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GW - 80

ENERGY TRANSFER PARTNERS, LP

2/8/2017

New Source Permit Application

Thoreau Compressor Station
Transwestern Pipeline Company
McKinley County, New Mexico

Submitted to:

State of New Mexico Environment Department
Air Pollution Control Bureau

Prepared by:

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March 31, 1994

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1.0 Introduction

Transwestern Pipeline Company (TPC) is filing an application for permit to install a soil vapor extraction system at TPC's Compressor Station No. 5 located near Thoreau, New Mexico (Figure 1). The soil vapor extraction system is to be installed as part of a proposed ground water remediation project at the site. The estimated emissions from the new source are below the levels required for a permit (AQCR 702) or a notice of intent (AQCR 703.1); however, the proposed new source is to be installed at a "grandfathered" facility. The soil vapor extraction system technically could be considered a modification to the existing facility which would require the submittal of an operating permit application for the entire facility. Therefore, representatives of TPC and the NMED Air Pollution Control Bureau met on February 10, 1994 to discuss this issue. As a result it was agreed that TPC would permit the soil vapor extraction system separate from the main facility with the understanding that an operating permit application would be submitted for the main facility in the near future as required by Title V of the 1990 Clean Air Act Amendments.

A completed permit application form is included in Appendix A. A completed permit application form checklist is included in Appendix B.

2.0 Description of Facility

2.1 Main Facility

The function of the main facility is to compress natural gas that is transported westward via TPC's 30" natural gas pipeline. The facility was constructed in 1958 on a 40 acre site that is owned by TPC (Figure 2). The SIC code for the existing facility is 4922. The primary air emission sources of the main facility are three 4500 Hp Cooper-Bess reciprocating engines that drive the compressors.

2.2 Proposed New Source Facility

The proposed soil vapor extraction system will be located in the southeast corner of the main facility as shown in Figure 2. The location of the proposed source is indicated by SVE-1 and SVE-2.

The proposed soil vapor extraction system will be implemented in three phases. A three phase approach was developed in order to limit the volatile organic compounds (VOC) emission rate from soil vapor extraction and to allow opportunities to optimize system components between

phases.

2.2.1 Phase I - Initial SVE System

The primary objective of the phase I system is to remove a limited volume of soil vapor to reduce the concentration of volatile organic compounds (VOC) from within the area to be remediated. This will be accomplished by extracting soil vapor from a single SVE well at a rate of 20-25 cfm (Figure 3). The purpose of the limited vapor extraction rate is to maintain the VOC emission rate below which emission control equipment is required. Typically, the VOC emissions from an SVE system are greatest at the start-up of the system and drop off rapidly to a much lower sustained rate. Therefore, rather than control VOC emissions with emission control equipment for such a short duration, the phase I system will maintain a low emission rate from a single SVE well for a longer duration. Once the concentration of VOCs have declined to lower levels, the phase II system will start-up without limitations imposed by VOC emission rates. The estimated duration of phase I is 30 days. After 30 days of operation, the phase II system is scheduled to start-up.

Monitor well 5-34B will be utilized as an extraction well during phase I. It was determined during an SVE pilot test that a sustainable extraction rate of approximately 21 cfm could be maintained from well 5-34B at a vacuum of 6"of H_2O. In the event the SVE equipment is not capable of limiting the vapor extraction rate from monitor well 5-34B to less than 25 cfm, then monitor well 5-35B will be used as the extraction well during phase I. It was determined during the SVE pilot test that a sustainable extraction rate of approximately 22 cfm could be maintained from well 5-35B at a vacuum of 27"of H_2O. The location of the emission source (SVE-1) during phase I will be adjacent to monitor well 5-34B as shown in Figure 3.

The surface equipment associated with the phase I vapor extraction system will consist of the following:

- 1 - Regenerative blower with 1/3 Hp TEFC motor (460V/15A/3ϕ; Class 1 Div 2 Group D);
- 1 - Vapor filter assembly;
- 1 - Water knockout assembly;
- 2 - Vacuum gauges
- 1 - Vapor flowmeter, 5-50 cfm range;
- 1 - Protective weather cover for blower; and
- 2 - Orifice plate flanges and multiple size orifice plates.

The purpose of the orifice plate is to limit the vapor extraction rate, and likewise the "potential emission rate", of the equipment to less than 25 cfm. The orifice plate, if necessary, will be located between the extraction well and the SVE blower. Due to the short duration of phase I, the equipment skid will be placed directly on the ground surface and located adjacent to the extraction well.

2.2.2 Phase II - Expanded SVE System

The purpose of the phase II system is to increase the soil vapor extraction rate to 88 cfm. The

estimated duration of phase II is six to twelve months. This time frame will allow sufficient time to evaluate the operation of the system and to make plans to optimize the system during installation of phase III if necessary.

Monitor wells 5-4B, 5-34B, and 5-35B will be utilized as extraction wells during phase II. In addition, a fourth extraction well will be drilled and completed just west of 5-34B to ensure containment of injected air (Figure 4). It is anticipated that a sustainable extraction rate of approximately 88 cfm will be maintained from the four wells with a vacuum of 20"of H_2O.

The surface equipment for the SVE system will be skid mounted and located in a storage shed just east of monitor well 5-2B as shown in Figure 4 (SVE-2). The blower discharge will be routed just outside the storage shed. The surface equipment associated with the vapor extraction system has been sized to accommodate the capacity requirements of both the phase II and phase III systems. This system will consist of the following:

- 1 - Regenerative blower with 5 Hp motor (460V/30A/3ϕ; Class 1 Div 2 Group D);
- 1 - Vapor filter assembly;
- 1 - Water knockout assembly and 30 gallon reservoir tank;
- 2 - Vacuum gauges;
- 1 - Butterfly valve; and
- 1 - Vapor flowmeter, 20-200 cfm range.

2.2.3 Phase III - Final SVE System

The purpose of the phase III addition to the phase II system is to increase the soil vapor extraction rate to 176 cfm. This will be accomplished by an expansion of the phase II system which, when complete, will extract soil vapor from five (5) SVE wells (Figure 5). The estimated duration of phase III is two to five years. This time frame should be sufficient to achieve the remediation objectives.

Monitor well 5-5B will be utilized as an extraction well in addition to the four wells utilized during phase II. It is anticipated that a sustainable extraction rate of approximately 132 - 176 cfm will be maintained from the five wells with a vacuum of 30-40"of H_2O. If necessary, a sixth extraction well will be drilled and completed. Information obtained during phase II will determine whether a sixth extraction well would be necessary.

Assuming that no optimization of the SVE equipment is necessary, there would be no modification of the phase II equipment.

3.0 Nature and Use of Surrounding Area

The Thoreau compressor station is located approximately 1.5 miles north-northwest of Thoreau, New Mexico in McKinley County, as shown on Figure 1. The property adjacent to the TPC station site is owned by the Navajo Nation and the Bureau of Land Management. Inhabitation of

the area in the immediate vicinity of the station site is sparse. The nearest residence to the proposed new source is located approximately 800 feet south of the south station boundary. The area immediately south of the station site is also used for livestock grazing.

The land surface at the station slopes gently to the south and is sparsely vegetated with native grasses, juniper, and piñon pine. The land surface elevation is about 7300 feet above mean sea level (fmsl). The station is located on the north side of a broad east-west trending valley just east of the continental divide. The Zuni Mountains to the south rise to about 9100 feet, and the prominent cliffs of the Owl Rock escarpment define the northern edge of the valley. No well defined surface drainages cross the station. A 7.5 minute topographic quadrangle map is included in Appendix F.

4.0 Emission Calculations

4.1 Phase I Emissions Estimate

An SVE pilot test was completed in November 1993 in order to gather information on potential emissions. The results of the pilot test is included in Appendix D. The estimated emission rates for phase I were calculated based on measurements and samples taken from monitor well 5-34B which exhibited the highest vapor concentrations of VOCs. The method for estimation of emissions is included in Appendix C. The various data and parameters used for each calculation and the results of each calculation are also included in Appendix C. The results for all regulated contaminants are also included in the permit application attached as Appendix A.

Based on the results of the SVE pilot test, the only regulated air contaminant that will approach either 10 pounds per hour or 10 tons per year is total non-methane hydrocarbons (NMHC). Total NMHC emissions is estimated to be 6.75 lb/hr at start-up of the system.

It is typical for emissions of VOCs from soil vapor extraction systems to drop off rapidly after start-up. Therefore, a conservative estimate of emissions during the first month of operation of the phase I system can be made by assuming an average emission rate of 75% of the initial emission rate. This assumption results in a total emission estimate for the first month of operation of 1.85 tons NMHC. The results of these calculations are also shown in the worksheet included in Appendix C.

4.2 Phase II Emissions Estimate

An estimate of the emission rates during phase II has been prepared by assuming an average extraction rate of 88 cfm for the duration of phase II and the VOC concentrations measured during the pilot test at the monitor well 5-4B location. The total emissions during operation of the phase II system was estimated assuming an average emission rate of 75% of the phase II initial emission rate. The results of these calculations are also included in Appendix C.

4.3 Phase III Emissions Estimate

In a similar manner, an estimate for the emission rates during phase III has been prepared by assuming an average extraction rate of 176 cfm for the duration of phase III and the VOC concentrations measured during the pilot test at the monitor well 5-4B location. The total emissions during operation of the phase III system was estimated assuming an average emission rate of 50% of the phase III initial emission rate. The results of these calculations are also included in Appendix C.

4.4 Total Annual Emissions Estimate

An estimate of maximum emissions anticipated during the first year of operation can be calculated assuming phase I operates for a period of one month, phase II operates for a period of six months, and phase III operates for the remaining five months. These assumptions result in an emission estimate of 4.33 tons NMHC during the first year of operation.

A conservative estimate of total emissions anticipated during the second year of operation can be calculated assuming phase III operates for a period of twelve months and an average emission rate of 50% of the phase III initial emission rate. These assumptions result in an emission estimate of 3.13 tons NMHC during the second year of operation.

5.0 Required Notices

Public notice has been made as required by AQCR 702 and in accordance with the NMED "Guidelines for Public Notification Regarding Permit Application" dated June 1990. Specific details of the public notices are as follows:

1. A notice of permit application was sent by certified mail to adjacent landowners and nearby county officials. Adjacent landowners are the Navajo Nation and the Bureau of Land Management. County officials in McKinley and Cibola counties were notified. There are no known municipal officials to notify in the town of Thoreau, New Mexico. A copy of the letters and the returned receipts are included in Appendix E.

2. A notice of permit application was posted on March 10, 1994 in four "publicly accessible and conspicuous places". A copy is included in Appendix E. The posted locations were:
   1. Compressor station main gate,
   2. Thoreau Shopping Center,
   3. Thoreau post office,
   4. Gasoline service station next to the Thoreau Shopping Center, and
   5. St. Bonaventure Mission.

3. A notice of permit application was published in a newspaper of general circulation, The Gallup Independent. A copy of the affidavit of publication is included in Appendix E.

4. A notice of permit application was provided in a public service announcement by KXTC Radio in Gallup, New Mexico. A copy of the affidavit of announcement is included in Appendix E.

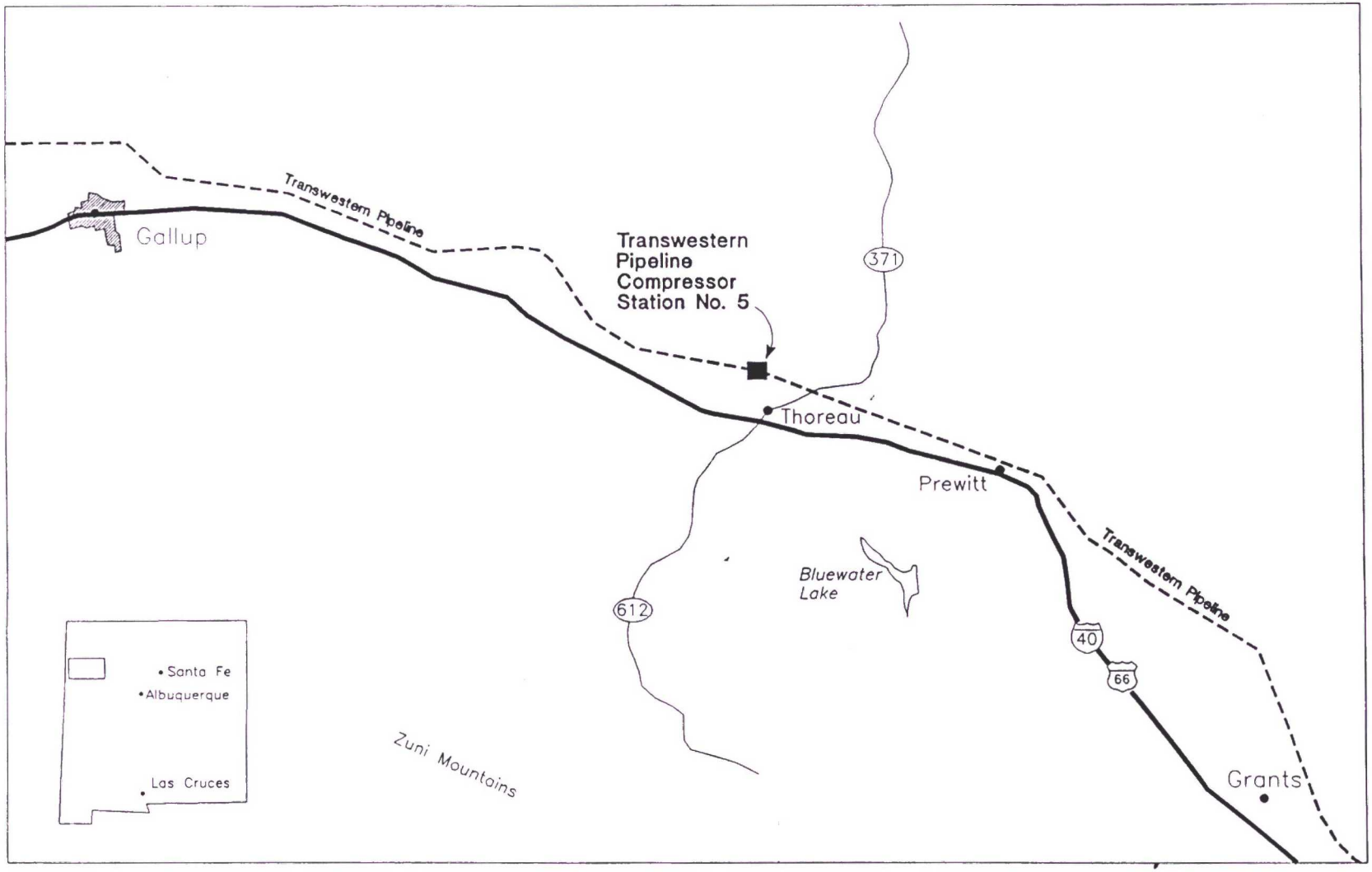
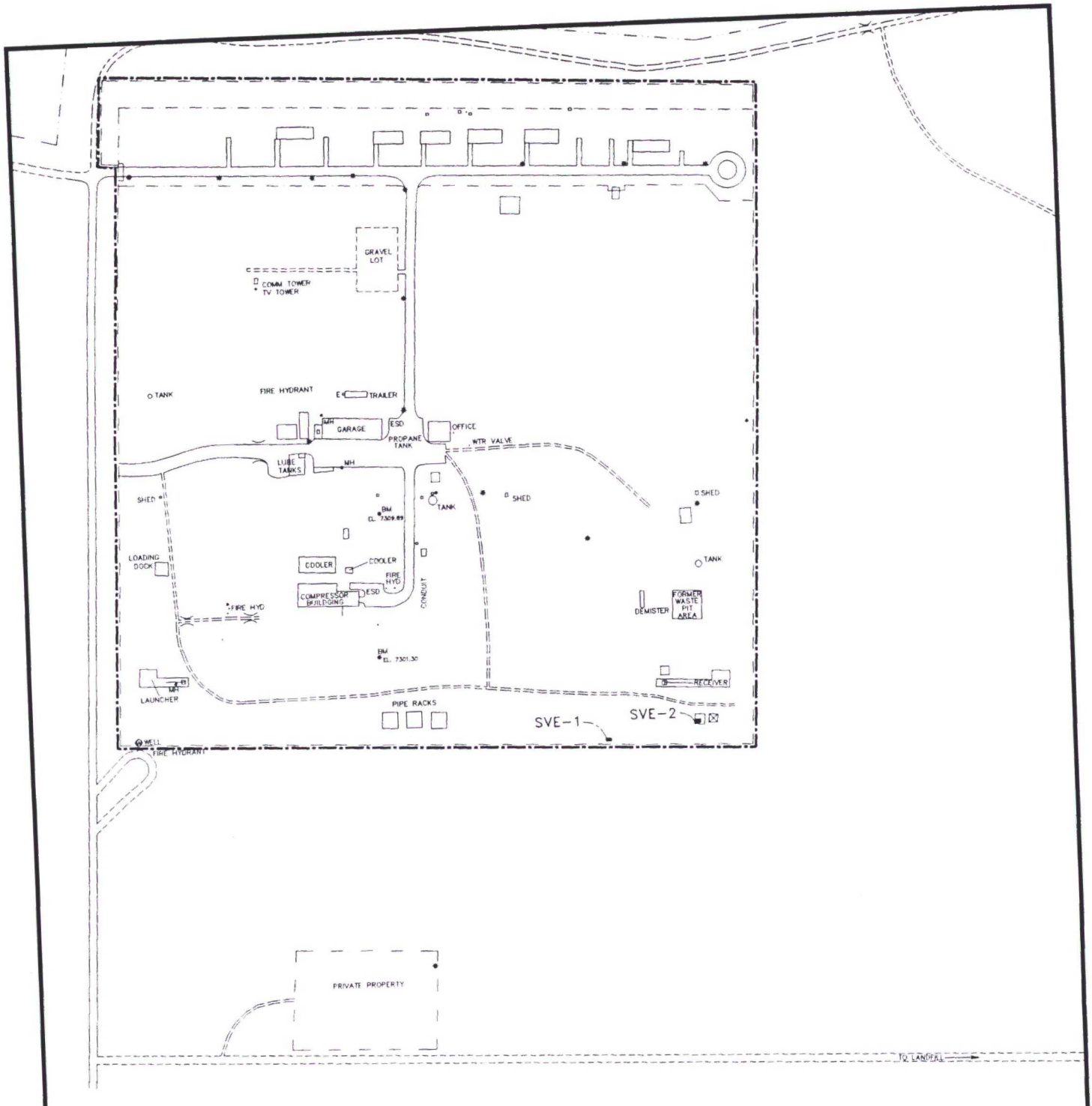


