl chloride		<10	ug/L	S-8240A		11/21/1996	acg		1329	10
Xylenes, Total		<5	ug/L	S-8240A		11/21/1996	acg		1329	5
SURR: 1,2-Dichloroethane-d4		90	% Rec	S-8240A		11/21/1996	acg		1329	76-114
SURR: Toluene-d8		99	% Rec	S-8240A		11/21/1996	acg		1329	88-110
SURR: 4-Bromofluorobenzene		96	% Rec	S-8240A		11/21/1996	acg		1329	86-115

QUALITY CONTROL REPORT
BLANKS

George Robinson
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Env. Affairs, Rm 3 AC 3142
P.O. Box 1188
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12/05/1996

EPIC Job Number: 96.08371

Project Description:
Job Description: TWP/WT-1 Engine Room Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
Chloride		<5.0	mg/L	5.0	11/20/1996		736
Sulfate		<5.0	mg/L	5.0	11/20/1996		571
Arsenic		<0.03	mg/L	0.03	11/15/1996	1934	1442
Barium		<0.01	mg/L	0.01	11/15/1996	1934	1329
Cadmium		<0.01	mg/L	0.01	11/15/1996	1934	1504
Chromium		<0.01	mg/L	0.01	11/15/1996	1934	1503
Lead		<0.03	mg/L	0.03	11/15/1996	1934	1512
Manganese		<0.01	mg/L	0.01	11/15/1996	1934	1478
Mercury, CVAA		<0.0002	mg/L	0.0002	11/15/1996		1287
Mercury, CVAA		<0.0002	mg/L	0.0002	11/19/1996		1288
Selenium		<0.04	mg/L	0.04	11/15/1996	1934	1441
Silver		<0.01	mg/L	0.01	11/15/1996	1934	1494
Total Dissolved Solids		<5	mg/L	5	11/19/1996		653
VOLATILES-8240 AQ(PRESERVED)							
Acetone		<100	ug/L	100	11/21/1996		1329
Benzene		<5	ug/L	5	11/21/1996		1329
Bromodichloromethane		<5	ug/L	5	11/21/1996		1329
Bromoform		<5	ug/L	5	11/21/1996		1329
Bromomethane		<10	ug/L	10	11/21/1996		1329
2-Butanone (MEK)		<100	ug/L	100	11/21/1996		1329
Carbon disulfide		<100	ug/L	100	11/21/1996		1329
Carbon tetrachloride		<5	ug/L	5	11/21/1996		1329
Chlorobenzene		<5	ug/L	5	11/21/1996		1329
Chloroethane		<10	ug/L	10	11/21/1996		1329
2-Chloroethylvinyl ether		<20	ug/L	20	11/21/1996		1329
Chloroform		<5	ug/L	5	11/21/1996		1329
Chloromethane		<10	ug/L	10	11/21/1996		1329
Dibromochloromethane		<5	ug/L	5	11/21/1996		1329