Figure 1

THOREAU COMPRESSOR STATION
Regional Location Map

DANIEL B. STEPHENS & ASSOCIATES, INC.
1-94 JN 2105



N

0 400'

Explanation

- Manhole
- Chainlink Fence
- Compressor Station Boundary
- Gravel Road
- Light

Figure 2

Site Map
Thoreau Compressor Station

TRANSWESTERN PIPE LINE COMPANY

2-94

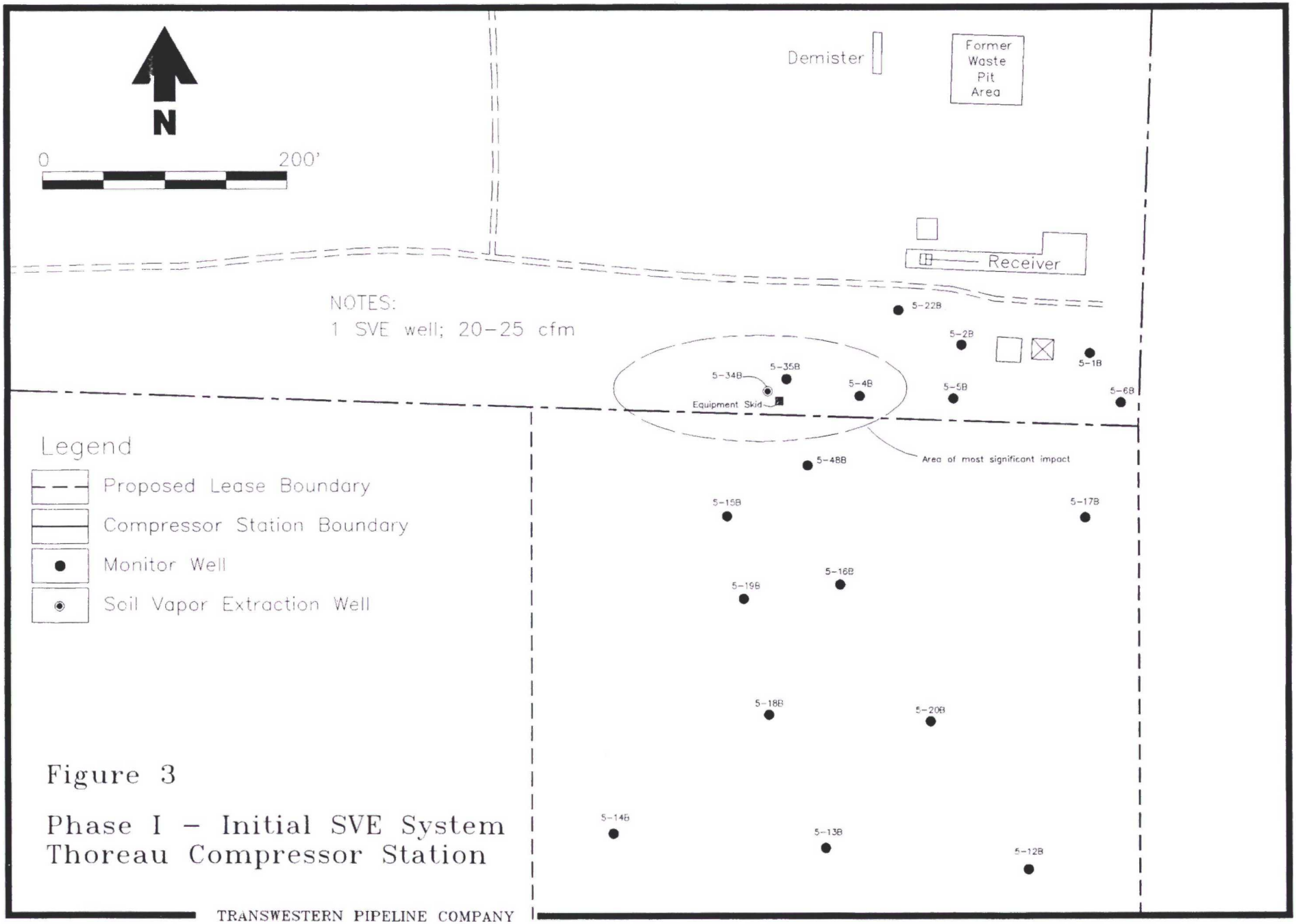


Figure 3

Phase I – Initial SVE System
Thoreau Compressor Station

TRANSWESTERN PIPELINE COMPANY

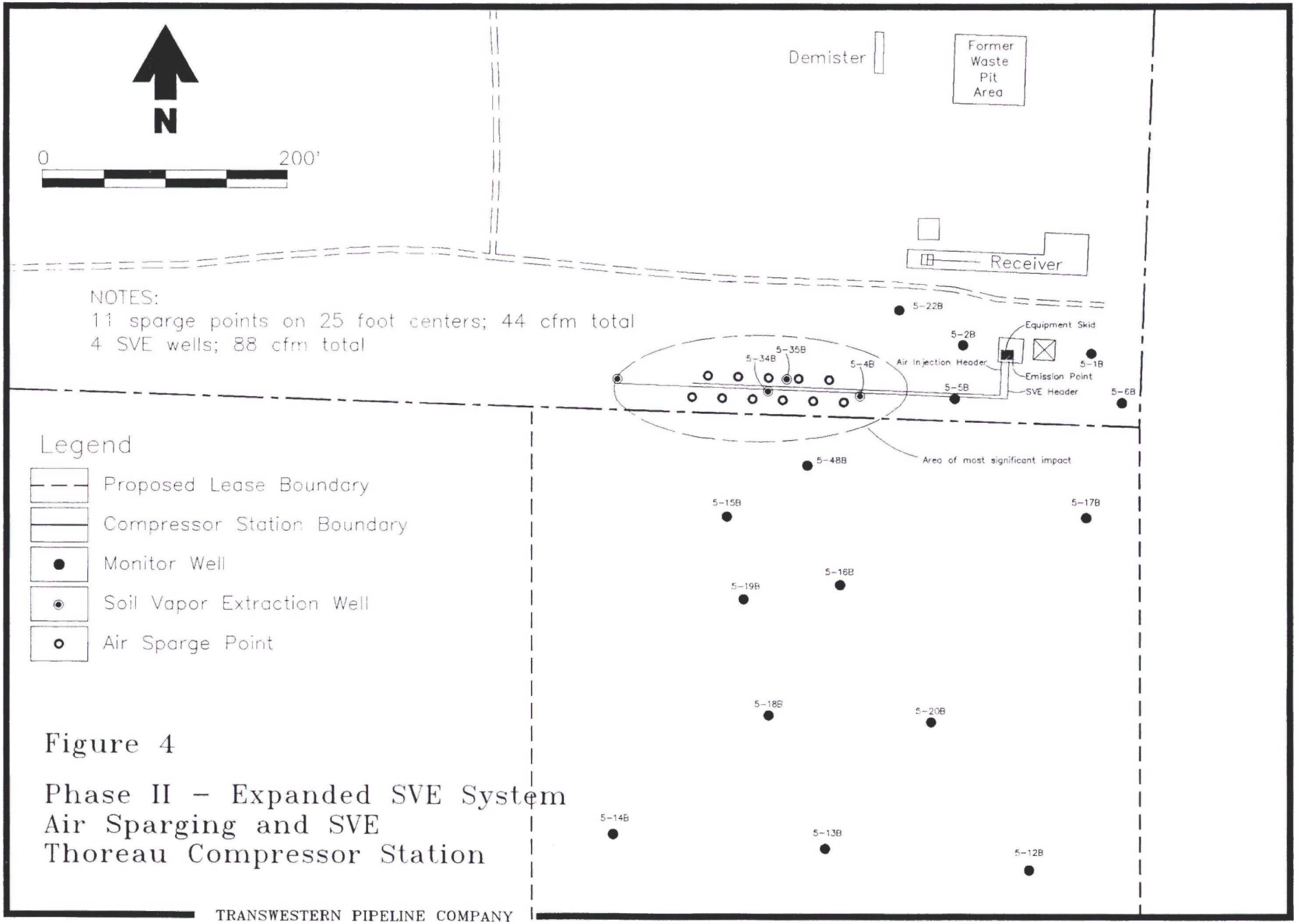


Figure 4

Phase II – Expanded SVE System
Air Sparging and SVE
Thoreau Compressor Station

TRANSWESTERN PIPELINE COMPANY

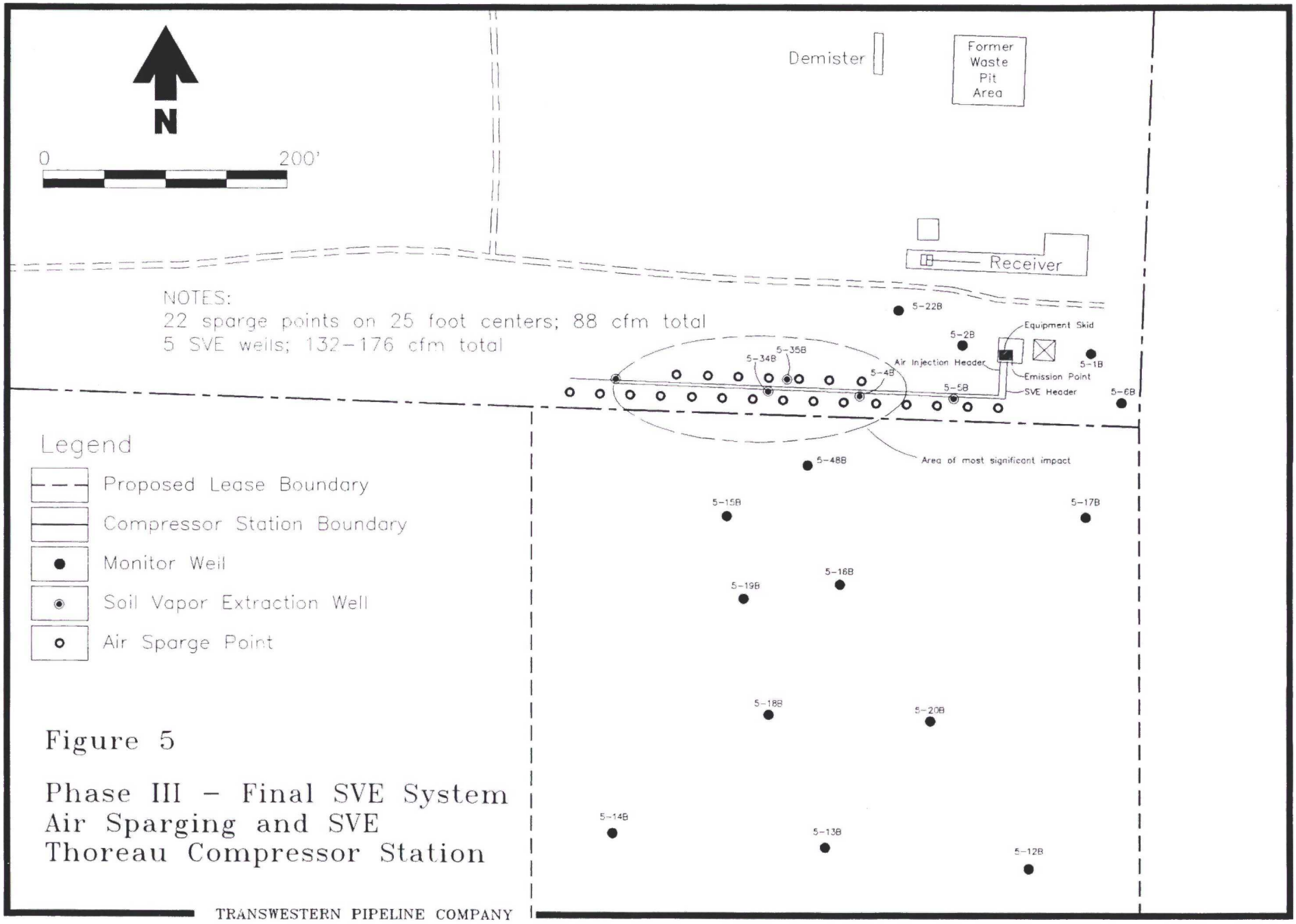


Figure 5

Phase III - Final SVE System
Air Sparging and SVE
Thoreau Compressor Station

TRANSWESTERN PIPELINE COMPANY

NMED - AIR QUALITY BUREAU
P.O. BOX 26110
SANTA FE, NEW MEXICO 87502
TELEPHONE: (505) 827-0070

GENERAL AIR QUALITY PERMIT APPLICATION AND NOTICE OF INTENT FOR THE STATE OF NEW MEXICO

Revised: November 4, 1992

Please answer all questions applicable to your specific business, operation and products.
Use the abbreviation "N.A." for "not applicable" wherever appropriate.

SECTION 1 - GENERAL DATA

1. Company Name: Transwestern Pipeline Company 2. Application Date: 3-31-94

3. Company Mailing Address: P.O. Box 1188, Houston, Texas 77251 Phone: _____

Person to Contact {1}: Fenley "Ted" Ryther, Jr., P.E. Title: Manager, Permits Group Envr. Aff. Phone: (713) 646-7318

4. a. Name and Address of new plant or modification: Name: SVE Vent; Address: Compressor Station #5, P.O. Box 1019, Thoreau, New Mexico 87323 Is U.S.G.S. quadrangular map or equivalent attached? {2} Yes

b. Location of Plant: County: McKinley Range: 13W Township: 14N Section: 20

UTM Zone: 12 UTMH: 751.4 km UTMV: 3,923.4 km Plant Elevation 7300 ft above mean sea level.

c. Approximate location (direction and distance from nearest town): 2.4 miles NNW of Thoreau, New Mexico

5. a. Describe briefly type of plant and nature of construction (or modification) and products: {3} Installation of a vapor blower for the removal of subsurface vapors potentially containing volatile organic compounds (VOCs). Products: None

b. Is this a modification to an existing plant? Yes ___ No X If yes, give the date of original construction: _____

c. Date of anticipated start of construction: 7/1/94 Date of anticipated Start of Operation: 7/1/94

6. Maximum Design Plant capacity (specify units) {4}: 176 CFM (Cubic Feet per minute)

7. Class of land at plant site (private, State, Federal, Indian, etc.): Private

8. Is this site permanent? Yes If not, how long is it expected to be occupied? NA Date of anticipated startup: 7/1/94

9. Normal operating schedule: 24 hours per day, 7 days per week, 4 weeks per month, 12 months per year.

10. Specify maximum operational periods: Continuous

11. Specify percent annual production by quarters: Dec. - Feb. 25, Mar. - May 25, June - Aug. 25, Sep. - Nov. 25

12. Capital Costs (Reconstruction) : (To include all depreciable components only) {5}
Capital cost to build entirely new facility, including modification: $ NA .
Capital cost of modification : NA .

13. Are cooling towers used at this facility? NO Is water conditioner containing Chromium used in the water of the cooling tower? NA

SECTION 2 - FUEL USAGE {1}

(Use additional sheets if necessary)

Unit No. {2}	Type of Equipment {3}	Equipment Manufacturer	Rated Capacity {4}	FUEL DATA {5}, {6}				
				Fuel Type {7}	Amount Per Year {8}	Heating Value (State Units) {9}	Percent Sulfur {10}	Percent Ash {10}
SVE-1	Vacuum Blower			Electric				
SVE-2	Vacumm Blower			Electric				

SECTION 3 - MATERIALS PROCESSED AND PRODUCED

A. RAW MATERIALS PROCESSED (Use additional sheets if necessary)

Unit No. {1}	Type	Composition {2}	Condition {3}	Quantity {4} Specify Units
SVE-1	Soil Vapor	Attached	NA	25 cfm (cubic ft per min)
SVE-2	Soil Vapor	Attached	NA	176 cfm (cubic ft.per min)
	B. MATERIALS PRODUCED (DO NOT INCLUDE EMISSIONS AND PRODUCTS LISTED IN SECTIONS 6, 7, 8 & 11)			

SECTION 4A - LIQUID STORAGE TANKS - MATERIAL DATA – NA

(Use additional sheets if necessary)

Tank No. {1}	Material Name	Composition {2}	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb-mol)	Avg. Stor. Temp., Ta (°F)	True Vapor Pressure @ Ta (psia)	Max. Stor. Temp., Tm (°F)	True Vapor Pressure @ Tm (psia)

SECTION 4B - LIQUID STORAGE TANKS - TANK DATA- NA

(Use additional sheets if necessary)

Tank No. {1}	Date Installed /modif {2}	Material(s) Stored	Roof Type {3}	Seal Type {4}	Capacity (bbl)	Diameter (ft)	Vapor Space H (ft) {5}	Roof/ Shell Color {6}	Paint Cond. {7}	Annual Throughput (gal/yr) {8}	Turnovers per Year {9}

SECTION 5A - SOLIDS MATERIAL STORAGE - MATERIAL DATA – NA

(Use additional sheets if necessary)

Unit No. {1}	Material Name	Process Served {2}	Storage Type {3}	Composition {4}	Date Installed or Modified

SECTION 5B - MATERIAL STORAGE - STORAGE TYPE – NA

(Use additional sheets if necessary)

Unit No. {1}	Transfer or Transport method {2}	Max. Hourly Throughput (units)	Annual Throughput	Dust Control (Storage or Transfer) {3}

SECTION 6 - HAZARDOUS, TOXIC AIR POLLUTANTS {1}, OTHER CHEMICALS, AND ODORS

(Use additional sheets if necessary)

Describe any hazardous air pollutants and toxic chemicals used or emitted in plant processes. See AQCR 702 Part Three list and 1990 CAAA Title III. You may need to expand the information and discussion with respect to compliance with AQCR 702 Part Three list and 1990 CAAA Title III compliance beyond this application form in the permit application package. {2}