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT
BLANKS

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12/05/1996

EPIC Job Number: 96.08371

Project Description:
Job Description: TWP/WT-1 Engine Room Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
1,1-Dichloroethane		<5	ug/L	5	11/21/1996		1329
1,2-Dichloroethane		<5	ug/L	5	11/21/1996		1329
1,1-Dichloroethene		<5	ug/L	5	11/21/1996		1329
trans-1,2-Dichloroethene		<5	ug/L	5	11/21/1996		1329
1,2-Dichloropropane		<5	ug/L	5	11/21/1996		1329
cis-1,3-Dichloropropene		<5	ug/L	5	11/21/1996		1329
trans-1,3-Dichloropropene		<5	ug/L	5	11/21/1996		1329
Ethyl benzene		<5	ug/L	5	11/21/1996		1329
2-Hexanone		<50	ug/L	50	11/21/1996		1329
4-Methyl-2-pentanone (MIBK)		<50	ug/L	50	11/21/1996		1329
Methylene chloride		<5	ug/L	5	11/21/1996		1329
Styrene		<5	ug/L	5	11/21/1996		1329
1,1,2,2-Tetrachloroethane		<5	ug/L	5	11/21/1996		1329
Tetrachloroethene		<5	ug/L	5	11/21/1996		1329
Toluene		<5	ug/L	5	11/21/1996		1329
1,1,1-Trichloroethane		<5	ug/L	5	11/21/1996		1329
1,1,2-Trichloroethane		<5	ug/L	5	11/21/1996		1329
Trichloroethene		<5	ug/L	5	11/21/1996		1329
Vinyl acetate		<50	ug/L	50	11/21/1996		1329
Vinyl chloride		<10	ug/L	10	11/21/1996		1329
Xylenes, Total		<5	ug/L	5	11/21/1996		1329
VOLATILES-8240 AQ(PRESERVED)							
Acetone		<100	ug/L	100	11/20/1996		1329
Benzene		<5	ug/L	5	11/20/1996		1329
Bromodichloromethane		<5	ug/L	5	11/20/1996		1329
Bromoform		<5	ug/L	5	11/20/1996		1329
Bromomethane		<10	ug/L	10	11/20/1996		1329
2-Butanone (MEK)		<100	ug/L	100	11/20/1996		1329

All parameters should be less than the reporting limit.

QUALITY CONTROL REPORT
BLANKS

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12/05/1996

EPIC Job Number: 96.08371

Project Description:
Job Description: TWP/WT-1 Engine Room Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
Carbon disulfide		<100	ug/L	100	11/20/1996		1329
Carbon tetrachloride		<5	ug/L	5	11/20/1996		1329
Chlorobenzene		<5	ug/L	5	11/20/1996		1329
Chloroethane		<10	ug/L	10	11/20/1996		1329
2-Chloroethylvinyl ether		<20	ug/L	20	11/20/1996		1329
Chloroform		<5	ug/L	5	11/20/1996		1329
Chloromethane		<10	ug/L	10	11/20/1996		1329
Dibromochloromethane		<5	ug/L	5	11/20/1996		1329
1,1-Dichloroethane		<5	ug/L	5	11/20/1996		1329
1,2-Dichloroethane		<5	ug/L	5	11/20/1996		1329
1,1-Dichloroethene		<5	ug/L	5	11/20/1996		1329
trans-1,2-Dichloroethene		<5	ug/L	5	11/20/1996		1329
1,2-Dichloropropane		<5	ug/L	5	11/20/1996		1329
cis-1,3-Dichloropropene		<5	ug/L	5	11/20/1996		1329
trans-1,3-Dichloropropene		<5	ug/L	5	11/20/1996		1329
Ethyl benzene		<5	ug/L	5	11/20/1996		1329
2-Hexanone		<50	ug/L	50	11/20/1996		1329
4-Methyl-2-pentanone (MIBK)		<50	ug/L	50	11/20/1996		1329
Methylene chloride		<5	ug/L	5	11/20/1996		1329
Styrene		<5	ug/L	5	11/20/1996		1329
1,1,2,2-Tetrachloroethane		<5	ug/L	5	11/20/1996		1329
Tetrachloroethene		<5	ug/L	5	11/20/1996		1329
Toluene		<5	ug/L	5	11/20/1996		1329
1,1,1-Trichloroethane		<5	ug/L	5	11/20/1996		1329
1,1,2-Trichloroethane		<5	ug/L	5	11/20/1996		1329
Trichloroethene		<5	ug/L	5	11/20/1996		1329
Vinyl acetate		<50	ug/L	50	11/20/1996		1329
Vinyl chloride		<10	ug/L	10	11/20/1996		1329

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

12/05/1996

EPIC Job Number: 96.08371

Project Description:
Job Description: TWP/WT-1 Engine Room Pit Area

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch Number	Run Batch Number
Xylenes, Total		<5	ug/L	5	11/20/1996		1329