Unit {3}	Description of Chemicals {4}	Quantity Emitted to Atmosphere {5}	How, Where Emitted {6}
SVE-1	Benzene	0.04 lb/hr * 0.01 ton/yr.	Not listed on AQCR 702 Part III
SVE-1	Ethyl Benzene	0.03 lb/hr* 0.01 ton.yr	Below AQRC 702 PartIII thresholds
SVE-1	Toluene	0.26 lb/hr* 0.07 ton/yr	Below AQRC 702 Part III Thresholds
SVE-1	Xylene (O-,m-,& p-)	0.17 lb/hr* 0.05 ton/yr	Below AQRC 702 Part III Thresholds
SVE-1	Hexanes	1.07 lb/hr* 0.29 ton/yr	Below AQRC 702 Part III Thresholds
SVE-1	Octanes	3.00 lb/hr* 0.82 ton/yr	Below AQRC 702 Part III Thresholds
SVE-1	Nonanes	0.46 lb/hr* 0.12 ton/yr	Below AQRC 702 Part III Thresholds
SVE-2	Benzene	0.002 lb/hr* 0.003 ton/yr	Not listed on AQCR 702 Part III
SVE-2	Ethyl Benzene	0.02 lb/hr * 0.02 ton/yr	Below AQRC 702 Part III Thresholds
SVE-2	Toluene	0.09 lb/hr* 0.10 ton/yr	Below AQRC 702 Part III Thresholds
SVE-2	Xylene (O-,m-&p-)	0.25 lb/hr* 0.29 ton/yr	Below AQRC 702 Part III Thresholds
SVE-2	Hexanes	0.00 lb/hr* 0.00 ton/yr	Below AQRC 702 Part III Thresholds
SVE-2	Octanes	1.07 lb/hr* 1.24 ton/yr	Below AQRC 702 Part III Thresholds
SVE-2	Nonanes	0.40 lb/hr* 0.46 ton/yr	Below AQRC 702 Part III Thresholds

* Maximum estimated emission rate

SECTION 7- UNIT EMISSIONS (PRIOR TO CONTROL OR ABATEMENT EQUIPMENT OR TO ATMOSPHERE IF UNCONTROLLED)

(Use additional sheets if necessary)

Unit No. {1}	Process or Operation {2}	Quantity of Gases Discharged to Control Equipment {3}	ESTIMATES OF PRE-CONTROL AIR POLLUTANTS						Estimation Method {7}
			Pollutant No. 1		Pollutant No. 2		Pollutant No. 3 {6}		
			Type {4}	Quantity {5}	Type {4}	Quantity {5}	Type {4}	Quantity {5}	
SVE-1	Vacuum Blower	25 cfm 70°F 11.2 psia	VOCs	*6.75 lb/hr		lb/hr		lb/hr	Field Test
				1.85 tn/yr		tn/yr		tn/yr	
				lb/hr		lb/hr		lb/hr	
				tn/yr		tn/yr		tn/yr	
SVE-2	Vacuum Blower	176 CFM 70°F 11.2 psia	VOCs	*2.15 lb/hr		lb/hr		lb/hr	Field Test
				2.48 tn/yr		tn/yr		tn/yr	
				lb/hr		lb/hr		lb/hr	
				tn/yr		tn/yr		tn/yr	
				lb/hr		lb/hr		lb/hr	
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				lb/hr		lb/hr		lb/hr	
				tn/yr		tn/yr		tn/yr	

* Maximum estimated emission rate

SECTION 8 - AIR POLLUTION CONTROL EQUIPMENT, EMISSIONS TO ATMOSPHERE

(Use additional sheets if necessary)

Unit No. {1}	CONTROL EQUIPMENT		AIR POLLUTANTS EMITTED TO STACKS {3}						Control Efficiency	
			Pollutant No. 1		Pollutant No. 2		Pollutant No. 3 {6}			
	Type {2}	Manufacturer and Model No.	Type {4}	Quantity {5}	Type {4}	Quantity {5}	Type {4}	Quantity {5}	% by Weight	How Determined {7}
SVE-1	NONE		VOCs	*6.75 lb/hr		lb/hr		lb/hr	0	
				1.85 tn/yr		tn/yr		tn/yr		
				lb/hr		lb/hr		lb/hr		
				tn/yr		tn/yr		tn/yr		
SVE-2	NONE		VOCs	*2.15 lb/hr		lb/hr		lb/hr	0	
				2.48 tn/yr		tn/yr		tn/yr		
				lb/hr		lb/hr		lb/hr		
				tn/yr		tn/yr		tn/yr		
				lb/hr		lb/hr		lb/hr		
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				tn/yr		tn/yr		tn/yr		

*Maximum estimated emission rate

SECTION 9 - STACK DATA

(Use additional sheets if necessary)

Unit No. {1}	Stack Height ft {2}	Stack Inside Exit Diameter ft {3}	EXIT GAS CONDITIONS {4}			SAMPLING PORTS		
			Temperature °F	Velocity ft/sec	Moisture % by Volume	Number	Size	Location {5}
SVE-1	No Stack	NA	70°F	19.1	3.3% (est.)	NA	NA	NA
SVE-2	No Stack	NA	70°F	19.1	3.3% (est.)	NA	NA	NA

SECTION 10 - EMISSION MEASUREMENT EQUIPMENT – NA

(Use additional sheets if necessary)

Unit No.	Pollutant	Type of Instrument {1}	Manufacturer - Model No.	Range {2}	Sensitivity	Accuracy

SECTION 11 - WASTE PRODUCT DISPOSAL (SOLID AND LIQUID WASTES, AND AUXILIARY INCINERATION, AND OTHER EMISSIONS NOT COVERED IN SECTIONS 4 OR 5) - NA

A. Auxiliary Incineration Operation: AQCR 2000 or AQCR 2020 may apply. **INCINERATION OF HAZARDOUS MATERIALS IS NOT ALLOWED UNDER AQCR 702.**
Normal on-site combustion operating schedule: _____ hours per day _____ days per week _____ weeks per year
Seasonal or peak combustion operating periods (specify):____

B. Waste Products or Emissions: (Use additional sheets if necessary)

Unit No. {1}	Waste Material		Method of Disposal {4}	Incinerator Capacity Specify Units	Auxillary Fuel Used {5}	Type and Efficiency of Air Cleaning Equipment {6}	ESTIMATES OF AIR POLLUTANTS, IF ANY	
	Type {2}	Amount {3}					Type {7}	Quantity Per Year {8}
		/hr						/hr
		/yr						/yr
		/hr						/hr
		/yr						/yr
		/hr						/hr
		/yr						/yr
		/hr						/hr
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		/yr						/yr

SECTION 12 - CERTIFICATION

I, Fenley "Ted" Ryther, Jr.,P.E. hereby certify that the information and data submitted in this application are completely true and as accurate as possible, to the best of my personal knowledge and professional expertise and experience.

Signed this 31st day of March, 1994, upon my oath of affirmation, before a notary of the State of Texas

SIGNATURE (~~Authorized~~ Company Representative) DATE: March 31, 1994

Fenley "Ted" Ryther, Jr., P.E.
PRINTED NAME

Title: Manager, Permits Group, ~~Envr.~~ Aff.
Enron Operations Corp.

Subscribed and sworn to before me on this 31st day of March, 1994.

My authorization as a Notary of the State of Texas expires on the 19th day of November, 1997.

Maria E. Acosta
NOTARY'S SIGNATURE

3-31-94
DATE

Maria E. Acosta
NOTARY'S PRINTED NAME

MARIA E. ACOSTA
Notary Public, State of Texas
My Commission Expires
NOVEMBER 19, 1997

BRUCE KING
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT
AIR QUALITY BUREAU

Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-0070

JUDITH M. ESPINOSA
SECRETARY

RON CURRY
DEPUTY SECRETARY

Air Quality Notice of Intent and Permit Application Checklist

This checklist is designed to help applicants to include the required elements under AQCR 703.1, Notice of Intent, AQCR 702, Permits and AQCR 707, PSD. Each application submitted shall contain the required items listed below, depending on the regulation under which the application is being submitted, before the Air Quality Bureau will rule the application complete under AQCR 702 or make a determination that no permit is required under AQCR 703.1. If each item on the appropriate checklist can not be checked prior to submitting the application, the application will be ruled incomplete. Applications which are ruled incomplete because of missing information will delay any determination or the issuance of the permit. The Department reserves the right to request additional relevant information prior to ruling the application complete in accordance with AQCR 702, Part Two D.1.i.

If an application is being submitted for a determination that no permit is required, complete SECTION A. If an application is being submitted for a permit, complete SECTION A and B. If any application is being submitted for a PSD permit under AQCR 707, complete SECTION A, B and C.

A copy of this checklist shall accompany the application.

SECTION A: AQCR 702, Permits, 703.1, Notice of Intent, and 707, PSD

Applications under this section shall:

1. [✓] be made on a form provided by the Department. Additional text, tables, calculations or clarifying information may also be attached to the form.

2. [✓] contain the applicant's name, address, and the names and addresses of all other owners or operators of the emission sources.

3. [ ] contain the name, address, and phone number of a person to contact regarding questions about the facility.

4. [✓] contain the date of application.

5. [✓] contain the company name which identifies this particular site.

6. [✓] contain a written description of the facility and/or modification including all operations affecting air emissions.

7. [✓] contain the maximum and standard operating schedules for the source after completion of construction or modification in terms of hours per day, days per week, and weeks per year.

8. [✓] contain a map, such as a 7.5 minute USGS topographic quadrangle, showing the exact location of the source.

9. [✓] contain the Section, Range, Township.

10. [✓] contain the UTM zone and UTM coordinates.

11. [✓] include the four digit Standard Industrialized Code (SIC).

12. [✓] contain the types and **potential uncontrolled** amounts of any regulated air contaminants the new source or modification will emit. Complete appropriate sections of the application; attachments can be used to supplement the application, but not replace it.

    if the "potential emission rate" for any one criteria pollutant from a new facility is greater than 10 pounds per hour or 25 tons per year a permit is required - complete Section A and B. If as a result of a modification an existing facility's potential emission rate for any one pollutant is greater than 10 pounds per hour or 25 tons per year a permit is required - complete Section A and B. If the emission rate for a toxic pollutant exceeds the thresholds in AQCR 702 Part Three a permit is required - complete Section A and B.

    - "Potential emission rate" under AQCR 702 means the uncontrolled emission rate at maximum capacity, prior to or in the absence of pollution control equipment, for one hour or one full year (8760 hours per year).

NA 13. [ ] contain the types and **controlled** amounts of any regulated air contaminants the new source or modification will emit. Complete appropriate sections of the application; attachments can be used to supplement the application, but not replace it.

if the "potential to emit" for any one criteria pollutant from a new facility exceeds 100 tons per year (major source) for one of the 28 sources listed in Table 1 of AQCR 707, or 250 tons per year (major source) for all other sources, a PSD permit is required - complete Section A, B, and C. If the source is an existing major source and a modification occurs which results in an actual increase above the threshold in Table 2 of AQCR 707 a PSD permit is required - complete Section A, B, and C.

"potential to emit" under AQCR 707 means the controlled emission rate at maximum capacity, after pollution control equipment, for one full year (8760 hours). "Actual increase" means the emission rate to the atmosphere after all offsets or reductions elsewhere at the plant have been considered.

14. [✓] contain the basis or source for each emission rate (include the manufacturer's specification sheets when used as the source)

15. [✓] contain all calculations used to estimate **potential uncontrolled** and **controlled** emissions.

NA 16. [ ] contain a description of any air pollution control device or control method to be utilized.

NA 17. [ ] contain the basis for the estimated control efficiencies and sufficient engineering data for verification of the control equipment operation, including if necessary, design drawings, test reports, and factors which affect the normal operation (e.g. limits to normal operation).

NA 18. [ ] contain fuel data for each existing and/or proposed piece of fuel burning equipment.

NA 19. [ ] contain the anticipated maximum production capacity of the entire facility after construction and/or modification or of the applicable emission or process unit. Identify any process bottlenecks that limit production.

NA 20. [ ] contain the stack and exhaust gas parameters for all existing and proposed emission stacks.

21. [✓] be signed under oath or affirmation by the operator, the owner, or an authorized representative, certifying to the best of his or her knowledge the truth of all information submitted,

SECTION B: AQCR 702, Permits and 707, PSD

Applications under this section shall:

22. [✓] contain all the elements in SECTION A of this checklist.

23. [✓] consist of five copies of this entire application package, including five copies of the dispersion modelling summary report in each application. Only one complete copy of the dispersion modelling study, including computer disks with all input/output files, should be submitted.

NA 24. [ ] contain a regulatory compliance discussion demonstrating compliance with each applicable regulation (state & federal) and ambient air quality standard, PSD increments (if baseline triggered), and provisions of air toxics, if applicable.

NA 25. [ ] contain the required air quality modeling analysis.

NA 26. [ ] the "Air Quality Modeling Checklist for Permit Applications" has been reviewed and the required information has been submitted with the application.

NA 27. [ ] contain a preliminary operational plan defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown.

NA 28. [ ] contain a process flow sheet, including a material balance, of all components of the facility which would be involved in routine operations and emissions.

NA 29. [ ] contain a full description, including all calculations and the basis for all control efficiencies presented, of the equipment to be used for air pollution control. This shall include a process flow sheet or, if the Department so requires, layout and assembly drawings, design plans, test reports and factors which affect the normal equipment operation, including control and/or process equipment operating bounds.

NA 30. [ ] contain a description of the equipment or methods proposed by the applicant to be used for emission measurement.

contain the following public notice announcement documentation in accordance with AQCR 702, Part Two D.2;

31. [✓] adjacent land owners have been notified of the proposed application,

32. [✓] municipalities and counties have been notified,

33. [✓] one classified or legal advertisement has been published in a local newspaper,

34. [✓] one other advertisement has been published in a local newspaper,

35. [✓] notice of the application has been posted in at least four publicly accessible and conspicuous places, including the proposed or existing facility entrance. (ie: post office, library, grocery store, etc.)

36. [✓] a public service announcement has been made on at least one radio or television station which serves the municipality or county in which the source proposes to locate.

The public notice shall contain the following;

37. [✓] the applicant's name, address and the names and addresses of all other owners or operators of the emission sources,

38. [✓] the date of application submittal,

39. [✓] a description of the plant or equipment process for which a permit is sought,

40. [✓] an estimate of the maximum controlled emission rate for the entire facility in pounds per hour and tons per year for each pollutant, or in the case of a modification to an existing facility, the maximum controlled emission rates for both the modification and the entire facility after the modification,

41. [✓] the maximum and standard operating schedules expected at the facility after completion of construction (hrs/day, days/wk, wks/yr),

42. [✓] the current address of the Department to which comments and inquiries may be directed,

New Mexico Environment Department
Air Quality Bureau - Technical Analysis & Permits Section
1190 St. Francis Dr., P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-0070

43. [✓] include the $100.00 filing fee in accordance with AQCR 700.

SECTION C: AQCR 707, PSD

NA An **applicant** for a PSD permit shall:

44. [ ] arrange a pretest meeting to be held in Santa Fe, which includes the federal land managers, to discuss BACT, modeling, and items of particular interest.

45. [ ] submit the BACT analysis for review prior to submittal of the application (no application will be ruled complete until the final determination regarding BACT is made and this determination can ultimately affect information provided in the application),

46. [ ] submit a modeling protocol prior to submitting the permit application.

47. [ ] submit the monitoring exemption analysis prior to submittal of the application.

NA An **application** for a PSD permit shall:

48. [ ] contain all the elements in SECTION A and B of this checklist.

49. [ ] contain an analysis on the impact on visibility.

50. [ ] contain an analysis on the impact on soils.

51. [ ] contain an analysis on the impact on vegetation, including state and federal threatened and endangered species.

52. [ ] contain documentation that the federal land manager of a Class I area within 100 km of the site has been notified and provided a copy of the application, including the BACT analysis and modeling results.

53. [ ] contain a completed EPA PSD checklist.

Method for Estimation of Uncontrolled Emissions from the SVE-1 & SVE-2 Proposed New Sources

Transwestern Pipeline Company
Compressor Station No. 5 Remediation

1. Vapor samples collected from monitor well 5-34B during an SVE pilot test were analyzed by two laboratories; Core Laboratories and Hall Environmental Analysis Laboratory (HEAL). The Core Lab results indicated higher Non-Methane Volatile Organic Compounds (NMVOC) concentrations than the HEAL results and were used for emission estimations. The concentrations of NMVOC reported by Core Lab are shown in Table 1.

Table 1. Estimated vapor concentrations and emission rates for NMVOC during phase I system operation.

Compound	Concentration ppmv	Concentration ug/L	Emission Rate lb/hr	Emissions tons
benzene	192	474	0.04	0.01
toluene	969	2821	0.26	0.07
ethybenzene	96	322	0.03	0.01
xylene (m-, p-, & o-)	552	1853	0.17	0.05
hexanes	4200	11445	1.07	0.29
heptanes	5500	17422	1.63	0.45
octanes	8900	32131	3.00	0.82
nonanes	1200	4867	0.46	0.12
decanes	200	900	0.08	0.02
undecanes	0	0	0.00	0.00
Total NMVOC	21809	72236	6.75	1.85

2. The following calculation was performed to convert concentrations from ppmv to ug/L:

$$C_{(ug/L)} = C_{(ppmv)} \times \frac{MW_x \times P}{R \times T}$$

where, $C_{(ppmv)}$ = concentration of compound "x" in parts per million by volume;
MW_x = molecular weight of compound "x" in grams/mole;
P = atmospheric pressure in atmospheres (1.0 atm = 14.7 psia at sea level); this was estimated to be 0.76 atm at an elevation of 7300 feet above mean sea level;
R = universal gas constant (0.08205 L-atm/°K-mole); and
T = temperature in degrees °K (assumed to be 293 °K or 68 °F).

3. The emission rates were calculated as follows:

$$M_x = C_x \times Q \times \frac{1\ kg}{1.0E09\ ug} \times \frac{2.203\ lb}{1\ kg} \times \frac{28.32\ L}{1\ ft^3} \times \frac{60\ min}{1\ hr}$$

where, M_x = emission rate of compound "x" in lb./hour;
C_x = concentration of compound "x" in ug/L; and
Q = vapor flow rate in cubic feet per minute; the design flow rate for phase I of 25.0 cfm was used in the following calculations.

4. The total emissions during the first month of operation of the phase I system were estimated as follows:

$$M_{x(\text{tons})} = M_{x(\text{lb./hr})} \times RF \times \frac{24\ \text{hr}}{1\ \text{day}} \times \frac{30\ \text{day}}{1\ \text{month}} \times \frac{1\ \text{ton}}{2000\ \text{lb}}$$

where, RF = an adjustment factor to account for a decline in vapor concentration with time; this was assumed to be 0.75 for the first month of operation of the phase I system.

5. A copy of a spreadsheet with the results of all calculations is attached. The calculations for the phase II and III systems were identical to the phase I calculations with the following exceptions:

- The initial vapor concentrations for the phase II and III systems assumed the concentrations measured during the pilot test in monitor well 5-4B;
- The vapor flow rate for the phase II and III systems was assumed to be the design flow rates of 88 cfm and 176 cfm, respectively;
- The adjustment factor used to account for the decline in vapor concentration with time for the phase II and III systems was 0.75 and 0.50, respectively.

Estimated Uncontrolled Emission Calculations
for the SVE-1 & SVE-2 Proposed New Sources
Transwestern Pipeline Company
Compressor Station No. 5 Remediation

Note: Compound concentrations based on Core Lab analysis of pilot test samples.

Phase I Emissions Estimate (SVE-1)

Compound	C(ppmv)	MW(gm/mole)	P(atm)	R(L-atm/K-mole)	T(K)	C(ug/L)	@ cfm 25.0000 M(lb/hr)	Factor	@ months 1.0000 M(tons)
benzene	192	78.1	0.76	0.08205	293	474.05	0.0443	0.7500	0.0121
toluene	969	92.1	0.76	0.08205	293	2821.31	0.2637	0.7500	0.0722
ethylbenzene	96	106.2	0.76	0.08205	293	322.30	0.0301	0.7500	0.0082
xylene(m-, p-, &o-)	552	106.2	0.76	0.08205	293	1853.24	0.1732	0.7500	0.0474
hexanes	4200	86.2	0.76	0.08205	293	11445.21	1.0699	0.7500	0.2929
heptanes	5500	100.2	0.76	0.08205	293	17421.99	1.6287	0.7500	0.4459
octanes	8900	114.2	0.76	0.08205	293	32130.94	3.0037	0.7500	0.8223
nonanes	1200	128.3	0.76	0.08205	293	4867.16	0.4550	0.7500	0.1246
decanes	200	142.3	0.76	0.08205	293	899.71	0.0841	0.7500	0.0230
undecanes	0	156.3	0.76	0.08205	293	0.00	0.0000	0.7500	0.0000
Total NMHC	21809	104.8	0.76	0.08205	293	72235.91	6.7529	0.7500	1.8486

Phase II Emissions Estimate (SVE-2)

Compound	C(ppmv)	MW(gm/mole)	P(atm)	R(L-atm/K-mole)	T(K)	C(ug/L)	@ cfm 88.0000 M(lb/hr)	Factor	@ months 6.0000 M(tons)
benzene	1	78.1	0.76	0.08205	293	2.47	0.0008	0.7500	0.0013
toluene	31	92.1	0.76	0.08205	293	90.26	0.0297	0.7500	0.0488
ethylbenzene	6	106.2	0.76	0.08205	293	20.14	0.0066	0.7500	0.0109
xylene(m-, p-, &o-)	76	106.2	0.76	0.08205	293	255.16	0.0840	0.7500	0.1379
hexanes	0	86.2	0.76	0.08205	293	0.00	0.0000	0.7500	0.0000
heptanes	100	100.2	0.76	0.08205	293	316.76	0.1042	0.7500	0.1712
octanes	300	114.2	0.76	0.08205	293	1083.07	0.3564	0.7500	0.5854
nonanes	100	128.3	0.76	0.08205	293	405.60	0.1335	0.7500	0.2192
decanes	0	142.3	0.76	0.08205	293	0.00	0.0000	0.7500	0.0000
undecanes	0	156.3	0.76	0.08205	293	0.00	0.0000	0.7500	0.0000
Total NMHC	614	112.0	0.76	0.08205	293	2173.45	0.7152	0.7500	1.1747

Phase III Emissions Estimate (SVE-2)

Compound	C(ppmv)	MW(gm/mole)	P(atm)	R(L-atm/K-mole)	T(K)	C(ug/L)	@ cfm 176.0000 M(lb/hr)	Factor	@ months 5.0000 M(tons)
benzene	1	78.1	0.76	0.08205	293	2.47	0.0016	0.5000	0.0015
toluene	31	92.1	0.76	0.08205	293	90.26	0.0594	0.5000	0.0542
ethylbenzene	6	106.2	0.76	0.08205	293	20.14	0.0133	0.5000	0.0121
xylene(m-, p-, &o-)	76	106.2	0.76	0.08205	293	255.16	0.1679	0.5000	0.1532
hexanes	0	86.2	0.76	0.08205	293	0.00	0.0000	0.5000	0.0000
heptanes	100	100.2	0.76	0.08205	293	316.76	0.2085	0.5000	0.1902
octanes	300	114.2	0.76	0.08205	293	1083.07	0.7128	0.5000	0.6504
nonanes	100	128.3	0.76	0.08205	293	405.60	0.2669	0.5000	0.2436
decanes	0	142.3	0.76	0.08205	293	0.00	0.0000	0.5000	0.0000
undecanes	0	156.3	0.76	0.08205	293	0.00	0.0000	0.5000	0.0000
Total NMHC	614	112.0	0.76	0.08205	293	2173.45	1.4304	0.5000	1.3053

Summation of Emissions Estimates

Compound	First Year Emissions tons	Second Year Emissions tons
benzene	0.0149	0.0036
toluene	0.1752	0.1301
ethylbenzene	0.0312	0.0290
xylene(m-, p-, &o-)	0.3386	0.3678
hexanes	0.2929	0.0000
heptanes	0.8073	0.4566
octanes	2.0581	1.5610
nonanes	0.5874	0.5846
decanes	0.0230	0.0000
undecanes	0.0000	0.0000
Total NMHC	**4.3286**	**3.1326**

AcuVac Remediation

9111 Katy Freeway
Suite 303
Houston, TX 77024
(713) 468-6688: TEL
(713) 468-6689: FAX
Manufacturers Distributor
RSI S.A.V.E. System

November 15, 1993

Ms JoAnn Hilton
Hydrogeologist and Manager
Daniel B. Stephens & Associates, Inc.
6020 Academy N.E. Ste 100
Albuquerque, NM 87109

Dear Ms Hilton:

Enclosed is the report on Pilot Testing performed on November 3rd, 4th, and 5th, 1993 at DBS&A Project No. 2105, Enron Corporation, Transwestern Compressor Station #5, Thoreau, NM. During the tests, AcuVac used the S.A.V.E. Remediation System with various instrumentation including the Horiba Analyzer. The report is divided into six separate tests that were conducted over a three day period.

Project Scope:

Connect the S.A.V.E. System to observation wells B-35B, B-34B, B-4B, B-5B, B-2B and B-6B, and apply vacuum to these wells; record the vacuum and well flow and record all system data - including fuel flow (propane) - and estimate the fuel value from the well vapors. Install and observe the magnehelic gauges on the selected outer observation wells to determine vacuum radius of influence or if the selected recovery well is in vacuum communication with the outer observation wells. Take influent vapor samples to forward for laboratory analysis and provide on-site Horiba Analyzer data on HC ppmv, CO_2 and CO, % by volume. Operate the S.A.V.E. System in a manner that all well vapors are passed through the engine to destruct the contaminants and exhausted to meet air emission standards and comply with applicable State and Federal laws and safety standards.

Fuel Use Information:

When the S.A.V.E. System is running 100% on fuel from recovery well vapors at an altitude of 7,300 ft, the maximum contaminated fuel destruction or burn rate is approximately 9.3 lbs/hr or 1.4 gallons of gasoline per hour. Maximum propane flow at full load was 115 CFH at this altitude at ambient air temperatures from 30° to 50°F and engine speed at 2,700 RPM. Therefore, when the flow meter is on 60 CFH, the well vapors are contributing approximately 50% of the fuel value, or approximately 4.65 lbs/hr. Other percentages are calculated accordingly. Contaminant in the form of gasoline will produce approximately 125,000 BTU/hr. Therefore, the fuel requirement

for these tests are estimated to produce 175,000 BTU/hr. Propane requirements without fuel value from well flow is 1.81 gals/hr.

Summary of Data: 6 Tests See Exhibit A.

Discussion of Data:

There will be variations in well distances compared to an accurate survey. Some well distances were measured while others were estimated from the scale plotted on a location map.

Test #1 was a 24 hour SVE test conducted from recovery well (RW) 5-35B. This well is constructed from 4" PVC pipe and screened from 31.3 to 61.3 ft bgs with a depth of groundwater at test time of 50.03 bmp. Prior to beginning the test, magnehelic gauges were used to check the static vacuum or pressure existing in the selected observation wells. With the exception of well 5-37I, all selected observation wells indicated a pressure under static conditions. From my experience in observing SVE test data, this is not uncommon. Observation wells 5-36E and 5-37I are reported to be screened below the groundwater level and erratic data may occur during SVE testing. Later, we found out during SVE Test #5, that 5-2B was a dead well (no well flow) and the observed vacuums /pressures were probably not influenced by the RW vacuum with the exception of groundwater level changes.

Prior to starting the test, the recovery well PVC connecter and boot were modified to accept transducers for sensing groundwater level changes. All S.A.V.E.'s systems were checked and magnehelic gauges set at "0".

The 24 hour test provided good steady data from observation wells 5-34B, 5-4B, 5-22B and 5-5B. This is presented in the Summary of Data. From this data, 5-34B and 5-4B should be considered within the radius of influence and it is highly probable that 5-22B and 5-5B will effectively be within the influence over time (see Figure 1). The HC, CO_2 and CO concentrations from well vapors as provided by the HORIBA Analyzer were consistent throughout the test period. This is confirmed by the consistent propane flow.

Test #2 was a 3 hour SVE test conducted from recovery well (RW) 5-34B. This well is constructed from 4" PVC pipe and screened from 34 to 64 ft bgs with depth of groundwater at 47.68 ft at the time of the test. The interface probe indicated a PSH sheen on the groundwater. The test was a very typical SVE test in that the RW vacuum and flow was almost constant throughout the test time. The propane flow and the HORIBA analysis of well vapors were also consistent and the progress of vacuum in the

observation wells was steady. This is confirmed as shown in the Summary of Data and Figure 1.

Test #3 was a 2 hour SVE test conducted from recovery well (RW) 5-4B. This well is constructed from 2" PVC pipe and screened from 38.7 to 58.7 ft bgs with depth of groundwater at time of test of 46.12 ft. Prior to beginning the test, magnehelic gauges were used to check the static vacuum/pressure existing in the selected observations wells. With the exception of well 5-2B, all wells indicated a vacuum at 0730 hours on 11/05/93 as compared to a pressure at 1155 hours on 11/03/93. This occurred after 27.9 hours of SVE testing. The recorded data was consistent throughout the test as indicated in the Summary of Data and Figure 1.

Test #4 was a 2 hour SVE test from recovery well (RW) 5-5B. This well is constructed from 2" PVC pipe and screened from 39.5 to 58 ft bgs with depth of groundwater of 45.0 ft at time of test. The operating data was consistent throughout the test. The HORIBA analysis indicates the well vapors contained small amounts of hydrocarbon vapors. Observation wells 5-35B and 5-34B were too far from the RW to provide meaningful data. Two additional wells, 5-1B and 5-6B were added as observation wells. The data is presented in the Summary and Figure 1.

Test #5 was scheduled to be a 2 hour SVE test. However, after the initial vapor evacuation from the well, no flow was observed at a well vacuum of 283" H_2O. The test was aborted. The well should not be included as a SVE recovery well.

Test #6 was a 1.3 hour SVE test conducted from recovery well (RW) 5-6B. This well is constructed from 2" PVC pipe and reported screened from 38.7 to 58.7 ft bgs with the depth of groundwater at 42.0 ft at the time of test. All operating data was consistent throughout the test. Vacuum was held at near 90" H_20 to encourage well flow. Observation wells 5-1B and 5-5B responded to RW vacuum. HORIBA data indicates low hydrocarbon value from the well vapors. All other observation wells were dropped due to distances. The data was not included in the plot in Figure 1.

Figure 1 indicates the most conclusive data supporting a SVE system for this facility. As shown on the plot, a radius of influence from 40 to 60 ft could be incorporated in the design plan. An approximation of the radius of influence may be obtained by determining the point at which the measured vacuum is 0.3 to 0.5" H_20. It is assumed that beyond these points, the pressure gradient (driving force) is negligible to effectively transport vaporized contaminants to the extraction well. Under continuous operation, vacuum and radius of influence may continue to increase 1 to 10 days.

Additional Information (This should be read as vital part of the report):

- Summary of Operating Data
- Plot of observed Vacuum vs Distance at the Facility
- Field Operating Data and Notes
- Site Photographs

Conclusion:

The tests indicate that soil vacuum extraction (SVE) would be an effective method of remediation for this facility. Although the observed vacuum on the outer observation wells was relatively low, or in some cases pressure was recorded, the duration of the pilot tests #2 through #6 were short. However, the results give positive indication that the observed and reported wells were in vacuum communication with the selected SVE recovery wells. A properly installed SVE System should effectively remove contaminants from the soil.

The S.A.V.E. System performed as represented and should be considered a viable technology to use for the remediation of this location. We project it will take 1 to 5 days to establish a consistent vacuum and true radius of influence. The System is designed to consume heavy concentrations of vapors and meet air emission standards set by the NMED. The new S.A.V.E. II System which is presently being tested, can provide well flows of up to 250 cfm.

Once you have reviewed the report, please call me if you have any questions.

Sincerely,

James E. Sadler
Product Engineer

SCHEDULE A
ENRON CORPORATION/TRANSWESTERN COMPRESSOR STATION #5

DBS&A - Thoreau, NM Test #1

11/03/93	Initial Data Time 1230	Second Data Time 1315	Third Data Time 1330	Forth Data Time 1430	Fifth Data Time 1530	Sixth Data Time 1630	Seventh Data Time 1730
% Well Vapors As Fuel	13	22	17	22	22	22	22
Horiba-HC PPM	-	15,530	-	19,430	20,490	17,120	23,950
Recovery Well Vacuum "H_2O Well 5-35B	24	26	26	26	26	26	26
Recovery Well Flow-CFM Well 5-35B	19	20	19.5	19	20	21	21
Well 5-34B Vacuum "H_2O Dist. ft.	.25	.45	.48	.60	.64	.64	.70
Well 5-4B Vacuum "H_2O Dist. ft.	.17	.30	.35	.40	.52	.50	.48
Well 5-22B Vacuum "H_2O Dist. ft.	(.13)	0	.05	.05	.10	.10	.12
Well 5-2B Vacuum "H_2O Dist. ft.	(.41)	(1.00)	(1.00)	(.85)	(.70)	(.70)	(.54)
'l 5-5B uum "H_2O Dist. ft.	(.10)	(.03)	(.01)	.03	.05	.04	.06

11/03/93 and 11/04/93	Eighth Data Time 1830	Ninth Data Time 1930	Tenth Data Time 2030	Eleventh Data Time 2130	Twelfth Data Time 2230	Thirteenth Data Time 2330	Fourteenth Data Time 0030
% Well Vapors As Fuel	26	17	17	17	17	17	17
Horiba-HC PPM	23,630	21,370	-	22,130	-	21,870	-
Recovery Well Vacuum "H_2O Well 5-35B	26	27	27	27	27	27	27
Recovery Well Flow-CFM Well 5-35B	20	21	21	21	21	21	22
Well 5-34B Vacuum "H_2O Dist. ft.	.70	.78	.80	.83	.85	.86	.88
Well 5-4B Vacuum "H_2O Dist. ft.	.52	.56	.60	.62	.60	.58	.60
Well 5-22B Vacuum "H_2O Dist. ft.	.15	.18	.18	.18	.18	.16	.14
ell 5-2B Vacuum "H_2O Dist. ft.	(.48)	(.30)	(.28)	(.24)	(.30)	(.32)	(.38)
Well 5-5B Vacuum "H_2O Dist. ft.	.07	.13	.12	.12	.12	.14	.14

ENRON CORPORATION/TRANSWESTERN COMPRESSOR STATION #5

DBS&A - Thoreau, NM Test #1 - Continued

11/04/93	Fifteenth Data Time 0130	Sixteenth Data Time 0230	Seventeenth Data Time 0330	Eighteenth Data Time 0430	Nineteenth Data Time 0530	Twentieth Data Time 0630	Twenty-first Data Time 0730
% Well Vapors As Fuel	17	17	17	22	22	17	17
Horiba-HC PPM	-	23,110	-	22,570	-	21,960	21,200
Recovery Well Vacuum "H_2O Well 5-35B	27	27	27	27	27	27	28
Recovery Well Flow-CFM Well 5-35B	22	22	21	22	22	22	26
Well 5-34B Vacuum "H_2O Dist. 21.6 ft.	.90	.90	.90	.90	.92	.95	.98
Well 5-4B Vacuum "H_2O Dist. 38.2 ft.	.62	.60	.64	.66	.66	.67	.70
Well 5-22B Vacuum "H_2O Dist. 80.3 ft.	.15	.15	.15	.16	.18	.20	.27
Well 5-2B Vacuum "H_2O Dist. 116.9 ft.	(.38)	(.34)	(.32)	(.30)	(.24)	(.20)	(.14)
Well 5-5B Vacuum "H_2O Dist. 118.8 ft.	.15	.14	.12	.10	.12	.15	.15

11/04/93	Twenty-second Data Time 0830	Twenty-third Data Time 0930	Twenty-forth Data Time 1030	Twenty-fifth Data Time 1130	Twenty-sixth Data Time 1235	Average Data 24:05 Hrs.	Maximum Data
% Well Vapors As Fuel	17	17	17	17	17	18.54	26
Horiba-HC PPM	-	20,398	21,394	22,470	21,860	21,205	23,950
Recovery Well Vacuum "H_2O Well 5-35B	28	29	29	30	31	27.12	31
Recovery Well Flow-CFM Well 5-35B	27	29	29	30	30	22.64	30
Well 5-34B Vacuum "H_2O Dist. 21.6 ft.	.97	.98	1.00	1.00	1.10	.81	1.10
Well 5-4B Vacuum "H_2O Dist. 38.2 ft.	.74	.68	.65	.72	.76	.57	.76
Well 5-22B Vacuum "H_2O Dist. 80.3 ft.	.24	.17	.18	.24	.26	.15	.27
Well 5-2B Vacuum "H_2O Dist. 116.9 ft.	(.18)	(.22)	(.24)	(.30)	(.50)	(.42)	(.14)
Well 5-5B Vacuum "H_2O Dist. 118.8 ft.	.15	.08	.10	.14	.15	.09	.15

ENRON CORPORATION/TRANSWESTERN COMPRESSOR STATION #5

DBS&A - Thoreau, NM Test #2

11/04/93	Initial Data Time 1415	Second Data Time 1515	Third Data Time 1615	Average Data 2:12 Hrs.	Maximum Data
% Well Vapors As Fuel	35	30	35	33.3	35
Horiba-HC PPM	28,770	32,570	31,670	31,003	32,570
Recovery Well Vacuum "H_2O Well 5-34B	6.0	6.0	6.2	6.07	6.2
Recovery Well Flow-CFM Well 5-34B	20	21	22	21	22
Well 5-35B Vacuum "H_2O Dist. 21.6 ft.	.80	.80	.85	.82	.85
Well 5-4B Vacuum "H_2O Dist. 54.0 ft.	.46	.48	.52	.49	.52
Well 5-22B Vacuum "H_2O Dist. 102.0 ft.	.12	.16	.20	.16	.20
Well 5-2B Vacuum "H_2O Dist. 134.0 ft.	(.66)	(.50)	(.36)	.51	(.36)
Well 5-5B Vacuum "H_2O Dist. 133.5 ft.	.10	.14	.18	.14	.18

ENRON CORPORATION/TRANSWESTERN COMPRESSOR STATION #5

DBS&A - Thoreau, NM Test #3

11/05/93	Initial Data Time 0755	Second Data Time 0855	Third Data Time 1000	Average Data 2:05 Hrs.	Maximum Data
% Well Vapors As Fuel	0	0	0	0	0
Horiba-HC PPM	898	1,178	1,205	1,094	1,205
Recovery Well Vacuum "H_2O Well 5-4B	42	42	43	42.33	43
Recovery Well Flow-CFM Well 5-4B	20	22	23	21.67	23
Well 5-35B Vacuum "H_2O Dist. 38.2 ft.	.38	.46	.52	.45	.52
Well 5-34B Vacuum "H_2O Dist. 54.0 ft	.22	.28	.34	.28	.34
Well 5-22B Vacuum "H_2O Dist. 83.0 ft.	.14	.19	.24	.19	.24
Well 5-2B Vacuum "H_2O Dist. 88.5 ft.	(.06)	(.04)	(.02)	(.04)	(.02)
Well 5-5B Vacuum "H_2O Dist. 79.5 ft.	.04	.20	.26	.17	.26

ENRON CORPORATION/TRANSWESTERN COMPRESSOR STATION #5

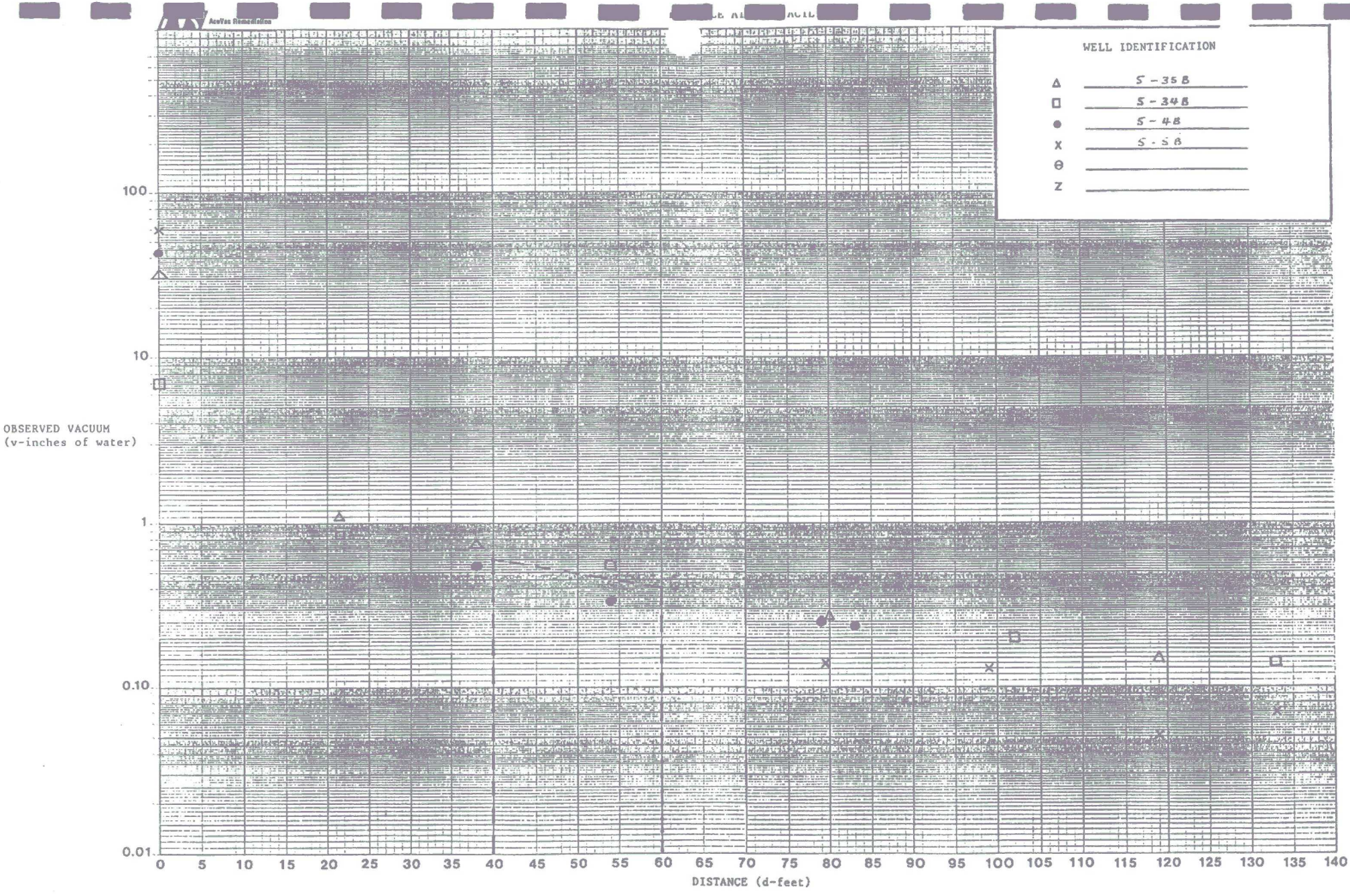
DBS&A - Thoreau, NM Test #4

11/05/93	Initial Data Time 1015	Second Data Time 1115	Third Data Time 1225	Average Data 2:10 Hrs.	Maximum Data
% Well Vapors As Fuel	0	0	0	0	0
Horiba-HC PPM	56	64	22	47.33	64
Recovery Well Vacuum "H_2O Well 5-5B	82	60	60	67.33	82
Recovery Well Flow-CFM Well 5-5B	20	18	18	.67	20
Well 5-35B Vacuum "H_2O Dist. 118.8 ft.	.05	.05	.05	.05	.05
Well 5-34B Vacuum "H_2O Dist. 133.5 ft	.07	.07	.05	.06	.07
Well 5-4B Vacuum "H_2O Dist. 79.5 ft.	.14	.16	.18	.16	.18
Well 5-22B Vacuum "H_2O Dist. 99.0 ft.	.14	.14	.16	.15	.16
l 5-2B .cuum "H_2O Dist. 46.0 ft.	(.02)	.05	.05	.03	.05
Well 5-1B Vacuum "H_2O Dist. 123.0 ft.	(.22)	(.04)	.05	(.07)	.05
Well 5-6B Vacuum "H_2O Dist. 142.5 ft.	(.10)	(.05)	.08	(.02)	.08

ENRON CORPORATION/TRANSWESTERN COMPRESSOR STATION #5

DBS&A - Thoreau, NM Test #6

11/05/93	Initial Data Time 1305	Second Data Time 1405	Third Data Time 1420	Average Data 1:15 Min	Maximum Data
% Well Vapors As Fuel	0	0	0	0	0
Horiba-HC PPM	20	108	-	64	108
Recovery Well Vacuum "H_2O Well 5-6B	92	95	96	94.33	96
Recovery Well Flow-CFM Well 5-6B	4	8	9	7.0	9
Well 5-1B Vacuum "H_2O Dist. 49.5 ft.	0	.18	.20	.13	.20
Well 5-5B Vacuum "H_2O Dist. 142.5 ft	.04	.15	.18	.12	.18


WELL IDENTIFICATION
Δ S-35B
□ S-34B
● S-4B
X S-5B
Θ
Z
100
10
1
0.10
0.01
OBSERVED VACUUM
(v-inches of water)
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140
DISTANCE (d-feet)

AcuVac Remediation

OPERATING DATA - TEST NO 1

S.A.V.E.™ SYSTEM

Page 1 Location ENRON CORPORATION TRANSWESTERN COMPRESSOR STA #5 THOREAU NM Project Engr. J. SADLER

	Parameter						
	Date	11/3/93					→
		Time START UP 1005	Time WARM UP 1155	Time START 1230	Time 1315	Time 1330	Time 1430
		Hr. Meter 535.0	Hr. Meter 536.0	Hr. Meter 536.5	Hr. Meter 537.2	Hr. Meter 537.5	Hr. Meter 538.6
ENGINE	R.P.M.	2000	2000	2600	2750	2700	2700
ENGINE	Oil Press P.S.I.	60	55	55	50	50	50
ENGINE	Water Temp °F	120	170	190	190	190	190
ENGINE	Volts	13.5	13.5	13.5	13.5	13.5	13.5
ENGINE	Intake Vac Hg	6	6	8	6	6	4
FUEL/AIR	Gas Flow Fuel/Propane cfh	60	60	100	90	95	90
FUEL/AIR	Air Flow cfm	20	18	24	28	28	30
FUEL/AIR	Well Flow 5-35B cfm	—	—	19	20	19.5	19
FUEL/AIR	Recovery Well Vac 5-35B "H_2O	—	—	24	26	26	26
	Air Temp °F	38	52	55	56	56	58
	Barometric Pressure "Hg						
MONITOR WELL VACUUM	5-36E "H_2O	-	(.90)	.05	.11	.12	(.18)
MONITOR WELL VACUUM	5-37 I "H_2O	-	0	.40	.90	.90	.90
MONITOR WELL VACUUM	5-34 B "H_2O	-	(.06)	.25	.45	.48	.60
MONITOR WELL VACUUM	5-4 B "H_2O	-	(.10)	.17	.30	.35	.40
MONITOR WELL VACUUM	5-22B "H_2O	-	(.13)	(.13)	0	.05	.05
MONITOR WELL VACUUM	5-2B "H_2O	-	(.16)	(.41)	(1.00)	(1.00)	(.85)
MONITOR WELL VACUUM	5-5B "H_2O	-	(.10)	(.10)	(.03)	(.01)	.03
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MANIFOLD	Vapor Wells On/Off	OFF	ON	ON	ON	ON	ON
MANIFOLD	Groundwater Wells On/Off	OFF	→	→	→	→	→
MANIFOLD	Discharge Flow Meter gals	OFF	→	→	→	→	→
	Samples				HORIBA Influent		HORIBA Influent

STATIC WELL VACUUM / PRESSURE PRIOR TO WELL VACUUM OR FLOW

( ) INDICATES WELL PRESSURE

AcuVac Remediation

OPERATING DATA - TEST NO 1

S.A.V.E.™ SYSTEM

Page 2 Location ENRON CORPORATION TRANSWESTERN COMPRESSOR STA #5 THOREAU N.M Project Engr. J. SADLER

	Parameter						
	Date	11/2/93					→
		Time	Time	Time	Time	Time	Time
		1530	1630	1730	1830	1930	2030
		Hr. Meter	Hr. Meter	Hr. Meter	Hr. Meter	Hr. Meter	Hr. Meter
		539.6	540.6	541.6	542.6	543.6	544.6
ENGINE	R.P.M.	2700	2700	2700	2600	2700	2700
ENGINE	Oil Press P.S.I.	50	50	50	50	50	50
ENGINE	Water Temp °F	190	190	190	190	185	185
ENGINE	Volts	13.5	13.5	13.5	13.5	13.5	13.5
ENGINE	Intake Vac Hg	4	4	4	4	5	5
FUEL/AIR	Gas Flow Fuel/Propane cfh	90	90	90	85	95	95
FUEL/AIR	Air Flow cfm	30	32	32	32	35	35
FUEL/AIR	Well Flow 5-35B cfm	20	21	21	20	21	21
FUEL/AIR	Recovery Well Vac 5-35B "H_2O	26	26	26	26	27	27
	Air Temp °F	52	48	43	40	38	38
	Barometric Pressure "Hg						
MONITOR WELL VACUUM	5-36E "H_2O	(.17)	(.12)	(.02)	.03	.15	.08
MONITOR WELL VACUUM	5-37I "H_2O	.90	.90	1.00	(1.2)	(.60)	(.60)
MONITOR WELL VACUUM	5-34B "H_2O	.64	.64	.70	.70	.78	.80
MONITOR WELL VACUUM	5-4B "H_2O	.52	.50	.48	.52	.56	.60
MONITOR WELL VACUUM	5-22B "H_2O	.10	.10	.12	.15	.18	.18
MONITOR WELL VACUUM	5-2B "H_2O	(.70)	(.70	(.54)	(.48)	(.30)	(.28)
MONITOR WELL VACUUM	5-5B "H_2O	.05	.04	.06	.07	.13	.12
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O			( ) INDICATES WELL PRESSURE			
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MANIFOLD	Vapor Wells On/Off	ON	ON	ON	ON	ON	ON
MANIFOLD	Groundwater Wells On/Off	OFF	→				→
MANIFOLD	Discharge Flow Meter gals	OFF	→				→
	Samples	HORIBA EMISSIONS		HORIBA INFLUENT & EMISSIONS	HORIBA INFLUENT	HORIBA INFLUENT	

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AcuVac Remediation

OPERATING DATA - TEST NO 1

S.A.V.E.™ SYSTEM

Page 3 Location ENRON CORPORTION TRANSWESTERN COMPRESSOR STA #5 THOREAU NM, Project Engr. J. SADLER

	Parameter						
	Date	11/3/93	→	→	11/4/93	→	→
		Time 2130	Time 2230	Time 2330	Time 0030	Time 0130	Time 0230
		Hr. Meter 545.5	Hr. Meter 546.5	Hr. Meter 547.5	Hr. Meter 548.5	Hr. Meter 549.5	Hr. Meter 550.5
ENGINE	R.P.M.	2700	2700	2800	2700	2700	2700
ENGINE	Oil Press P.S.I.	50	50	50	50	50	50
ENGINE	Water Temp °F	185	185	185	185	185	185
ENGINE	Volts	13.5	13.5	13.5	13.5	13.5	13.5
ENGINE	Intake Vac Hg	5	5	5	5	5	5
FUEL/AIR	Gas Flow Fuel/Propane cfh	95	95	95	95	95	95
FUEL/AIR	Air Flow cfm	34	34	34	34	34	34
FUEL/AIR	Well Flow 5-35B cfm	21	21	21	22	22	22
FUEL/AIR	Recovery Well Vac 5-35B "H_2O	27	27	27	27	27	27
	Air Temp °F	37	37	36	36	36	35
	Barometric Pressure "Hg						
MONITOR WELL VACUUM	5-36E "H_2O	.06	.08	.10	.12	.12	.10
MONITOR WELL VACUUM	5-37I "H_2O	(.70)	(.70)	(.75)	(.80)	(.80)	(.60)
MONITOR WELL VACUUM	5-34B "H_2O	.83	.85	.86	.88	.90	.90
MONITOR WELL VACUUM	5-4B "H_2O	.62	.60	.58	.60	.62	.60
MONITOR WELL VACUUM	5-22B "H_2O	.18	.18	.16	.14	.15	.15
MONITOR WELL VACUUM	5-2B "H_2O	(.24)	(.30)	(.32)	(.38)	(.38)	(.34)
MONITOR WELL VACUUM	5-5B "H_2O	.12	.12	.14	.14	.15	.14
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O			( ) INDICATES WELL PRESSURE			
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
...IFOLD	Vapor Wells On/Off	ON	ON	ON	ON	ON	ON
...IFOLD	Groundwater Wells On/Off	OFF	→	→	→	→	→
...IFOLD	Discharge Flow Meter gals	OFF	→	→	→	→	→
	Samples	HORIBA INFLUENT		HORIBA INFLUENT			HORIBA INFLUENT

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AcuVac Remediation

OPERATING DATA - TEST NO 1

S.A.V.E.™ SYSTEM

Page 4 Location ENRON CORPORATION TRANSWESTERN COMPRESSOR STA #5 THOREAU N.M. Project Engr. J. SADLER

	Parameter	Date 11/4/93					
		Time 0330 / Hr. Meter 551.5	Time 0930 / Hr. Meter 552.5	Time 0530 / Hr. Meter 553.5	Time 0630 / Hr. Meter 554.5	Time 0730 / Hr. Meter 555.5	Time 0830 / Hr. Meter 556.5
ENGINE	R.P.M.	2700	2700	2700	2700	2700	2700
	Oil Press P.S.I.	50	50	50	50	50	50
	Water Temp °F	185	185	185	185	185	185
	Volts	13.5	13.5	13.5	13.5	13.5	13.5
	Intake Vac Hg	5	5	5	5	5	6
FUEL/AIR	Gas Flow Fuel/Propane cfh	95	90	90	95	95	95
	Air Flow cfm	34	32	33	34	32	32
	Well Flow 5-35B cfm	21	22	22	22	26	27
	Recovery Well Vac 5-35B "H_2O	27	27	27	27	28	28
	Air Temp °F	34	33	32	34	35	36
	Barometric Pressure "Hg						
MONITOR WELL VACUUM	5-36E "H_2O	.07	.08	.10	.10	.12	.08
	5-37I "H_2O	(.60)	(.50)	(.50)	(.50)	(.50)	(.60)
	5-34B "H_2O	.90	.90	.92	.95	.98	.97
	5-4B "H_2O	.64	.66	.66	.67	.70	.74
	5-22B "H_2O	.15	.16	.18	.20	.27	.24
	5-2B "H_2O	(.32)	(.30)	(.24)	(.20)	(.14)	(.18)
	5-5B "H_2O	.12	.10	.12	.15	.15	.15
	"H_2O						
	"H_2O						
	"H_2O			( ) INDICATES WELL PRESSURE			
	"H_2O						
	"H_2O						
	"H_2O						
	"H_2O						
MANIFOLD	Vapor Wells On/Off	ON	ON	ON	ON	ON	ON
	Groundwater Wells On/Off	OFF	→	→	→	→	→
	Discharge Flow Meter gals	OFF	→	→	→	→	→
	Samples		HORIBA INFLUENT		HORIBA INFLUENT	HORIBA INFLUENT	

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AcuVac Remediation

OPERATING DATA - TEST NO 1

S.A.V.E.™ SYSTEM

age 5 Location ENRON CORPORATION TRANSWESTERN COMPRESSOR STA #5 THOREAU N.M. Project Engr. J. SADLER

	Parameter						
	Date	11/4/93	→	→	→		
		Time	Time	Time	Time STOP	Time	Time
		0930	1030	1130	1235		
		Hr. Meter	Hr. Meter	Hr. Meter	Hr. Meter	Hr. Meter	Hr. Meter
		557.5	558.5	559.5	560.6		
ENGINE	R.P.M.	2800	2700	2700	2700		
	Oil Press P.S.I.	50	50	50	50		
	Water Temp °F	190	190	190	190		
	Volts	13.5	13.5	13.5	13.5		
	Intake Vac Hg	5	5	5	5		
FUEL/AIR	Gas Flow Fuel/Propane cfh	95	95	95	95		
	Air Flow cfm	33	34	34	34		
	Well Flow 5-35 B cfm	29	29	30	30		
	Recovery Well Vac 5-35 B "H_2O	29	29	30	31		
	Air Temp °F	39	44	48	54		
	Barometric Pressure "Hg						
MONITOR WELL VACUUM	5-36 E "H_2O	.05	.05	.05	(.20)		
	5-37 I "H_2O	(.6)	(.65)	(.88)	(1.1)		
	5-34 B "H_2O	.98	1.00	1.00	1.10		
	5-4 B "H_2O	.68	.65	.72	.76		
	5-22 B "H_2O	.17	.18	.24	.26		
	5-2 B "H_2O	(.22)	(.24)	(.30)	(.50)		
	5-5 B "H_2O	.08	.10	.14	.15		
	"H_2O						
	"H_2O						
	"H_2O						
	"H_2O		( )	INDICATES	WELL PRESSURE		
	"H_2O						
	"H_2O						
	"H_2O						
MANIFOLD	Vapor Wells On/Off	ON	ON	ON	ON		
	Groundwater Wells On/Off	OFF	→	→	→		
	Discharge Flow Meter gals	OFF	→	→	→		
	Samples	HORIBA INFLUENT	HORIBA INFLUENT AND EMISSIONS	HORIBA INFLUENT	HORIBA INFLUENT		

(933107)

AcuVac Remediation

OPERATING DATA - TEST NO 2

S.A.V.E.™ SYSTEM

Page 1 Location ENRON CORPORATION TRANSWESTERN COMPRESSOR STA #5 THOREAU N.M Project Engr. J. SADLER

	Parameter						
	Date	11/4/93	→	→	→	→	
		Time START 1315	Time 1415	Time 1515	Time 1615	Time STOP 1627	Time
		Hr. Meter 560.7	Hr. Meter 561.7	Hr. Meter 562.7	Hr. Meter 563.8	Hr. Meter 563.9	Hr. Meter
ENGINE	R.P.M.	2700	2700	2700	2700		
ENGINE	Oil Press P.S.I.	50	50	50	50		
ENGINE	Water Temp °F	190	190	190	190		
ENGINE	Volts	13.5	13.5	13.5	13.5		
ENGINE	Intake Vac Hg	5	5	5	5		
FUEL/AIR	Gas Flow Fuel/Propane cfh	90	75	80	75		
FUEL/AIR	Air Flow cfm	34	34	34	34		
FUEL/AIR	Well Flow 5-34B cfm	20	20	21	22		
FUEL/AIR	Recovery Well Vac 5-34B "H_2O	5.6	6.0	6.0	6.2		
	Air Temp °F	56	57	56	54		
	Barometric Pressure "Hg						
MONITOR WELL VACUUM	5-35B "H_2O	.68	.80	.80	.85		
MONITOR WELL VACUUM	5-36E "H_2O	(.56)	(.54)	(.36)	(.12)		
MONITOR WELL VACUUM	5-37I "H_2O	(1.7)	(1.5)	(1.4)	(1.2)		
MONITOR WELL VACUUM	5-4B "H_2O	.26	.46	.48	.52		
MONITOR WELL VACUUM	5-22B "H_2O	.02	.12	.16	.20		
MONITOR WELL VACUUM	5-2B "H_2O	(.58)	(.66)	(.50)	(.36)		
MONITOR WELL VACUUM	5-5B "H_2O	0	.10	.14	.18		
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O			( ) INDICATES WELL PRESSURE			
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MANIFOLD	Vapor Wells On/Off	ON	ON	ON	ON	OFF	
MANIFOLD	Groundwater Wells On/Off	OFF	→	→	→	→	
MANIFOLD	Discharge Flow Meter gals	OFF	→	→	→	→	
	Samples	HORIBA INFLUENT	HORIBA INFLUENT EMISSIONS	HORIBA INFLUENT	HORIBA INFLUENT		

(933107)

AcuVac Remediation

OPERATING DATA - TEST NO 3

S.A.V.E.™ SYSTEM

Page 1 Location ENRON CORPORATION TRANSWESTERN COMPRESSOR STA #5 THOREAU NM Project Engr. J. SADLER

	Parameter	Date 11/5/93					
		Time Warm up 0730	Time START 0755	Time 0855	Time STOP 1000	Time	Time
		Hr. Meter 564.0	Hr. Meter 564.5	Hr. Meter 565.5	Hr. Meter 566.6	Hr. Meter	Hr. Meter
ENGINE	R.P.M.	1500	2500	2750	2700		
ENGINE	Oil Press P.S.I.	60	55	50	50		
ENGINE	Water Temp °F	120	180	190	190		
ENGINE	Volts	13.5	13.5	13.5	13.5		
ENGINE	Intake Vac Hg	4	11	7	7		
FUEL/AIR	Gas Flow Fuel/Propane cfh	60	115	115	115		
FUEL/AIR	Air Flow cfm	20	27	23	24		
FUEL/AIR	Well Flow 5-4B cfm	OFF	20	22	23		
FUEL/AIR	Recovery Well Vac 5-4B "H_2O	OFF	42	42	43		
	Air Temp °F	33	34	36	39		
	Barometric Pressure "Hg						
MONITOR WELL VACUUM	5-35B "H_2O	.05	.38	.46	.52		
MONITOR WELL VACUUM	5-36E "H_2O	.40	(.60)	(.60)	(.64)		
MONITOR WELL VACUUM	5-37I "H_2O	.40	(.40)	(.44)	(.40)		
MONITOR WELL VACUUM	5-34B "H_2O	.05	.22	.28	.34		
MONITOR WELL VACUUM	5-22B "H_2O	.10	.14	.19	.24		
MONITOR WELL VACUUM	5-2B "H_2O	(.2)	(.06)	(.04)	(.02)		
MONITOR WELL VACUUM	5-5B "H_2O	.07	.04	.20	.26		
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O	INITIAL OUTER WELL DATA PRIOR TO RW VACUUM & FLOW					
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O			( ) INDICATES WELL PRESSURE			
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MANIFOLD	Vapor Wells On/Off	OFF	ON	ON	ON		
MANIFOLD	Groundwater Wells On/Off	OFF	→	→	→		
MANIFOLD	Discharge Flow Meter gals	OFF	→	→	→		
	Samples		HORIBA INFLUENT	HORIBA INFLUENT & EMISSIONS	HORIBA INFLUENT		

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AcuVac Remediation

OPERATING DATA - TEST NO 4

S.A.V.E.™ SYSTEM

ENRON CORPORATION THOREAU

Page 1 Location TRANSWESTERN COMPRESSOR STA #5 N.M. Project Engr. _____

	Parameter						
	Date	11/5/93	→	→			
		Time START 1015	Time 1115	Time STOP 1225	Time	Time	Time
		Hr. Meter 566.9	Hr. Meter 567.9	Hr. Meter 569.0	Hr. Meter	Hr. Meter	Hr. Meter
ENGINE	R.P.M.	2500	2500	2500			
ENGINE	Oil Press P.S.I.	50	50	50			
ENGINE	Water Temp °F	190	190	190			
ENGINE	Volts	13.5	13.5	13.5			
ENGINE	Intake Vac Hg	11	11	11			
FUEL/AIR	Gas Flow Fuel/Propane cfh	115	115	115			
FUEL/AIR	Air Flow cfm	12	14	14			
FUEL/AIR	Well Flow 5-5B cfm	20	18	18			
FUEL/AIR	Recovery Well Vac 5-5B "H_2O	82	60	60			
	Air Temp °F	40	43	47			
	Barometric Pressure "Hg						
MONITOR WELL VACUUM	5-35B "H_2O	.05	.05	.05			
MONITOR WELL VACUUM	5-34B "H_2O	.07	.07	.05			
MONITOR WELL VACUUM	5-4B "H_2O	.14	.16	.18			
MONITOR WELL VACUUM	5-22B "H_2O	.14	.14	.16			
MONITOR WELL VACUUM	5-2B "H_2O	(.02)	.05	.05			
MONITOR WELL VACUUM	5-1B "H_2O	(.22)	(.09)	.05			
MONITOR WELL VACUUM	5-6B "H_2O	(.10)	(.05)	.08			
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O			( ) INDICATES WELL PRESSURE			
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MANIFOLD	Vapor Wells On/Off	ON	ON	ON			
MANIFOLD	Groundwater Wells On/Off	OFF	→	→			
MANIFOLD	Discharge Flow Meter gals	OFF	→	→			
	Samples	HORIBA INFLUENT	HORIBA INFLUENT	HORIBA INFLUENT			

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AcuVac Remediation

OPERATING DATA - TEST NO 5

S.A.V.E.™ SYSTEM

Page 1 Location ENRON CORPORATION TRANSWESTERN COMPRESSOR STA #5 THOREAU N.M. Project Engr. J. SADLER

	Parameter						
	Date	11/5/93	→	→			
		Time START 1245	Time 1250	Time STOP 1255	Time	Time	Time
		Hr. Meter 569.3	Hr. Meter 569.4	Hr. Meter 569.5	Hr. Meter	Hr. Meter	Hr. Meter
ENGINE	R.P.M.	2600	2700	2700			
ENGINE	Oil Press P.S.I.	50	–	–			
ENGINE	Water Temp °F	190	–	–			
ENGINE	Volts	13.5	–	–			
ENGINE	Intake Vac Hg	16	–	–			
FUEL/AIR	Gas Flow Fuel/Propane cfh	115	115	115			
FUEL/AIR	Air Flow cfm	15	15	16			
FUEL/AIR	Well Flow 5-2B cfm	0	0	0			
FUEL/AIR	Recovery Well Vac 5-2B "H_2O	250	280	285			
	Air Temp °F	48	49	49			
	Barometric Pressure "Hg						
MONITOR WELL VACUUM	5-35B "H_2O	NO WELL FLOW - NO TEST					
MONITOR WELL VACUUM	5-34B "H_2O						
MONITOR WELL VACUUM	5-4B "H_2O						
MONITOR WELL VACUUM	5-22B "H_2O						
MONITOR WELL VACUUM	5-5B "H_2O						
MONITOR WELL VACUUM	5-1B "H_2O						
MONITOR WELL VACUUM	5-6B "H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
MONITOR WELL VACUUM	"H_2O						
NIFOLD	Vapor Wells On/Off	ON	ON	ON			
NIFOLD	Groundwater Wells On/Off	OFF	→	→			
NIFOLD	Discharge Flow Meter gals	OFF	→	→			
	Samples						

(933107)

AcuVac Remediation

OPERATING DATA - TEST NO 6

S.A.V.E.™ SYSTEM

Page 1 Location ENRON CORPORATION TRANSWESTERN COMPRESSOR STA. #5 THOREAU N.M. Project Engr. J. SADLER

	Parameter						
Date		11/5/93	→	→	→		
		Time START 1305	Time 1405	Time STOP 1420	Time SHUT OFF 1425	Time	Time
		Hr. Meter 569.7	Hr. Meter 570.7	Hr. Meter 570.9	Hr. Meter 571.0	Hr. Meter	Hr. Meter
ENGINE	R.P.M.	2500	2600	2600			
	Oil Press P.S.I.	50	50	50			
	Water Temp °F	190	190	190			
	Volts	13.5	13.5	13.5			
	Intake Vac Hg	13	13	13			
FUEL/AIR	Gas Flow Fuel/Propane cfh	115	115	115			
	Air Flow cfm	18	18	20			
	Well Flow 5-6B cfm	4	8	9			
	Recovery Well Vac 5-6B "H_2O	92	95	96			
	Air Temp °F	49	49	50			
	Barometric Pressure "Hg						
MONITOR WELL VACUUM	5-1B "H_2O	0	.18	.20			
	5-5B "H_2O	.04	.15	.18			
	"H_2O						
	"H_2O						
	"H_2O						
	"H_2O						
	"H_2O						
	"H_2O						
	"H_2O						
	"H_2O						
	"H_2O						
	"H_2O						
	"H_2O						
...ANIFOLD	Vapor Wells On/Off	ON	ON	ON			
	Groundwater Wells On/Off	OFF	→	→			
	Discharge Flow Meter gals	OFF	→	→			
	Samples						

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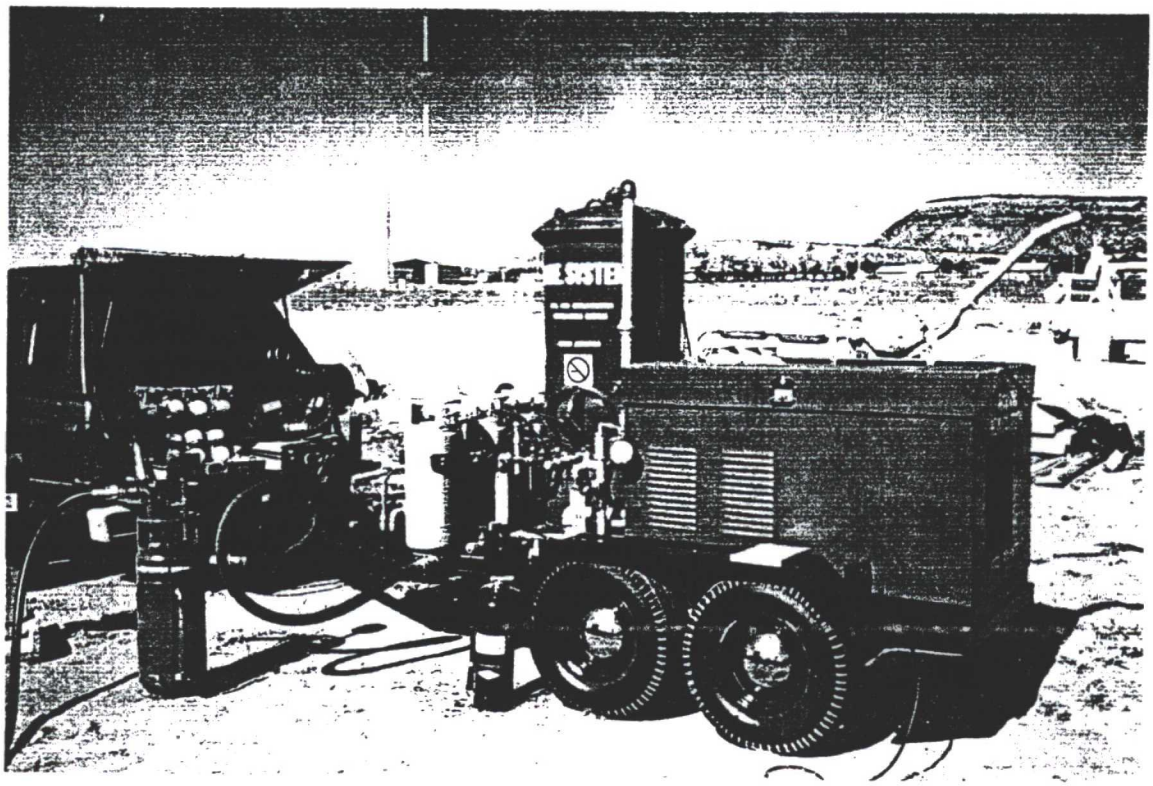
ENRON CORPORATION, TRANSWESTERN COMPRESSOR STATION #5



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A N A L Y T I C A L   R E P O R T

Job Number: 935571
Prepared For:

HALL ENVIRONMENTAL ANALYTICAL
**SCOTT HALLENBECK*
2403 SAN MATEO N E
ALBUQUERQUE, NM 87110

Date: 11/19/93

Larry Scott, AW
Signature

11-19-93
Date:

Name: Larry Scott

Title: Laboratory Supervisor

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LABORATORY TESTS RESULTS
11/19/93

JOB NUMBER: 935571 CUSTOMER: HALL ENVIRONMENTAL ANALYTICAL ATTN: **SCOTT HALLENBECK*

CLIENT I.D.....: 210522
DATE SAMPLED.....: 11/03/93
TIME SAMPLED.....: 14:40
WORK DESCRIPTION...: 5-35B

LABORATORY I.D...: 935571-0001
DATE RECEIVED....: 11/09/93
TIME RECEIVED....: 08:23
REMARKS.....:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Benzene, Toluene, Xylenes in Gas		*1			11/17/93	PKT
Benzene	30	1	ppm v/v			
Toluene	220	1	ppm v/v			
Ethyl Benzene	48	1	ppm v/v			
m+p-Xylenes	501	1	ppm v/v	GC		
ortho-Xylene	21	1	ppm v/v			
Refinery Gas Analysis, Extended		*1			11/17/93	PKT
Hydrogen	<0.01	0.01	Mol %	ASTM D-1945		
Oxygen	2.95	0.01	Mol %	ASTM D-1945		
Nitrogen	84.29	0.01	Mol %	ASTM D-1945		
Carbon Monoxide	<0.01	0.01	Mol %	ASTM D-1946		
Carbon Dioxide	11.55	0.01	Mol %	ASTM D-1945		
Hydrogen Sulfide	<0.01	0.01	Mol %			
Methane	<0.01	0.01	Mol %	ASTM D-1945		
Ethylene	<0.01	0.01	Mol %	ASTM D-1946		
Ethane	<0.01	0.01	Mol %	ASTM D-1945		
Propylene	<0.01	0.01	Mol %	ASTM D-2163		
Propane	<0.01	0.01	Mol %	ASTM D-1945		
Isobutane	<0.01	0.01	Mol %	ASTM D-1945		
Isobutylene	<0.01	0.01	Mol %	ASTM D-2163		
1-Butene	<0.01	0.01	Mol %	ASTM D-2163		
n-Butane	<0.01	0.01	Mol %	ASTM D-1945		
trans-2-Butene	<0.01	0.01	Mol %	ASTM D-2163		
cis-2-Butene	<0.01	0.01	Mol %	ASTM D-2163		
Isopentane	<0.01	0.01	Mol %	ASTM D-2163		
n-Pentane	<0.01	0.01	Mol %	ASTM D-2163		
Hexanes	0.08	0.01	Mol %			
Heptanes	0.34	0.01	Mol %			
Octanes	0.33	0.01	Mol %			
Nonanes	0.06	0.01	Mol %			
Decanes	0.01	0.01	Mol %			
Undecanes	0	0	Mol %			
Dodecanes	0	0	Mol %			
Tridecanes	0	0	Mol %			
Tetradecanes Plus	0	0	Mol %			

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LABORATORY TESTS RESULTS
11/19/93

JOB NUMBER: 935571 CUSTOMER: HALL ENVIRONMENTAL ANALYTICAL ATTN: **SCOTT HALLENBECK*

CLIENT I.D.....: 210522
DATE SAMPLED.....: 11/04/93
TIME SAMPLED.....: 12:30
WORK DESCRIPTION...: 5-35B

LABORATORY I.D...: 935571-0002
DATE RECEIVED....: 11/09/93
TIME RECEIVED....: 08:23
REMARKS.....:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Benzene, Toluene, Xylenes in Gas		*1			11/17/93	PKT
Benzene	38	1	ppm v/v			
Toluene	262	1	ppm v/v			
Ethyl Benzene	47	1	ppm v/v			
m+p-Xylenes	558	1	ppm v/v	GC		
ortho-Xylene	32	1	ppm v/v			
Refinery Gas Analysis, Extended		*1			11/17/93	PKT
Hydrogen	<0.01	0.01	Mol %	ASTM D-1945		
Oxygen	3.69	0.01	Mol %	ASTM D-1945		
Nitrogen	85.31	0.01	Mol %	ASTM D-1945		
Carbon Monoxide	<0.01	0.01	Mol %	ASTM D-1946		
Carbon Dioxide	9.85	0.01	Mol %	ASTM D-1945		
Hydrogen Sulfide	<0.01	0.01	Mol %			
Methane	<0.01	0.01	Mol %	ASTM D-1945		
Ethylene	<0.01	0.01	Mol %	ASTM D-1946		
Ethane	<0.01	0.01	Mol %	ASTM D-1945		
Propylene	<0.01	0.01	Mol %	ASTM D-2163		
Propane	<0.01	0.01	Mol %	ASTM D-1945		
Isobutane	<0.01	0.01	Mol %	ASTM D-1945		
Isobutylene	<0.01	0.01	Mol %	ASTM D-2163		
1-Butene	<0.01	0.01	Mol %	ASTM D-2163		
n-Butane	<0.01	0.01	Mol %	ASTM D-1945		
trans-2-Butene	<0.01	0.01	Mol %	ASTM D-2163		
cis-2-Butene	<0.01	0.01	Mol %	ASTM D-2163		
Isopentane	<0.01	0.01	Mol %	ASTM D-2163		
n-Pentane	<0.01	0.01	Mol %	ASTM D-2163		
Hexanes	0.10	0.01	Mol %			
Heptanes	0.41	0.01	Mol %			
Octanes	0.38	0.01	Mol %			
Nonanes	0.07	0.01	Mol %			
Decanes	0.01	0.01	Mol %			
Undecanes	0.01	0	Mol %			
Dodecanes	0	0	Mol %			
Tridecanes	0	0	Mol %			
Tetradecanes Plus	0	0	Mol %			

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LABORATORY TESTS RESULTS
11/19/93

JOB NUMBER: 935571 CUSTOMER: HALL ENVIRONMENTAL ANALYTICAL ATTN: **SCOTT HALLENBECK*

CLIENT I.D.....: 210522
DATE SAMPLED.....: 11/04/93
TIME SAMPLED.....: 16:10
WORK DESCRIPTION...: 5-34B

LABORATORY I.D...: 935571-0003
DATE RECEIVED....: 11/09/93
TIME RECEIVED....: 08:23
REMARKS.....:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Benzene, Toluene, Xylenes in Gas		*1			11/17/93	PKT
Benzene	192	1	ppm v/v			
Toluene	969	1	ppm v/v			
Ethyl Benzene	96	1	ppm v/v			
m+p-Xylenes	435	1	ppm v/v	GC		
ortho-Xylene	117	1	ppm v/v			
Refinery Gas Analysis, Extended		*1			11/17/93	PKT
Hydrogen	<0.01	0.01	Mol %	ASTM D-1945		
Oxygen	1.56	0.01	Mol %	ASTM D-1945		
Nitrogen	81.39	0.01	Mol %	ASTM D-1945		
Carbon Monoxide	<0.01	0.01	Mol %	ASTM D-1946		
Carbon Dioxide	14.44	0.01	Mol %	ASTM D-1945		
Hydrogen Sulfide	<0.01	0.01	Mol %			
Methane	<0.01	0.01	Mol %	ASTM D-1945		
Ethylene	<0.01	0.01	Mol %	ASTM D-1946		
Ethane	<0.01	0.01	Mol %	ASTM D-1945		
Propylene	<0.01	0.01	Mol %	ASTM D-2163		
Propane	<0.01	0.01	Mol %	ASTM D-1945		
Isobutane	<0.01	0.01	Mol %	ASTM D-1945		
Isobutylene	<0.01	0.01	Mol %	ASTM D-2163		
1-Butene	<0.01	0.01	Mol %	ASTM D-2163		
n-Butane	<0.01	0.01	Mol %	ASTM D-1945		
trans-2-Butene	<0.01	0.01	Mol %	ASTM D-2163		
cis-2-Butene	<0.01	0.01	Mol %	ASTM D-2163		
Isopentane	<0.01	0.01	Mol %	ASTM D-2163		
n-Pentane	<0.01	0.01	Mol %	ASTM D-2163		
Hexanes	0.42	0.01	Mol %			
Heptanes	0.55	0.01	Mol %			
Octanes	0.89	0.01	Mol %			
Nonanes	0.12	0.01	Mol %			
Decanes	0.02	0.01	Mol %			
Undecanes	0	0	Mol %			
Dodecanes	0	0	Mol %			
Tridecanes	0	0	Mol %			
Tetradecanes Plus	0	0	Mol %			

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LABORATORY TESTS RESULTS
11/19/93

JOB NUMBER: 935571 CUSTOMER: HALL ENVIRONMENTAL ANALYTICAL ATTN: **SCOTT HALLENBECK*

LIENT I.D.....: 210522
DATE SAMPLED.....: 11/05/93
TIME SAMPLED.....: 09:50
ORK DESCRIPTION...: 5-48

LABORATORY I.D...: 935571-0004
DATE RECEIVED....: 11/09/93
TIME RECEIVED....: 08:23
REMARKS.....:

EST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
enzene, Toluene, Xylenes in Gas		*1			11/17/93	PKT
Benzene	<1	1	ppm v/v			
Toluene	31	1	ppm v/v			
Ethyl Benzene	6	1	ppm v/v			
m+p-Xylenes	67	1	ppm v/v	GC		
ortho-Xylene	9	1	ppm v/v			
efinery Gas Analysis, Extended		*1			11/17/93	PKT
Hydrogen	<0.01	0.01	Mol %	ASTM D-1945		
Oxygen	15.31	0.01	Mol %	ASTM D-1945		
Nitrogen	78.92	0.01	Mol %	ASTM D-1945		
arbon Monoxide	<0.01	0.01	Mol %	ASTM D-1946		
arbon Dioxide	5.72	0.01	Mol %	ASTM D-1945		
Hydrogen Sulfide	<0.01	0.01	Mol %			
Methane	<0.01	0.01	Mol %	ASTM D-1945		
Ethylene	<0.01	0.01	Mol %	ASTM D-1946		
Ethane	<0.01	0.01	Mol %	ASTM D-1945		
Propylene	<0.01	0.01	Mol %	ASTM D-2163		
Propane	<0.01	0.01	Mol %	ASTM D-1945		
Isobutane	<0.01	0.01	Mol %	ASTM D-1945		
Isobutylene	<0.01	0.01	Mol %	ASTM D-2163		
1-Butene	<0.01	0.01	Mol %	ASTM D-2163		
n-Butane	<0.01	0.01	Mol %	ASTM D-1945		
trans-2-Butene	<0.01	0.01	Mol %	ASTM D-2163		
cis-2-Butene	<0.01	0.01	Mol %	ASTM D-2163		
Isopentane	<0.01	0.01	Mol %	ASTM D-2163		
n-Pentane	<0.01	0.01	Mol %	ASTM D-2163		
Hexanes	<0.01	0.01	Mol %			
Heptanes	0.01	0.01	Mol %			
Octanes	0.03	0.01	Mol %			
Nonanes	0.01	0.01	Mol %			
Decanes	<0.01	0.01	Mol %			
Undecanes	0	0	Mol %			
Dodecanes	0	0	Mol %			
Tridecanes	0	0	Mol %			
Tetradecanes Plus	0	0	Mol %			

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L A B O R A T O R Y   T E S T S   R E S U L T S
11/19/93

JOB NUMBER: 935571   CUSTOMER: HALL ENVIRONMENTAL ANALYTICAL   ATTN: **SCOTT HALLENBECK*

LIENT I.D.........: 210522	LABORATORY I.D...: 935571-0005
DATE SAMPLED.......: 11/05/93	DATE RECEIVED....: 11/09/93
TIME SAMPLED.......: 12:15	TIME RECEIVED....: 08:23
ORK DESCRIPTION...: 5-5B	REMARKS..........:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
enzene, Toluene, Xylenes in Gas		*1			11/17/93	PKT
Benzene	<1	1	ppm v/v			
Toluene	2	1	ppm v/v			
Ethyl Benzene	<1	1	ppm v/v			
m+p-Xylenes	6	1	ppm v/v	GC		
ortho-Xylene	<1	1	ppm v/v			
efinery Gas Analysis, Extended		*1			11/17/93	PKT
Hydrogen	<0.01	0.01	Mol %	ASTM D-1945		
Oxygen	12.70	0.01	Mol %	ASTM D-1945		
Nitrogen	82.47	0.01	Mol %	ASTM D-1945		
arbon Monoxide	<0.01	0.01	Mol %	ASTM D-1946		
arbon Dioxide	4.83	0.01	Mol %	ASTM D-1945		
Hydrogen Sulfide	<0.01	0.01	Mol %			
Methane	<0.01	0.01	Mol %	ASTM D-1945		
Ethylene	<0.01	0.01	Mol %	ASTM D-1946		
Ethane	<0.01	0.01	Mol %	ASTM D-1945		
Propylene	<0.01	0.01	Mol %	ASTM D-2163		
Propane	<0.01	0.01	Mol %	ASTM D-1945		
Isobutane	<0.01	0.01	Mol %	ASTM D-1945		
Isobutylene	<0.01	0.01	Mol %	ASTM D-2163		
1-Butene	<0.01	0.01	Mol %	ASTM D-2163		
n-Butane	<0.01	0.01	Mol %	ASTM D-1945		
trans-2-Butene	<0.01	0.01	Mol %	ASTM D-2163		
cis-2-Butene	<0.01	0.01	Mol %	ASTM D-2163		
Isopentane	<0.01	0.01	Mol %	ASTM D-2163		
n-Pentane	<0.01	0.01	Mol %	ASTM D-2163		
Hexanes	<0.01	0.01	Mol %			
Heptanes	<0.01	0.01	Mol %			
Octanes	<0.01	0.01	Mol %			
Nonanes	<0.01	0.01	Mol %			
Decanes	<0.01	0.01	Mol %			
Undecanes	0	0	Mol %			
Dodecanes	0	0	Mol %			
Tridecanes	0	0	Mol %			
Tetradecanes Plus	0	0	Mol %			

P O BOX 34766
HOUSTON, TX 77234-4282
(713) 943-9776

CHAIN-OF-CUSTODY RECORD

HALL ENVIRONMENTAL ANALYSIS LABORATORY
2403 San Mateo NE, Suite P-13
Albuquerque, New Mexico 87110
505.880.1803

Client: Daniel B. Stephens & Assoc.

Address: 6020 Academy NE Suite 100
Albuquerque, NM 87109

Phone #: 505 822 9400

Fax #: 505 822 8877

Project Name: Exxon - Thoreau

Project #: 2105 2.2

Project Manager: Bob Marley

Sampler: Bob Marley

Samples Cold? ☐ Yes ☐ No

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative: $HgCl_2$	Preservative: HCl	Preservative: Other	HEAL No.
11/3/93	1440	Air	5-35B	1L/1 600cc				
11/4/93	1230	Air	5-35B	1L/				
11/4/93	1610	Air	5-34B	1L/				
11/5/93	0950	Air	5-4B	1L/				
11/5/93	1215	Air	5-5B	1L/				

ANALYSIS REQUEST

BTEX (Method 602/8020)	BTEX + MTBE (602/8020)	TPH Method 8015 MOD (Gas/Diesel)	BTEX + MTBE + TPH (Gasoline Only)	BTEX + MTBE + TPH (Gas + Diesel)	TPH (Method 418.1)	601/602 Volatiles	EDB (Method 504.1)	EDC	610 (PNA or PAH)	extended refinery Gasses			Air Bubbles or Headspace (Y or N)
			X							X			Y
			X							X			
			X							X			
			X							X			
			X							X			

Remarks:

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
11/5/93	1745	Bob Marley	
			- 11-6-93 0830

Hall Environmental
Analysis Laboratory

Hall Environmental Analysis Laboratory
2403 San Mateo N.E., Suite P-13
Albuquerque, N.M. 87110
(505) 880-1803

11/10/93

Daniel B. Stephens and Associates, Inc.
6020 Academy NE, Suite 100
Albuquerque, NM 87109

Dear Mr. Bob Marley:

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

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

Sincerely,

Scott Hallenbeck 11/10/93

Scott Hallenbeck, Lab Manager

Project: Enron-Thoreau

Results for sample : 5-35B (See date collected)

Date collected: 11/4/93 Date received: 11/5/93
Date extracted: NA Date injected: 11/8/93
Client: Daniel B. Stephens and Associates, Inc.
Project Name: Enron-Thoreau HEAL #: 931119-2
Project Manager: Bob Marley Sampled by: B. Marley
Matrix: Air

Method: EPA 602

Compound	Amount	Units
Benzene	67	UG/L
Toluene	450	UG/L
Ethylbenzene	21	UG/L
Total-Xylene	190	UG/L

BFB (Surrogate) Recovery = 100 %

Dilution Factor = 100

Method: EPA 8015 Modified

Compound	Amount	Units
Gasoline	53,000	UG/L

BFB (Surrogate) Recovery = 108 %

Dilution Factor = 100

Results for sample : 5-4B

Date collected: 11/5/93 Date received: 11/5/93
Date extracted: NA Date injected: 11/8/93
Client: Daniel B. Stephens and Associates, Inc.
Project Name: Enron-Thoreau HEAL #: 931119-4
Project Manager: Bob Marley Sampled by: B. Marley
Matrix: Air

Method: EPA 602

Compound	Amount	Units
Benzene	4.8	UG/L
Toluene	44	UG/L
Ethylbenzene	6.2	UG/L
Total-Xylene	38	UG/L

BFB (Surrogate) Recovery = 102 %

Dilution Factor = 25

Method: EPA 8015 Modified

Compound	Amount	Units
Gasoline	6,800	UG/L

BFB (Surrogate) Recovery = 119 %

Dilution Factor = 25

Results for QC: Air Blank

Date extracted: NA Date injected: 11/8/93
Client: Daniel B. Stephens and Associates, Inc.
Project Name: Enron-Thoreau HEAL #: RB 11/8
Project Manager: Bob Marley
Matrix: Air

Method: EPA 602

Compound	Amount	Units
Benzene	<0.05	UG/L
Toluene	<0.05	UG/L
Ethylbenzene	<0.05	UG/L
Total-Xylene	<0.05	UG/L

BFB (Surrogate) Recovery = 99 %

Method: EPA 8015 Modified

Compound	Amount	Units
Gasoline	<10	UG/L

BFB (Surrogate) Recovery = 95 %

CHAIN-OF-CUSTODY RECORD

HALL ENVIRONMENTAL ANALYSIS LABORATORY
2403 San Mateo NE, Suite P-13
Albuquerque, New Mexico 87110
505.880.1803

Client: Daniel B. Stephens & Assoc.

Project Name: Enron - Thoreau

Address: 6020 Academy NE Suite 100
Albuquerque, NM 87109

Project #: 2105 2.2

Project Manager: Bob Marley

Phone #: 505 822 9400

Sampler: Bob Marley

Fax #: 505 822 8877

Samples Cold? ☐ Yes ☐ No

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative: $HgCl_2$	Preservative: HCl	Preservative: Other	HEAL No.
11/3/93	1490	Air	5-35B	1L/1 60cc				931119-01
11/4/93	1230	Air	5-35B	1L/				-02
11/4/93	1610	Air	5-34B	1L/				-03
11/5/93	0950	Air	5-4B	1L/				-04
11/5/93	1215	Air	5-5B	1L/				-05

ANALYSIS REQUEST

HEAL No.	BTEX (Method 602/8020)	BTEX + MTBE (602/8020)	TPH Method 8015 MOD (Gas/Diesel)	BTEX + ~~MTBE~~ + TPH (Gasoline Only)	BTEX + MTBE + TPH (Gas + Diesel)	TPH (Method 418.1)	601/602 Volatiles	EDB (Method 504.1)	EDC	610 (PNA or PAH)	extended refinery Gasses			Air Bubbles or Headspace (Y or N)
931119-01				X							X			Y
-02				X							X			
-03				X							X			
-04				X							X			
-05				X							X			

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
11/5/93	1745	Bob Marley	
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks:

ENRON
Transwestern Pipeline Company

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

CERTIFIED MAIL -- RETURN RECEIPT REQUESTED

March 11, 1994

Ms. Sadie Hoskie
Director, Navajo EPA
P.O. Box 308
Window Rock, AZ 86515

Dear ~~Ms. Hoskie~~, Sadie

This is to let you know that Transwestern Pipeline Company (TPC) is preparing to apply to the New Mexico Environment Department, Air Pollution Control Bureau for a permit for construction of a soil vapor extraction system at its Compressor Station No. 5 facility. This notice is a requirement of the permitting process, under Air Quality Control Regulation 702 - Permits.

We expect to submit the permit application to the NMED Air Pollution Control Bureau on March 21, 1994. The TPC facility is located in Section 20 of Range 13W Township 14N, 2.4 miles NNW of Thoreau, New Mexico. The process for which we are seeking a permit is a soil vapor extraction system. The system is designed to extract subsurface soil vapor at a maximum rate of 176 cfm (cubic feet per minute). The estimated maximum emissions after construction is completed are listed in Table 1. The standard operating schedule of the new source after completion is 24 hours/day, 7 days/week, 52 weeks/year.

Table 1. Maximum estimated emission rates and annual emissions of regulated compounds.

Compound	Maximum Estimated Emission Rate lbs./hour	Maximum Estimated Annual Emissions tons/year
benzene	0.04	0.01
toluene	0.26	0.18
ethylbenzene	0.03	0.03
xylene (m-, p-, & o-)	0.17	0.34
hexanes	1.07	0.29
octanes	3.00	2.01
nonanes	0.46	0.59
Total NMHC	6.75	4.33

Note: Total NMHC (non-methane hydrocarbons) includes the previously listed compounds.

The owner and operator of the facility is Transwestern Pipeline Company, a subsidiary of ENRON Operations Corp., P.O. Box 1188, Houston, TX 77251-1188.

Comments and inquiries regarding this permit application or the permitting process may be directed to:

Program Manager, Technical Analysis and Permits Section
Environment Department
Air Pollution Control Bureau, S2100
1190 St. Francis Drive, Runnels Building
P.O. Box 26110
Santa Fe, New Mexico 87502

Sincerely,

Fenley "Ted" Ryther, Jr., P.E.
Manager, Permits Group

Address:
Environmental Affairs, Rm. 3AC3137
ENRON Operations Corp.
P.O. Box 1188
Houston, TX 77251-1188

ENRON
Transwestern Pipeline Company

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

CERTIFIED MAIL -- RETURN RECEIPT REQUESTED

March 11, 1994

Area Manager, BLM
Rio Puerco Resource Area
435 Montano NE
Albuquerque, NM 87107

To whom it may concern:

This is to let you know that Transwestern Pipeline Company (TPC) is preparing to apply to the New Mexico Environment Department, Air Pollution Control Bureau for a permit for construction of a soil vapor extraction system at its Compressor Station No. 5 facility. This notice is a requirement of the permitting process, under Air Quality Control Regulation 702 - Permits.

We expect to submit the permit application to the NMED Air Pollution Control Bureau on March 21, 1994. The TPC facility is located in Section 20 of Range 13W Township 14N, 2.4 miles NNW of Thoreau, New Mexico. The process for which we are seeking a permit is a soil vapor extraction system. The system is designed to extract subsurface soil vapor at a maximum rate of 176 cfm (cubic feet per minute). The estimated maximum emissions after construction is completed are listed in Table 1. The standard operating schedule of the new source after completion is 24 hours/day, 7 days/week, 52 weeks/year.

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Program Manager, Technical Analysis and Permits Section
Environment Department
Air Pollution Control Bureau, S2100
1190 St. Francis Drive, Runnels Building
P.O. Box 26110
Santa Fe, New Mexico 87502

Sincerely,

Fenley "Ted" Ryther, Jr., P.E.
Manager, Permits Group

Address:
Environmental Affairs, Rm. 3AC3137
ENRON Operations Corp.
P.O. Box 1188
Houston, TX 77251-1188

ENRON
Transwestern Pipeline Company

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

CERTIFIED MAIL -- RETURN RECEIPT REQUESTED

March 11, 1994

Mr. Milton Gabaldon
McKinley County Clerk
P.O. Box 1268
Gallup, NM 87305

Dear Mr. Gabaldon,

This is to let you know that Transwestern Pipeline Company (TPC) is preparing to apply to the New Mexico Environment Department, Air Pollution Control Bureau for a permit for construction of a soil vapor extraction system at its Compressor Station No. 5 facility. This notice is a requirement of the permitting process, under Air Quality Control Regulation 702 - Permits.

We expect to submit the permit application to the NMED Air Pollution Control Bureau on March 21, 1994. The TPC facility is located in Section 20 of Range 13W Township 14N, 2.4 miles NNW of Thoreau, New Mexico. The process for which we are seeking a permit is a soil vapor extraction system. The system is designed to extract subsurface soil vapor at a maximum rate of 176 cfm (cubic feet per minute). The estimated maximum emissions after construction is completed are listed in Table 1. The standard operating schedule of the new source after completion is 24 hours/day, 7 days/week, 52 weeks/year.

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Total NMHC	6.75	4.33

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The owner and operator of the facility is Transwestern Pipeline Company, a subsidiary of ENRON Operations Corp., P.O. Box 1188, Houston, TX 77251-1188.

Comments and inquiries regarding this permit application or the permitting process may be directed to:

Program Manager, Technical Analysis and Permits Section
Environment Department
Air Pollution Control Bureau, S2100
1190 St. Francis Drive, Runnels Building
P.O. Box 26110
Santa Fe, New Mexico 87502

Sincerely,

Fenley "Ted" Ryther, Jr., P.E.
Manager, Permits Group

Address:
Environmental Affairs, Rm. 3AC3137
ENRON Operations Corp.
P.O. Box 1188
Houston, TX 77251-1188

ENRON
Transwestern Pipeline Company

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

CERTIFIED MAIL -- RETURN RECEIPT REQUESTED

March 11, 1994

Ms. Patricia A. Aragon
Cibola County Clerk
P.O. Box 190
Grants, NM 87020

Dear Ms. Aragon,

This is to let you know that Transwestern Pipeline Company (TPC) is preparing to apply to the New Mexico Environment Department, Air Pollution Control Bureau for a permit for construction of a soil vapor extraction system at its Compressor Station No. 5 facility. This notice is a requirement of the permitting process, under Air Quality Control Regulation 702 - Permits.

We expect to submit the permit application to the NMED Air Pollution Control Bureau on March 21, 1994. The TPC facility is located in Section 20 of Range 13W Township 14N, 2.4 miles NNW of Thoreau, New Mexico. The process for which we are seeking a permit is a soil vapor extraction system. The system is designed to extract subsurface soil vapor at a maximum rate of 176 cfm (cubic feet per minute). The estimated maximum emissions after construction is completed are listed in Table 1. The standard operating schedule of the new source after completion is 24 hours/day, 7 days/week, 52 weeks/year.

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Note: Total NMHC (non-methane hydrocarbons) includes the previously listed compounds.

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Comments and inquiries regarding this permit application or the permitting process may be directed to:

Program Manager, Technical Analysis and Permits Section
Environment Department
Air Pollution Control Bureau, S2100
1190 St. Francis Drive, Runnels Building
P.O. Box 26110
Santa Fe, New Mexico 87502

Sincerely,

Fenley "Ted" Ryther, Jr., P.E.
Manager, Permits Group

Address:
Environmental Affairs, Rm. 3AC3137
ENRON Operations Corp.
P.O. Box 1188
Houston, TX 77251-1188

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Ms. Sadie Hoskie
Director, Navajo EPA
P.O. Box 308
Window Rock, AZ 86515

4a. Article Number
P 468 140 118

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

7. Date of Delivery
3-21-94

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)
Lee Markus

PS Form **3811**, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Area Manager, BLM
Rio Puerco Resource Area
435 Montano NE
Albuquerque, NM 87107

4a. Article Number
P 468 149 120

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

7. Date of Delivery
3-18-94

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)
K. Armendariz

PS Form **3811**, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Ms. Patricia A. Aragon
Cibola County Clerk
P.O. Box 190
Grants, NM 87020

4a. Article Number
P 468 140 121

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

7. Date of Delivery
MAR 21 1994

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

PS Form **3811**, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Milton Gabaldon
McKinley County Clerk
P.O. Box 1268
Gallup, NM 87305

4a. Article Number
P 468 140 122

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

7. Date of Delivery
3-21-94

5. Signature (Addressee)
Milton Gabaldon

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

PS Form **3811**, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

NOTICE OF PERMIT APPLICATION

Pursuant to the requirements of New Mexico Air Quality Control Regulation 702 - Permits, Transwestern Pipeline Company (TPC) of P.O. Box 1188, Houston, TX 77251, hereby announces an intent to apply to the New Mexico Environment Department, Air Pollution Control Bureau for a permit to construct a facility which will cause emissions of the following regulated air contaminants: benzene, toluene, ethylbenzene, xylene, hexanes, octanes, and nonanes. The expected date of application submittal to the NMED is March 15, 1994. The TPC facility is located in Section 20 of Range 13W Township 14N, 2.4 miles NNW of Thoreau, New Mexico. The process for which TPC is seeking a permit is a soil vapor extraction system. The system is designed to extract subsurface soil vapor at a maximum rate of 176 cfm (cubic feet per minute).

The estimated maximum emissions after construction is completed are listed in Table 1. The maximum and standard operating schedule of the new source after completion is 24 hours/day, 7 days/week, 52 weeks/year.

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Comments and inquires regarding this permit application or the permitting process may be directed to:

Program Manager, Technical Analysis and Permits Section
Environment Department
Air Pollution Control Bureau, S2100
1190 St. Francis Drive, Runnels Building
P.O.Box 26110
Santa Fe, New Mexico 87502

Affidavit of Publication

STATE OF NEW MEXICO
) SS
UNTY OF McKINLEY

HUBBARD, FREIDA being duly sworn upon oath, deposes and says:

As Legal Clerk of The Independent, a newspaper published in and having a general circulation in McKinley County, New Mexico and in the City of Gallup, New Mexico and having a general circulation in Cibola County, New Mexico and in the City of Grants, New Mexico and having a general circulation in Apache County, Arizona and in the City of St. Johns and in the City of Window Rock, Arizona therein: that this affiant makes this affidavit based upon personal knowledge of the facts herein sworn to. That the publication, a copy of which is hereto attached was published in said newspaper during the period and time of publication and said notice was published in the newspaper proper, and not in a supplement thereof,

for one time, the first publication being on the 21st day of March, 19 94 the second publication being on the _____ day of _____, 19_____ the third publication on the _____ day of _____, 19_____.

and the last publication being on the _____ day of _____, 19_____.

That such newspaper, in which such notice or advertisement was published, is now and has been at all times material hereto, duly qualified for such purpose, and to publish legal notices and advertisements within the meaning of Chapter 12, of the statutes of the State of New Mexico, 1941 compilation.

Freida Hubbard
Affiant.

Sworn and subscribed to before me this 24th day of March, A.D., 19 94.

Notary Public

My commission expires
August 29, 1997

2736 2M BUTLER'S Gallup

LEGAL NOTICE
Santa Fe County
New Mexico

NOTICE OF PERMIT APPLICATION

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HEXANES	1.07	0.29
OCTANES	3.00	2.01
NONANES	0.46	0.59
TOTAL NMHC	6.75	4.33

Note: Total NMHC (non-methane hydrocarbons) includes the previously listed compounds.

The owner and operator of the facility is Transwestern Pipeline Company, a subsidiary of ENRON Operations Corp., P.O. Box 1188, Houston, TX 77251-1188.

Comments and inquires regarding this permit application of the permitting process may be directed to:

Program Manager, Technical Analysis and Permits Section
Environment Department
Air Pollution Control Bureau, S2100
1190 St. Francis Drive, Runnels Building
P.O. Box 26110
Santa Fe, New Mexico 87502

Legal No. 10492 Published in The Independent March 21, 1994.

NOTICE OF PERMIT APPLICATION

Pursuant to the requirements of New Mexico Air Quality Control Regulation 702-Permits, Transwestern Pipeline Company (TPC) of P.O. Box 1188, Houston, TX 77251, hereby announces an intent to apply to the New Mexico Environment Department, Air Pollution Control Bureau for a permit to construct a facility which will cause emissions of the following regulated air contaminants: benzene, toluene, ethylbenzene, xylene, hexanes, octanes, and nonanes. The expected date of application submittal to the NMED is March 21, 1994. The TPC facility is located in Section 20 of Range 13W Township 14N, 2.4 miles NNW of Thoreau, New Mexico. The process for which TPC is seeking a permit is a soil vapor extraction system. The system is designed to extract subsurface soil vapor at a maximum rate pf 176 cfm (cubic feet per minute).

The estimated maximum emissions after construction is completed are listed in Table 1. The maximum and standard operating schedule of the new source after completion is 24 hours/day, 7 days/week, 52 weeks/year.

Table 1 Maximum estimated emission rates and annual emissions of regulated compounds.

Compound	Maximun Estimated Emission Rate Lbs./Hour	Maximum Estimated Annual Emissions tons/year
BENZENE	0.04	0.01
TOLUENE	0.26	0.18
ETHYLBENZENE	0.03	0.03
XYLENE (M-,P-, & O-)	0.17	0.34
HEXANES	1.07	0.29
OCTANES	3.00	2.01
NONANES	0.46	0.59
TOTAL NMHC	6.75	4.33

Note: Total NMHC (non-methane hydrocarbons) includes the previously listed compounds.

The owner and operator of the facility is Transwestern Pipeline Company, a subsidiary of ENRON Operations Corp., P.O. Box 1188, Houston, TX 77251-1188.

Comments and inquires regarding this permit application of the permitting process may be directed to:

Program Manager, Technical Analysis and Permits Section
Environment Department
Air Pollution Control Bureau, S2100
1190 St. Francis Drive, Runnels Building
P.O. Box 26110
Santa Fe, New Mexico 87502

FUN 100 KXTC
2495 East Aztec
Gallup, New Mexico
87301
(505) 722 - 4442

FM 100 KXTC

CONTINUITY

DATE: 3-31-94

ACCOUNT: ENRON CORP.

PREPARED BY: JENNIFER SAUCEDO

SPECIAL INSTRUCTIONS:

TIME AND DATE SCHEDULE

3-19-94 10:20am

THIS ANNOUNCEMENT WAS BROADCAST 1 TIMES, AS BILLING TO THIS STATION'S CLIENTS, FOR THE PERIOD DATED 3-19-94 AT THE COST OF $ 19.60 EACH FOR 1MIN ANNOUNCEMENTS, FOR A TOTAL OF $ 19.60

LEE WINSLOW GENERAL MANAGER
OFFICIAL'S TITLE

[signature]
NOTARY

KXTC FM 100
STATION

[signature]
OFFICIAL SIGNAUTURE

FUN 100 KXTC
2495 East Aztec
Gallup, New Mexico
87301
(505) 722 - 4442

FM 100 KXTC

CONTINUITY

DATE: 3-31-94

ACCOUNT: ENRON OPERATIONS

PREPARED BY: JENNIFER SAUCEDO

SPECIAL INSTRUCTIONS:

NOTICE OF PERMIT APPLICATION

PURSUANT TO THE REQUIREMENTS OF NEW MEXICO AIR QUALITY CONTROL REGULATION 702 PERMITS, TRANWESTERN, PIPELINE COMPANY (TPC) OF P.O. BOX 1188, HOUSTON, TX 77251, HEREBY ANNOUNCES AN INTENT TO APPLY TO THE NEW MEXICO ENVIRONMENT DEPARTMENT, AIR POLLUTION CONTROL BUREAU FOR A PERMIT TO CONSTRUCT A FACILITY WHICH WILL CAUSE EMISSIONS OF THE FOLLOWING REGULATED AIR CONTAMINANTS: THE EXPECTED DATE OF APPLICATION SUBMITTAL TO THE NMED IS MARCH 21, 1994 THE TPC FACILITY IS LOCATED IN SECTION 20 OF RANGE 13W TOWNSHIP 14N, 2.4 MILES NNW OF THOREAU, NEW MEXICO THE PROCESS FOR WHICH TPC IS SEEKING A PERMIT IS A SOIL VAPOR EXTRACTION SYSTEM.

THE ESTIMATED MAXIMUM EMISSIONS AFTER CONSTRUCTION IS COMPLETED ARE LISTED IN TABLE 1. THE MAXIMUM AND STANDARD OPERATING SCHEDULE OF THE MEW SOURCE AFTER COMPLETION IS 24 HOURS/DAY, 7 DAYS/WEEK, 52 WEEKS/YEAR.

Table 1 Maximum estimated emission rates and annual emissions of regulated compounds

Compound	Maximum Estimated Emission Rate lbs/hour	Maximum Estimated Annual Emissions tons/year
benzene	0.04	0.01
toluene	0.26	0.18
ethylbenzene	0.03	0.03
xylene (m-, p-, & o-)	0.17	0.34
hexanes	1.07	0.29
octanes	3.00	2.01
nonanes	0.46	0.59
Total NMHC	6.75	4.33

Note. Total NMHC (non-methane hydrocarbons) includes the previously listed compounds

THIS ANNOUNCEMENT WAS BROADCAST 1 TIMES, AS BILLING TO THIS STATION'S CLIENTS, FOR THE PERIOD DATED 3-19-94 AT THE COST OF $ 19.60 EACH FOR 1min ANNOUNCEMENTS, FOR A TOTAL OF $ 19.60

OFFICIAL'S TITLE

NOTARY

KXTC FM 100
STATION

LEE WINSLOW GENERAL MANAGER
OFFICIAL SIGNAUTURE

FUN 100 KXTC
2495 East Aztec
Gallup, New Mexico
87301
(505) 722 - 4442

FM 100 KXTC

CONTINUITY

DATE:

ACCOUNT:

PREPARED BY:

SPECIAL INSTRUCTIONS:

THE OWNER AND OPERATOR OF THE FACILITY IS TRANWESTERN PIPELINE COMPANY, A SUBSIDIARY OF ENRON OPERATIONS CORP., P.O. BOX 1188, HOUSTON, TX 77251-1188.
FOR THE ADDRESS TO MAIL COMMENTS AND INQUIRES PLEASE CALL KXTC AT (505)-722-4442 THIS ANNOUNCEMENT BROUGHT AND PAID FOR BY TRANSWESTERN PIPELINE COMPANY, A SUBSIDIARY OF ENRON OPERATIONS CORP,. P.O. BOX 1188 HOUSTON, TX 77251-1188

THIS ANNOUNCEMENT WAS BROADCAST _______ TIMES, AS BILLING TO THIS STATION'S CLIENTS, FOR THE PERIOD DATED ___________ AT THE COST OF $ ________ EACH FOR ________ ANNOUNCEMENTS, FOR A TOTAL OF $ ___________

OFFICIAL'S TITLE

NOTARY

STATION

OFFICIAL SIGNAUTURE