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

12/05/1996

EPIC Job Number: 96.08371

Project Description:
Job Description: TWP/WT-1 Engine Room Pit Area

Parameter	Flag	CCVS True Concentration	Units	CCVS Concentration Found	CCVS Percent Recovery	Date Analyzed	Run Batch Number
Sulfate		30.0	mg/L	28.5	95.0	11/20/1996	571
Arsenic		1.00	mg/L	0.98	98.0	11/15/1996	1442
Barium		1.00	mg/L	0.95	95.0	11/15/1996	1329
Cadmium		1.00	mg/L	0.98	98.0	11/15/1996	1504
Chromium		1.00	mg/L	0.99	99.0	11/15/1996	1503
Lead		1.00	mg/L	0.99	99.0	11/15/1996	1512
Manganese		1.00	mg/L	0.98	98.0	11/15/1996	1478
Mercury, CVAA		0.50	mg/L	0.49	98.0	11/15/1996	1287
Mercury, CVAA		0.50	mg/L	0.49	98.0	11/19/1996	1288
Selenium		1.00	mg/L	1.00	100.0	11/15/1996	1441
Silver		1.00	mg/L	0.97	97.0	11/15/1996	1494
VOLATILES-8240 AQ(PRESERVED)							
Chloroform		20	ug/L	19	95.0	11/21/1996	1329
1,1-Dichloroethene		20	ug/L	19	95.0	11/21/1996	1329
1,2-Dichloropropane		20	ug/L	19	95.0	11/21/1996	1329
Ethyl benzene		20	ug/L	20	100.0	11/21/1996	1329
Toluene		20	ug/L	19	95.0	11/21/1996	1329
Vinyl chloride		20	ug/L	11	55.0	11/21/1996	1329
VOLATILES-8240 AQ(PRESERVED)							
Chloroform		20	ug/L	23	115.0	11/20/1996	1329
1,1-Dichloroethene		20	ug/L	20	100.0	11/20/1996	1329
1,2-Dichloropropane		20	ug/L	21	105.0	11/20/1996	1329
Ethyl benzene		20	ug/L	24	120.0	11/20/1996	1329
Toluene		20	ug/L	24	120.0	11/20/1996	1329
Vinyl chloride		20	ug/L	15	75.0	11/20/1996	1329

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

12/05/1996

EPIC Job Number: 96.08371

Project Description:
Job Description: TWP/WT-1 Engine Room Pit Area

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch Number	Run Batch Number
Chloride		mg/L	2,880	2000	4950	103.5	2000	4850	98.5	4.9	11/26/1996		736
Chloride		mg/L	315	200	505	95.0	200	520	102.5	7.5	11/20/1996		736
Chloride		mg/L	270	800	1120	106.3	800	1120	106.3	0.0	11/20/1996		736
Sulfate		mg/L	892	1000	1880	98.8	1000	1810	91.8	7.3	11/20/1996		571
Sulfate		mg/L	291	400	697	101.5	400	648	89.3	12.7	11/20/1996		571
Arsenic		mg/L	<0.03	1.00	1.04	104.0	1.00	1.04	104.0	0.0	11/15/1996		1442
Arsenic		mg/L	0.13	1.00	1.00	87.0	1.00	1.00	87.0	0.0	11/15/1996	1934	1442
Barium	BS	mg/L	22.9	10.0	33.1	102.0	10.0	33.1	102.0	0.0	11/15/1996	1934	1329
Cadmium		mg/L	<0.01	1.00	0.85	85.0	1.00	0.82	82.0	3.6	11/15/1996	1934	1504
Cadmium		mg/L	<0.01	1.00	0.81	81.0	1.00	0.81	81.0	0.0	11/15/1996	1934	1504
Chromium		mg/L	<0.01	1.00	0.84	84.0	1.00	0.83	83.0	1.2	11/15/1996	1934	1503
Lead		mg/L	<0.03	1.00	0.87	87.0	1.00	0.84	84.0	3.5	11/15/1996	1934	1512
Lead		mg/L	<0.03	1.00	0.82	82.0	1.00	0.82	82.0	0.0	11/15/1996	1934	1512
Manganese		mg/L	0.05	1.00	0.90	85.0	1.00	0.90	85.0	0.0	11/15/1996	1934	1478
Selenium		mg/L	<0.04	1.00	0.86	86.0	1.00	0.87	87.0	1.2	11/15/1996	1934	1441
Silver		mg/L	<0.01	1.00	0.82	82.0	1.00	0.82	82.0	0.0	11/15/1996	1934	1494
VOLATILES-8240 AQ(PRESERVED)													
Benzene		ug/L	9	20	21	60.0	20	30	105.0	54.4	11/22/1996		1329
Chlorobenzene		ug/L	<5	20	22	110.0	20	22	110.0	0.0	11/22/1996		1329
1,1-Dichloroethene		ug/L	<5	20	21	105.0	20	20	100.0	4.9	11/22/1996		1329
Toluene		ug/L	<5	20	20	100.0	20	21	105.0	4.9	11/22/1996		1329
Trichloroethene		ug/L	18	20	42	120.0	20	41	115.0	4.3	11/22/1996		1329
VOLATILES-8240 AQ(PRESERVED)													
Benzene		ug/L	<5	20	18	90.0	20	18	90.0	0.0	11/20/1996		1329

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
MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

12/05/1996

EPIC Job Number: 96.08371

Project Description:
Job Description: TWP/WT-1 Engine Room Pit Area

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch Number	Run Batch Number
Chlorobenzene		ug/L	<5	20	18	90.0	20	19	95.0	5.4	11/20/1996		1329
1,1-Dichloroethene		ug/L	<5	20	18	90.0	20	18	90.0	0.0	11/20/1996		1329
Toluene		ug/L	<5	20	17	85.0	20	18	90.0	5.7	11/20/1996		1329
Trichloroethene		ug/L	<5	20	17	85.0	20	18	90.0	5.7	11/20/1996		1329

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

12/05/1996

EPIC Job Number: 96.08371

Project Description:
Job Description: TWP/WT-1 Engine Room Pit Area

Parameter	Flag	Units	Sample Result	Duplicate Sample Result	RPD	Date Analyzed	Prep Batch Number	Run Batch Number
Total Dissolved Solids		mg/L	2010	2010	0.0	11/19/1996		653
Total Dissolved Solids		mg/L	6060	6520	7.3	11/19/1996		653

QUALITY CONTROL REPORT
LABORATORY CONTROL STANDARD

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

12/05/1996

EPIC Job Number: 96.08371

Project Description:
Job Description: TWP/WT-1 Engine Room 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		736	1000	mg/L	975	97.5					11/20/1996
Sulfate		571	30.0	mg/L	29.4	98.0					11/20/1996
Arsenic	1934	1442	1.00	mg/L	0.97	97.0					11/15/1996
Barium	1934	1329	1.00	mg/L	0.92	92.0					11/15/1996
Cadmium	1934	1504	1.00	mg/L	0.96	96.0					11/15/1996
Chromium	1934	1503	1.00	mg/L	0.96	96.0					11/15/1996
Lead	1934	1512	1.00	mg/L	0.95	95.0					11/15/1996
Manganese	1934	1478	1.00	mg/L	0.98	98.0					11/15/1996
Mercury, CVAA		1287	0.50	mg/L	0.48	96.0	0.59	118.0	20.5		11/15/1996
Mercury, CVAA		1288	0.50	mg/L	0.45	90.0	0.46	92.0	2.2		11/19/1996
Selenium	1934	1441	1.00	mg/L	0.97	97.0					11/15/1996
Silver	1934	1494	1.00	mg/L	0.87	87.0					11/15/1996
Total Dissolved Solids		653	2000	mg/L	1970	98.5					11/19/1996
VOLATILES-8240 AQ(PRESERVED)											
Benzene		1329	20	ug/L	22	110.0	21	105.0	4.7		11/21/1996
Chlorobenzene		1329	20	ug/L	21	105.0	21	105.0	0.0		11/21/1996
1,1-Dichloroethene		1329	20	ug/L	19	95.0	20	100.0	5.0		11/21/1996
Toluene		1329	20	ug/L	20	100.0	21	105.0	4.9		11/21/1996
Trichloroethene		1329	20	ug/L	22	110.0	21	105.0	4.7		11/21/1996
VOLATILES-8240 AQ(PRESERVED)											
Benzene		1329	20	ug/L	19	95.0					11/20/1996
Chlorobenzene		1329	20	ug/L	19	95.0					11/20/1996
1,1-Dichloroethene		1329	20	ug/L	18	90.0					11/20/1996
Toluene		1329	20	ug/L	18	90.0					11/20/1996
Trichloroethene		1329	20	ug/L	19	95.0					11/20/1996

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 Operations Corp 77251
ADDRESS P.O. Box 1188 Houston TX [illegible]
PHONE (713) 646-7252 FAX 713 646-7861
PROJECT NAME/LOCATION TNP / WT-1 Engine Room Pit Area
PROJECT NUMBER
PROJECT MANAGER

REPORT TO: ENRON Operations Corp P.O. Box 1188 Houston TX [illegible] 77251
INVOICE TO:
P.O. NO.
EPIC QUOTE NO.

SAMPLED BY
Sandy Sharp (PRINT NAME) Sandy Sharp SIGNATURE
(PRINT NAME) SIGNATURE

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	# and Type of Containers: HCl	NaOH	HNO_3	H_2SO_4	OTHER	ANALYSES: Volatiles 8240	Full Metals	Chlorides, Sulfate & TDS
11/9/96		MW-8	A	X		2/G					X		
		MW-8								1/P			X
		MW-8						1/P				X	
		MW-14				2/G					X		
		MW-14								1/P			X
		MW-14						1/P				X	
		MW-15				2/G					X		
		MW-15								1/P			X
		MW-15						1/P				X	
		MW-16				2/G					X		
		MW-16								1/P			X
		MW-16						1/P				X	

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

* 8 RCRA METALS PLUS MANGANESE

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 SS DATE 11/9/96

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR EPIC BY:
Sandy Sharp	11/13/96	0600			11/14/96	10:30	

METHOD OF SHIPMENT

REMARKS:

PT 1 - ORIGINAL - WHITE PT 2 - EPIC PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

CHAIN OF CUSTODY RECORD

EPIC LABORATORIES, INC.

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

COMPANY Enron Operations Corp. 77251
ADDRESS P.O. Box 1188 Houston TX [redacted]
PHONE 713/646-7252 FAX 713/646-7867
PROJECT NAME/LOCATION TWP/WT-1 Enron Room Pit Area
PROJECT NUMBER
PROJECT MANAGER

REPORT TO: P.O. Box 1188 Houston TX 77251 Houston TX [redacted]
INVOICE TO: Anita C. Bill
P.O. NO.
EPIC QUOTE NO.

SAMPLED BY Sandy Sharp (PRINT NAME) Sandy Sharp (SIGNATURE)
(PRINT NAME) (SIGNATURE)

4 ea # and Type of Containers

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	HCl	NaOH	HNO_3	H_2SO_4	OTHER	ANALYSES: Volatiles - 8240	Metals - RCRA	Chlorides, Sulfate & TDS
11/12/96	1505	MW-1	A	X		3/G					X		
		MW-1								1/P		X	X
		MW-1						1/P				X	
	1355	MW-4				2/G					X		
		MW-4								1/P		X	
		MW-4						1/P				X	
	1450	MW-5				2/G			[redacted]		X		
	1520	MW-5								1/P		X	
	1520	MW-5						1/P				X	
	1630	MW-6				2/G			[redacted]		X		
		MW-6								1/P		X	
		MW-6						1/P	[redacted]			X	
	1550	MW-7				2/G					X		
		MW-7								1/P		X	
		MW-7						1/P	[redacted]			X	

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

* & RCRA METALS PLUS MANGANESE

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 SS

DATE 11/12/96

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR EPIC BY:
Sandy Sharp	11/13/96	0600			11/14/96	10:30	

METHOD OF SHIPMENT

REMARKS:

PT 1 - ORIGINAL - WHITE PT 2 - EPIC PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK