AP - 069

GENERAL CORRESPONDENCE

YEAR(S):

2003 - 2006

NEW MEXICO ENERGY, MINERALS and
NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

January 23, 2006

Mr. Scott T. Pope
El Paso Corporation
2 North Nevada
Colorado Springs, CO 80903

RE: STAGE 1 ABATEMENT PLAN PROPOSAL (GW-039)
EL PASO NATURAL GAS - SAN JUAN RIVER PLANT/
PRAXAIR NITROGEN PLANT
SECTION 1, TOWNSHIP 29 NORTH, SOUTH, RANGE 15 EAST
SAN JUAN COUNTY, NEW MEXICO

Dear Mr. Pope:

The New Mexico Oil Conservation Division (OCD) has completed its technical review of the *PROPOSED WORKPLAN FOR A PHASE 1 INVESTIGATION OF POTENTIAL HYDROCARBON IMPACTS AS PART OF A STAGE 1 ABATEMENT PLAN THE SAN JUAN RIVER PLANT* submitted by El Paso Natural Gas Company (EPNG) on October 25, 2005. On November 10, 2005, OCD determined that EPNG's proposed Stage 1 Abatement Plan (AP) was administratively complete and required EPNG to provide public notice of its Stage 1 work plan. On December 7, 2005, EPNG submitted documentation that public notice had been provided. No comments were received on this Stage 1 AP; therefore, OCD approves EPNG's Stage 1 Abatement Plan with the following conditions:

1. EPNG shall advance all geoprobe soil borings at least five feet into the top of the water table.

2. EPNG shall obtain soil samples at least every 10 feet, or at every significant change in lithology, from the surface to total depth. EPNG shall analyze the soil samples for total petroleum hydrocarbons (TPH-GRO and TPH-DRO) using EPA SW-846 Method 8015M and benzene, toluene, ethylbenzene and xylene (BTEX) using EPA SW-846 Method 8021B. Please note that EPNG specifies in Section 5.1 that soil samples will be analyzed using EPA SW-846

Method 8260, but specifies in Section 5.2 that ground water samples will be analyzed using EPA SW-846 8021B.

3. EPNG shall analyze ground water samples collected from the boring through the Geoprobe rods or from any temporary ground water monitoring points for BTEX using EPA SW-846 Method 8021B.

4. EPNG shall submit its Stage 1 interim report to the OCD Santa Fe Office within 30 days of its receipt of analytical data with a copy provided to the OCD Aztec District Office. EPNG's Stage 1 interim report shall include:

a. A complete summary of the investigation activities, conclusions, and recommendations;

b. A geologic/lithologic log for each borehole;

c. A map showing the location of all water wells within one mile of the site;

d. A ground water elevation map showing Geoprobe borehole locations, monitor wells, and any other pertinent site features;

e. Summary tables of all soil and ground water quality sampling results and copies of all laboratory analytical data sheets and associated QA/QC data;

f. The disposition of all wastes generated;

g. An isopleth map for total BTEX;

h. An appropriate number of detailed cross-sections depicting, at a minimum: the lithology; PID readings; depths of soil samples; soil sample analytical results for TPH-GRO, TPH-DRO, and BTEX; depth to ground water; ground water sample analytical results for BTEX; and,

i. An interim site conceptual model that tentatively identifies the probable source or sources and the known extent of the hydrocarbon contamination, both horizontally and vertically.

5. Based on all available information, EPNG shall also include a detailed phase 2 work plan for a permanent ground water monitoring program and additional soil borings if it cannot define the extent of soil and ground water contamination with its Stage 1 interim report. EPNG's phase 2 work plan must also address what additional information us necessary for it to implement a Stage 2 remediation program.

OCD approval does not relieve MNA of responsibility if the Stage 1 abatement plan fails to adequately determine the extent of contamination. In addition, OCD approval does not relieve EPNG of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please call Glenn von Gonten of my staff at (505) 476-3488.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

xc: Denny Foust, OCD Aztec District Office
Mr. William Olson, NMED GWQB

elpaso

December 7, 2005

Mr. Glenn von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RE: DOCUMENTATION OF PUBLIC NOTICE
STAGE 1 ABATEMENT PLAN PROPOSAL
EL PASO TENNESSE PIPELINE COMPANY – SAN JUAN RIVER PLANT/
PRAXAIR NITROGEN PLANT
SAN JUAN COUNTY, NEW MEXICO

Dear Mr. Von Gonten:

In response to the New Mexico Oil Conservation Division's letter dated November 10, 2005, regarding the requirement to *"issue the enclosed Stage 1 notice of publication in the Santa Fe New Mexican and the Farmington Daily Times"*, as well as provide *"written notice of the Stage 1 proposal"*, El Paso Tennessee Pipeline Company submits with this letter notarized affidavits of publication in both the Santa Fe New Mexican and Farmington Daily Times, as well as certificate of mailings for all written notices required.

If you have any questions, please call me at (719) 520-4433.

Sincerely,

Jennifer Hurley

for
Scott T. Pope, P.G.
Project Manager

Enclosures

cc: Mr. Denny Foust, NMOCD;
Chandler Cole, MWH
Dan Schnee, EPC
Roger Towe, EPC
Todd Muelhoefer, EPC
Robert Sterrett – EMS
San Juan River Plant General File

AFFIDAVIT OF PUBLICATION

Ad No. 52600

STATE OF NEW MEXICO
County of San Juan:

CONNIE PRUITT, being duly sworn says: That she is the ADVERTISING MANAGER of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication and appeared in the Internet at The Daily Times web site on the following day(s):

Monday, November 28, 2005.

And the cost of the publication is $88.01.

Connie Pruitt

ON 11/30/05 CONNIE PRUITT appeared before me, whom I know personally to be the person who signed the above document.

Wynell Corey

My Commission Expires November 17, 2008.

COPY OF PUBLICATION

918 Legals

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Oil Conservation Division Regulations, the following Stage 1 Abatement Plan Proposal has been submitted to the Director of the Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

El Paso Natural Gas Company (EPNG), Telephone (719) 520-4827, Two North Nevada, Colorado Springs, CO 80903, has submitted a Stage 1 Abatement Plan Proposal to investigate ground water contamination beneath the Praxair Nitrogen Plant adjacent to EPNG's former San Juan River Plant, located in Section 1, Township 29 North, Range 15 West, Kirtland, San Juan County, New Mexico. EPNG's Stage 1 Abatement Plan Proposal specifies that EPNG will investigate the ground water contamination at the Praxair Nitrogen Plant site by collecting and analyzing soil and ground water samples through temporary Geoprobe boreholes and submitting an interim report.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The Stage 1 Abatement Plan Proposal may be viewed at the above address or at the Oil Conservation Division Aztec District Office, 1000 Rio Brazos Road, Aztec, New Mexico 87410, Telephone (505) 344-6178, between 8:00 a.m. and 4:00 p.m., Monday though Friday. Prior to ruling on the proposed Stage 1 Abatement Plan Proposal, the Director of the Oil Conservation Division shall allow at least 30 days from the date of publication of this notice for the submittal of written comments.

Legal No. 52600 published in The Daily Times, Farmington, New Mexico on Monday, November 28, 2005.

THE SANTA FE
NEW MEXICAN
Founded 1849

NMOCD
Attn: Jennifer Hurley
1801 California St. Ste 2900
Denver, CO. 80202

ALTERNATE ACCOUNT: 01001
AD NUMBER: 00147849 ACCOUNT: 00000123
LEGAL NO: 78046 P.O. #: Jennifer Hurley

143 LINES 1 TIME(S)	97.26
AFFIDAVIT:	5.50
TAX:	7.77
TOTAL:	110.53

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, R. Lara, being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily newspaper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication # 78046 a copy of which is hereto attached was published in said newspaper 1 day(s) between 11/28/2005 and 11/28/2005 and that the notice was published in the newspaper proper and not in any supplement; the first date of publication being on the 28th day of November, 2005 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

/S/ R. Lara
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 28th day of November, 2005

Notary Laura E. Harding

Commission Expires: 11/23/07

OFFICIAL SEAL
Laura E. Harding
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 11/23/07

NOTICE OF PUBLICATION

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Oil Conservation Division Regulations, the following Stage 1 Abatement Plan Proposal has been submitted to the Director of the Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

El Paso Natural Gas Company (EPNG), Telephone (719) 520-4827, Two North Nevada, Colorado Springs, CO 80903, has submitted a Stage 1 Abatement Plan Proposal to investigate ground water contamination beneath the Praxair Nitrogen Plant adjacent to EPNG's former San Juan River Plant, located in Section 1, Township 29 North, Range 15 West, Kirtland, San Juan County, New Mexico. EPNG's Stage 1 Abatement Plan Proposal specifies that EPNG will investigate the ground water contamination at the Praxair Nitrogen Plant site by collecting and analyzing soil and ground water samples through temporary Geoprobe boreholes and submitting an interim report.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The Stage 1 Abatement Plan Proposal may be viewed at the above address or at the Oil Conservation Division Aztec District Office, 1000 Rio Brazos Road, Aztec, New Mexico 87410, Telephone (505) 344-6178, between 8:00 a.m. and 4:00 p.m., Monday though Friday. Prior to ruling on the proposed Stage 1 Abatement Plan Proposal, the Director of the Oil Conservation Division shall allow at least 30 days from the date of publication of this notice for the submittal of written comments.
Legal #78046
Pub. November 28

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

November 10, 2005

Mr. Scott T. Pope
El Paso Corporation
2 North Nevada
Colorado Springs, CO 80903

RE: STAGE 1 ABATEMENT PLAN PROPOSAL
EL PASO NATURAL GAS - SAN JUAN RIVER PLANT/
PRAXAIR NITROGEN PLANT
SAN JUAN COUNTY, NEW MEXICO

Dear Mr. Pope:

The New Mexico Oil Conservation Division (OCD) has reviewed the *PROPOSED WORKPLAN FOR A PHASE 1 INVESTIGATION OF POTENTIAL HYDROCARBON IMPACTS AS PART OF A STAGE 1 ABATEMENT PLAN THE SAN JUAN RIVER PLANT* submitted by El Paso Natural Gas Company (EPNG) on October 25, 2005. EPNG submitted this Stage 1 Abatement Plan proposal (Stage 1 Work Plan) in response to OCD's letters of October 11, 2005. EPNG's proposed Stage 1 Work Plan specifies how it will investigate the ground water contamination discovered at the Praxair Nitrogen Plant and at other areas on the San Juan River Plant located in Kirtland, New Mexico.

In accordance with OCD Rule 19G.(2), OCD has determined that EPNG's Stage 1 Abatement Plan proposal is administratively complete. Before OCD can complete a technical review of the Stage 1 Abatement Plan Proposal, EPNG shall:

1. Issue the enclosed Stage 1 notice of publication in the Santa Fe New Mexican and the Farmington Daily Times by November 18, 2005, pursuant to OCD Rule 19.G.(2).

2. Issue written notice of the Stage 1 proposal pursuant to OCD Rule 19.G.(1), prior to issuing public notice. A listing of *"those persons, as identified by the Director, who have requested notification"* pursuant to OCD Rule 19.G(1)(d) can be found at:

"http://www.emnrd.state.nm.us/emnrd/ocd/documents/
WQCCMailingList1_000.doc."

3. Provide OCD with proof of publication and proof of written notice by November 28, 2005.

If you have any questions, please call Glenn von Gonten of my staff at (505) 476-3488.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

xc: Denny Foust, OCD Aztec District Office
Mr. William Olson, NMED GWQB

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Oil Conservation Division Regulations, the following Stage 1 Abatement Plan Proposal has been submitted to the Director of the Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

> Scott Pope, El Paso Natural Gas Company (EPNG), Telephone (719) 520-4433, Two North Nevada, Colorado springs, CO 80903, has submitted a Stage 1 Abatement Plan Proposal to investigate ground water contamination beneath the Praxair Nitrogen Plant adjacent to EPNG's former San Juan River Plant, located in Section 1, Township 29 North, Range 15 West, Kirtland, San Juan County, New Mexico. EPNG's Stage 1 Abatement Plan Proposal specifies that EPNG will investigate the ground water contamination at the Praxair Nitrogen Plant site by collecting and analyzing soil and ground water samples through temporary Geoprobe boreholes and submitting an interim report.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The Stage 1 Abatement Plan Proposal may be viewed at the above address or at the Oil Conservation Division Aztec District Office, 1000 Rio Brazos Road, Aztec, New Mexico 87410, Telephone (505) 334-6178, between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on the proposed Stage 1 Abatement Plan Proposal, the Director of the Oil Conservation Division shall allow at least 30 days from the date of publication of this notice for the submittal of written comments.

elpaso Natural Gas

Via UPS Overnight

October 25, 2005

RECEIVED

OCT 26 2005

Oil Conservation Division
Environmental Bureau

Mr. Glenn von Gonten
Senior Hydrologist
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RE: PROPOSED WORKPLAN FOR A PHASE 1 INVESTIGATION OF POTENTIAL HYDROCARBON IMPACTS AS PART OF A STAGE I ABATEMENT PLAN AT THE SAN JUAN RIVER PLANT

Dear Mr. von Gonten:

In response to your faxed letter dated October 11, 2005, regarding the "*Requirement to Submit Stage 1 Abatement Plan*", El Paso Natural Gas Company submits with this letter the ***Proposed Workplan for a Phase I Investigation of Potential Hydrocarbon Impacts as Part of a Stage I Abatement Plan at the San Juan River Plant.***

If you have any questions, please call me at (719) 520-4433. Please note that my Fax number has changed to (719) 667-7893.

Sincerely,

Scott T. Pope, P.G.
Project Manager

cc: Mr. Denny Foust, NMOCD; **Certified Mail # 4001 1940 0002 1371 7980**
Pam Anderson, MWH
Dan Schnee, EPC
Roger Towe, EPC
Todd Muelhoefer, EPC
Robert Sterrett, EMS
Kent McEvers, Western Gas Resources, Inc.
Mike Barsottelli,Praxair, Inc.
San Juan River Plant General File

El Paso Natural Gas
Two North Nevada Colorado Springs, CO 80903
PO Box 1087 Colorado Springs, CO 80903
tel 719.473.2300

PROPOSED WORKPLAN FOR A PHASE I INVESTIGATION OF POTENTIAL HYDROCARBON IMPACTS AS PART OF A STAGE I ABATEMENT PLAN AT THE SAN JUAN RIVER PLANT SAN JUAN RIVER BASIN, NEW MEXICO

October 24, 2005

Prepared for:
El Paso Natural Gas
2 North Nevada Avenue
Colorado Springs, Colorado
80903

Prepared by:
MWH
1801 California Street, Suite 2900
Denver, Colorado

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF ACRONYMS

bgs	Below ground surface
btoc	Below top of casing
BTEX	Benzene, toluene, ethylbenzene, and total xylenes
EPNG	El Paso Natural Gas Company
HSP	Health and Safety Plan
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
µg/L	Micrograms per liter
NMOCD	New Mexico Oil Conservation Division
NMWQCC	New Mexico Water Quality Control Commission
SJRP	San Juan River Plant
TPH	Total petroleum hydrocarbons
WGR	Western Gas Resources, Inc

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

This document presents El Paso Natural Gas Company's (EPNG) proposed workplan for the first phase of a Stage I Abatement Plan to be conducted in the vicinity of the Praxair Nitrogen Plant evaporation pond and at other areas on the San Juan River Plant (SJRP). Dissolved and free-phase hydrocarbons have been detected on the east side of the evaporation pond and the source of this hydrocarbon impact is unknown. This workplan presents the scope of work and field and laboratory methods to be implemented to investigate the source of, and the lateral extent of, potential hydrocarbon impacts. After the source(s) of hydrocarbons have been identified the extent of hydrocarbon impacts will be assessed in a second phase of investigations. The second phase of the Stage I Abatement Plan will consist of permanent monitoring well installations to assess and monitor groundwater quality, as well as completion of the remaining Stage I Abatement Plan requirements. Because the sources and extent of hydrocarbon impacts are unknown, a monitoring well network cannot be proposed at this time. Following completion of the second phase of work, a final site investigation report will be submitted to the Director for approval.

SJRP is located in the San Juan River Basin of New Mexico in San Juan County, Township 29N, Range 15W, Section 1, near Kirtland, New Mexico. A site map is shown in Figure 1. The SJRP was previously owned by EPNG, but has been owned and operated by Western Gas Resources, Inc (WGR) since June 1992. The plant is used to process natural gas collected from production wells located in the San Juan Basin of New Mexico and southern Utah. Recently, the Praxair Nitrogen Plant was built in the area north of the SJRP and a lined evaporation pond was constructed in the location of the former EPNG raw water pond. During installation of four groundwater monitoring wells around Praxair's pond, hydrocarbon impacts were encountered in a limited area on the east side of the pond.

A Geoprobe investigation will be conducted in the area east and north of the Praxair pond to assess the extent of hydrocarbon impacts in the area of the pond, as well as to investigate potential sources. The Geoprobe investigation will consist of soil sampling and groundwater sampling through temporary Geoprobe boreholes. Based on the results of the Geoprobe investigation, a monitoring well network will be proposed and installed to assess and monitor the areas of hydrocarbon impacts.

A Site-Specific Health and Safety Plan (HSP) (MWH, 2004) was written for groundwater monitoring, operations and maintenance (O&M), drilling and hand augering activities for the San Juan River Basin Projects. A copy of this plan must be on Site at all times while work is being conducted. This HSP applies to MWH Americas, Inc. (MWH) employees, MWH's subcontractor employees, and visitors at the sites.

1.2 DOCUMENT ORGANIZATION

Following this section, the document is organized as follows:

- Section 1.0 – Introduction
- Section 2.0 – Site Background
- Section 3.0 – Scope of Work
- Section 4.0 – Field Methods
- Section 5.0 – Laboratory Testing
- Section 6.0 – Data Evaluation and Reporting
- Section 7.0 – Schedule
- Section 8.0 – References

2.0 SITE BACKGROUND

The sections below present a description of the site and the site remediation history.

2.1 SITE DESCRIPTION

SJRP is located in San Juan County, Township 29N, Range 15W, Section 1, near Kirtland, New Mexico. A site map is shown in Figure 1. The SJRP was previously owned by EPNG, but has been owned and operated by WGR since June 1992. The plant is used to process natural gas collected from production wells located in the San Juan Basin of New Mexico and southern Utah. The SJRP is a 630-acre facility that has contained gas processing facilities, two raw water ponds (now closed), three wastewater evaporation ponds (now closed), a sulfur recovery plant, water and hydrocarbon tanks, a pigging station, flare pits, and several 16- to 24-inch diameter natural gas pipelines that cross the facility. Closure of the evaporation ponds, flare pits, and other potential hydrocarbon source areas was completed during a time period beginning 1992 and

ending in early 1996. Recently, the Praxair Nitrogen Plant was built in the area north of the SJRP, to the south of monitoring wells MW-8 and MW-9. Praxair constructed a lined evaporation pond in the location of the former EPNG raw water pond and installed five monitoring wells surrounding the pond. Monitoring wells MW-1, MW-2, MW-3 and MW-4 were installed in groundwater at total depths of 80 to 90 feet below ground surface (bgs). According to Praxair's field report, a perched zone was encountered during drilling MW-3 and therefore a second well, MW-5, was installed in the same boring as MW-3. Monitoring wells MW-3 and MW-5 were subsequently abandoned. Figure 2 presents a detailed site map of SJRP.

2.2 SITE GEOLOGY AND HYDROGEOLOGY

The following description of site geology and hydrogeology is based on reports prepared by Philip Environmental for EPNG in 1998 (Philip Environmental, June 1998), and K.W. Brown and Associates in 1987 (KWBA, 1987).

2.2.1 Site Geology

Based on drilling logs from 1995 and prior activities, the soils consist of a fine sand to fine sandy clay, with some gravel and cobbles. The soil samples from borings located in the valley or alluvial fans (such as P-10, P-7, P-9, MW-5, MW-8 and MW-9) consist of fine sand to clay. The soil samples from the borings located on the mesas, plateaus and terraces (such as E-10, E-11, E-9, MW-6 and MW-7) consist of fine sand with some gravel and cobble layers and some unconsolidated sandstone and shales. The uppermost and most prevalent lithology at the site is alluvial sediments, consisting of fluvial deposits and, to a lesser extent, terrace deposits of gravel and cobbles. Beneath the alluvium are the consolidated sedimentary units of the Kirtland Shale Formation, which includes both shales and sandstone members. The portion of the site to the north of the SJRP plant, itself, is underlain by a shale member of the Kirtland Formation. The plant and the flare hill are underlain by a sandstone member of the Kirtland Formation. During remediation of the south flare pit in September 1992, a distinct clay layer was encountered at a depth of approximately 15 feet below the original bottom of the pit.

2.2.2 Site Hydrogeology

Regional groundwater flow in the San Juan Basin is from the topographically high outcrop areas around the edges of the basin, towards the lower outcrop areas. The San Juan River Valley is

indicated as the main discharge area of the San Juan Basin (Stone, 1983). The San Juan River is located approximately two miles to the south of the SJRP site.

A potentiometric surface map is presented on Figure 1 based on water-level measurements collected in August 2005. These measurements indicate a groundwater flow divide just north of the plant that directs flow to the southwest through the southern portion of the site, and to the northwest through the northern portion of the site, including the Praxair pond area.

The Praxair evaporation pond, the area of current focus, was formerly the location of the EPNG raw water pond. The raw water pond received water from the San Juan River via Farmers ditch. This pond was not lined and as such served as a source of recharge to shallow ground water. A potentiometric surface map for June 17, 1987 (Philip, 1998) indicates that the raw water pond was a source of recharge as the groundwater contours wrap around the pond. When the pond was in use, the groundwater flow direction on the east side of the raw water pond was to the east. The raw water pond was closed when the evaporation ponds were closed. Since closure of the various ponds, groundwater flow directions at the facility have been altered to the current configuration.

Based on Praxair's well construction logs for monitoring wells near the Praxair pond, groundwater was encountered during drilling at approximately 60 to 70 feet bgs. These wells were screened between 58 to 83 feet bgs, and static groundwater levels in these wells have been measured at approximately 28 to 43 feet bgs. Based on the Praxair well log for MW-3 (recently abandoned), there may be a perched water zone at approximately 30 feet bgs. Praxair installed MW-5 within the same boring as MW-3, and screened the well from 30 to 45 feet bgs. In 2004 the water-level elevation in well MW-5 was measured at 5258.15 feet above mean sea level (msl); the corresponding water-level elevation in the deeper-screened well MW-3 was 5258.59 feet msl. Given these water-level elevations, it appears that the water table is at a higher potential than the so-called perched zone. This situation does not appear to be technically valid, and thus, the theory of a perched water table needs to be tested. This testing will be undertaken in this proposed workplan.

2.3 EPNG SITE PROJECT HISTORY

Dissolved-phase hydrocarbons have been observed in the northern portion of the site at MW-8 and MW-9. EPNG has been aggressively implementing active groundwater remediation in this

area to reduce dissolved-phase hydrocarbons. The remediation consists of chemical oxygen enhancement and air sparging. Historic groundwater sampling conducted at SJRP suggests that the air sparging activities have successfully reduced dissolved-phase hydrocarbon concentrations in the vicinity of MW-9. Concentrations in monitoring well MW-8 have also declined as a result of chemical oxygen enhancement using oxygen-releasing compound socks within this well. During the first quarterly sampling event of 2004, monitoring wells MW-8 and MW-9 contained hydrocarbon concentrations below the New Mexico Water Quality Control Commission standards. To assess groundwater conditions, the air sparging system was shut down in February 2004, and remained off for the remainder of 2004. Concentrations of benzene at MW-9 showed gradual rebounding conditions in the second, third, and fourth quarters of 2004, with a maximum benzene concentration of 35.9 µg/L in November. The benzene concentration at MW-8 remained below closure standards during the second and third quarters, but demonstrated rebounding conditions in the fourth quarter. Currently, the air sparging system is not operating as groundwater monitoring continues.

2.4 PRAXAIR HYDROCARBON IMPACTS

Following installation in July and August 2003, the five Praxair monitoring wells were sampled. At MW-5, approximately 1.5 inches of product was measured in the bailer and the dissolved phase groundwater concentration indicated benzene at 3,300 ug/L. The benzene concentrations in MW-1, MW-2, MW-3 and MW-4 were: below detection, 60 ug/L, 59 ug/L, and 3.4 ug/L, respectively. During a subsequent sampling event in August 2005, both MW-1 and MW-4 contained benzene concentrations below detection and the benzene concentration in MW-2 decreased to 29 ug/L. Monitoring wells MW-3 and MW-5 were not sampled because they had been abandoned. In general, the most elevated hydrocarbon concentrations have been detected in shallow groundwater at Praxair well MW-5 and EPNG wells MW-8 and MW-9, with only slightly elevated concentrations in groundwater in Praxair wells MW-2 and MW-3. Therefore, hydrocarbon impacts to the east of the pond, in the vicinity of Praxair MW-5 will be the focus of this investigation. Because free product is confined to one well and the well is screened in shallow groundwater, the source of the hydrocarbons is likely to be local.

3.0 SCOPE OF WORK

A Geoprobe investigation will be conducted in the area east of the Praxair pond in order to investigate the extent of hydrocarbon impacts, as well as to investigate potential sources in the vicinity. Based on site data, elevated dissolved-phase hydrocarbon concentrations have been detected in EPNG wells MW-8 and MW-9 and free-product has been detected in shallow groundwater at Praxair well MW-5. Therefore the investigation to assess the extent of hydrocarbons will be focussed in these areas. In addition, a review of site history and site documents has concluded that potential sources of the detected hydrocarbons include two natural gas lines, the 24" Barker Dome Line and the 16" Aneth-San Juan Line, and a pigging station (Figure 2). Therefore, the Geoprobe investigation will investigate these potential sources. The investigation will consist of soil sampling and groundwater sampling through the Geoprobe borings. Proposed locations are shown in Figure 2, although additional locations may be added in the field in order to assess the extent of hydrocarbon impacts.

Geoprobe soil cores will be continuously sampled and logged, as described in Section 4.1, below. Logging will include soil descriptions and measurements of headspace vapor photoionization detector (PID) readings. The Geoprobe borings will be advanced to the depth of first encountered groundwater. One soil sample will be collected from each boring for laboratory analysis for BTEX and total petroleum hydrocarbons (TPH). Soil samples will be collected at the depth of the highest PID measurement (depths may be modified based on field conditions). However, if there are no elevated PID measurements, the soil sample will be collected from immediately above the saturated zone, or in the case of a dry hole, at the terminus of the boring.

Shallow groundwater samples will be collected from each boring through the Geoprobe equipment using a peristaltic pump and dedicated tubing. All groundwater samples will be submitted to an analytical laboratory for analysis of BTEX compounds. Following sample collection, Geoprobe borings will be abandoned by backfilling to the surface with bentonite chips and hydrating. If the soil boring logs indicate significant moisture, but water does not readily accumulate for sampling, temporary well points may be installed in borings using 1-inch polyvinyl chloride (PVC) pipe with screened intervals at depths where the moist soils were encountered. If water is collected, water levels will be taken and these temporary well points will be surveyed. Following surveying and sampling, the temporary points will be abandoned by removing the casing (if possible) and backfilling the boring with bentonite chips and hydrating.

4.0 FIELD METHODS

The sections below present details for the soil and perched groundwater field investigations.

4.1 GEOPROBE SOIL INVESTIGATION

A truck-mounted, Geoprobe or direct-push rig will be utilized to advance soil borings and collect continuous soil cores. Soil samples will be collected in polyethylene liners with a Macro-Core Sampling Tube System® or similar. The soil cores will be collected for visual inspection/logging and for soil headspace testing at all locations. Soils will be sampled continuously from the ground surface to the depth of first groundwater, estimated to be between 10 and 35 feet bgs. The field geologist will log soils in general accordance with Unified Soil Classification System (USCS) protocol. Soil headspace gas will be monitored with a PID in all proposed borings from ground surface to total boring depth. Soil cores will be split in half after collection. Soil composites will be collected from ½ of the sliced core for headspace gas analysis. Soil composites will be collected from 1-foot or 2-foot intervals from each core and placed into zip-lock bags. After waiting at least 10 minutes the headspace gas reading will be noted. Soil samples for laboratory analysis will be labeled, handled and shipped according to the procedures outlined below.

4.2 SHALLOW GROUNDWATER INVESTIGATION

4.2.1 Shallow Groundwater Sampling

Each of the soil borings will be advanced to the depth of first encountered groundwater. Groundwater samples will be collected from the borings through the Geoprobe rods by using a steel-drive point screen, or similar. Water will be recovered through the rods using either a mini-bailer or a peristaltic pump and clean, dedicated polyethylene tubing. Groundwater samples will be collected in VOA vials for delivery to the analytical laboratory. Groundwater samples will be labeled, handled and shipped according to the procedures outlined below. Following completion of groundwater sampling, the borings will be abandoned by backfilling with bentonite and hydrating.

4.2.2 Temporary Groundwater Monitoring Points

Temporary groundwater monitoring points may be installed in some of the Geoprobe borings. Temporary points will be constructed of 1-inch Schedule 40 PVC screen (typically 5 to 10 feet in length) and blank casing. The well screen will be installed at the depth where shallow

groundwater is likely to occur, based on the soil boring log and/or adjacent well locations. The PVC blank casing will extend from the top of the well screen to about two feet above the ground surface. If possible, the annular space adjacent to the PVC well screen will be filled with silica sand from the bottom of the borehole to two feet above the top of the well screen. Hydrated bentonite will be placed above the silica sand to prevent downward migration of surface water. Groundwater samples will be collected from temporary monitoring points using clean, dedicated polyethylene bailers and/or clean, dedicated polyethylene tubing. After the temporary monitoring points have been sampled, surveyed and a stabilized water elevation collected, the borings will be abandoned by removing the PVC casing, backfilling the boring with bentonite, and hydrating.

4.3 GENERAL INVESTIGATION PROTOCOLS

This section presents a discussion of documentation procedures, location identification, sampling methods, and other procedures to be performed as part of the investigation.

4.3.1 Documentation Procedures

Data generated during the field investigation will be recorded on sampling logs that are specific to the type of sampling being performed or the type of samples collected. Each soil sample will be generally classified according to the USCS procedures. The soil samples will be classified based on visual evaluation of grain size, degree of sorting, and consistency. The visual soil description also will include color, soil particle angularity, plasticity, and moisture content.

In addition, the field hydrogeologist/environmental scientist will maintain daily field reports. At the end of each field day, the daily reports will be dated and signed by the field person performing the work. Daily field reports will include:

- Date
- Name and location of the work activities
- Weather conditions
- Personnel and visitors on Site
- Sample locations and methods (including sampling equipment), time of sample collection, and sample depths
- Samples submitted to the laboratory for analyses
- Sample type (soil, groundwater, duplicate, blank)

- Name of carrier transporting the sample (e.g., name of laboratory and shipping agent)
- Photograph numbers and descriptions (if applicable)
- Description of decontamination activities (if applicable)
- Schematic drawings of sample locations
- Any deviations from the Work Plan
- Other relevant observations as the field work progresses
- Problems and corrective actions

4.3.2 Boring Locations and Utility Identification

Proposed boring locations will be marked in the field prior to initiation of fieldwork. The "One-Call" Service will be contacted a minimum of 48 hours prior to drilling for clearance, and the necessary Right-of-Way clearances will be obtained.

4.3.3 Sample Labeling

A sample label will be placed on each sample container submitted for analysis and will include the project name and location, sample designation (including depth interval, if appropriate), date and time of collection, preservative (if applicable), sampler's initials, and required analyses. Sample designations are presented below in Section 4.3.5. Labels will be sufficiently durable to remain legible and attached to the sample container when wet. Sample labels will be completed with indelible ink.

4.3.4 Chain-of-Custody

A project-specific chain-of-custody form will be completed and will accompany each sample cooler. The chain-of-custody form includes project identification, project location, sample designation, analysis type, and shipping account information. In addition, there are spaces for entry of the sample collection date and time, sample depth, signature of the persons relinquishing and receiving samples, and the status of the samples upon receipt by the laboratory. The chain-of-custody form will be in duplicate. The original of the form will be shipped to the laboratory with the samples, one duplicate copy will be reviewed and filed with the EPNG project. Each form will be completed properly in the field at the time of collection to ensure that sample custody is documented, appropriate amount of sample has been collected, and that scheduled analyses are properly assigned. All entries will be made using indelible ink on the chain-of-

custody form. Any errors will be corrected by drawing a single line through the incorrect entry, entering the correct information, and then initialing and dating the change. Unused portions of the chain-of-custody form will be crossed out and initialed. All samples will be transported by field personnel or via a commercial carrier (e.g., Federal Express Priority Service). The signed shipping tracking number and receipt will serve as evidence of custody transfer between the field sampler and carrier, and the carrier and laboratory. The sampler will retain and file copies of the chain-of-custody record and the shipping tracking number and carrier name after the samples are shipped. The carrier will relinquish samples to the laboratory upon arrival, and the laboratory personnel will then complete the chain-of-custody form. The original completed chain-of-custody form will be returned to EPNG and filed in the project files.

Sample Handling and Shipping. All laboratory samples will be shipped or transported in coolers containing ice and maintained at 4°± 2 °C. Each cooler will contain a temperature blank consisting of a 40 ml vial. Upon receipt, the laboratory will record the temperature of the temperature blank on the chain-of-custody form. All samples will be either hand delivered, or will be shipped via a commercial carrier. Sampling personnel will prepare air-courier waybill identification labels in strict accordance with the U.S. Department of Transportation procedures.

Sample Packing. Sample containers will be placed in clean protective foam or bubble pack sleeves. The caps of all sample bottles shall be checked for tightness to prevent sample leakage during transport. Care will be taken to prevent over-tightening and breakage of bottle caps. Sample containers will be immediately placed on ice in a waterproof hard plastic ice chest. Samples will be stored and shipped on ice to maintain the samples at 4°± 2 °C. The ice will be double wrapped in resealable plastic bags. Sufficient packing material will be placed in each ice chest to minimize the potential for sample bottles to shift and become damaged or broken during shipment. Packing material may include bubble pack or foam material. Samples should be thoroughly cooled before placing in packing material so the packing material serves to insulate the pre-cooled sample. The drain plug on the shipping container will be closed and sealed on the inside and outside with duct tape.

Sampling personnel will inventory the sample bottles from the Site prior to shipment to ensure that all samples listed on the chain-of-custody form are present. All bottles collected from a specific sampling interval will be packed and shipped together in the same shipping container.

The originals of the analysis request and chain-of-custody forms will be sealed in a waterproof plastic bag and placed inside the shipping container prior to sealing of the container. The cooler will be taped shut using strapping tape over the hinges and custody seals placed across the top and sides of the cooler lid. Clear tape will be placed over the custody seals to prevent inadvertent damage during shipping. The tape should not allow the seals to be lifted off with the tape and then reaffix without breaking the seal.

4.3.5 Sample Designation

For this program, each sample will have a unique sample identification, and will consist of a boring identifier, sample type identifier, and depth identifier, if appropriate. Geoprobe borings will be given a numeric identifier (1 - #). Samples will be labeled with the Geoprobe boring number (GPH #), the type of sample (soil (SS) or water (GW)) and depth of sample (in feet). For example:

Sample Designation: *GPH 1 - GW(12)*

Indicates a groundwater sample collected at a depth of 12 feet bgs from the Geoprobe boring number 1.

4.3.6 Equipment Decontamination

Prior to collecting any sample and between sampling locations, all sampling equipment will be decontaminated using a non-phosphate detergent (e.g., Alconox) or by steam cleaning. Prior to the drilling, all downhole equipment will be steam-cleaned or scrubbed with a non-phosphate detergent (e.g., Alconox). If appropriate and feasible, several sets of decontaminated equipment (e.g., sampling trowels, or core barrels) may be used to minimize downtime during decontamination if multiple samples are to be collected from the same area. Where feasible, equipment to be decontaminated will be disassembled to permit adequate cleaning of the internal portions of the equipment. Equipment to be steam cleaned will be placed on metal cleaning racks that support the equipment for cleaning, rinsing, and air drying. Heavy waterproof gloves will be worn during steam cleaning to reduce the potential for cross-contamination between samples and to protect against skin contact with steam and potential constituents. These gloves will be steam cleaned or replaced each time the equipment is decontaminated.

4.3.7 Investigation-Derived Waste

Introduction. The types of investigation-derived waste (IDW) that are expected to be generated during this sampling program include soil, decontamination water, personal protective equipment (PPE), disposable field equipment, and groundwater. This section describes the activities that will generate each of these wastes and the methods that will be used to minimize the volume of IDW generated whenever possible.

Soil. During the field investigation, excess soil generated from sampling activities will be spread onto the ground surface. If soils appear to be impacted with hydrocarbons, they will be place into a 55-gallon drum for proper disposal.

Groundwater and Decontamination Water. Groundwater will be generated primarily through the purging and sampling of temporary groundwater monitoring points. In general, very little excess purge water is anticipated to be collected during this investigation. Purge water will be disposed of at the Rio Vista facility.

Disposable Equipment and PPE. Waste generated during the field investigation, including rope, disposable bailers, latex gloves, Tyvex suits, and etc. will be disposed in standard industrial "dumpsters." In the event the equipment or PPE is grossly contaminated, it will be decontaminated before disposal.

4.3.8 Field Equipment Calibration Procedures

Organic Vapor Meters

Field personnel will use a PID for screening for the presence of organic vapors and for soil sample screening measurements. This instrument will be calibrated prior to use according to the manufacturer's specifications. The instrument calibration will be checked at the end of each day of use and any time meter drift is suspected. All calibration information will be recorded on the daily field records.

Electric Water-Level Indicator

Electric water-level indicators will be checked before the beginning of field activities by comparing the scale on the water-level tape against an engineering measurement tape. If more than one water-level indicator is used on Site, they will be calibrated to assure the depth-to-water readings are consistent between all probes. Water-level measurements will be recorded to the nearest one hundredth (0.01) of a foot.

4.3.9 Survey

A licensed surveyor will be used to determine the coordinates and elevations of ground surface and top of casing for the temporary monitoring points. Field activities associated with the survey will be documented. Entries will include the date, time, personnel on Site, work performed, problems, and corrective actions.

5.0 LABORATORY TESTING

5.1 Soil Samples

Soil samples will be collected and analyzed in a laboratory for the following parameters:

- BTEX by EPA Method 8260
- TPH (GRO) by EPA Method 8015

5.2 Groundwater Samples

Groundwater samples will be collected for laboratory analysis of the following parameters:

- BTEX by EPA Method 8021B

6.0 DATA EVALUATION AND REPORTING

Following completion of the Geoprobe investigation, an interim report will be submitted to provide the data results, an interpretation of the nature and extent of hydrocarbon impacts, and conclusions with regard to potential sources. Hydrocarbon isoconcentration maps will be presented based on data collected during this investigation and previous groundwater sampling events. The report will also provide recommendations for monitoring well installations, a monitoring schedule, and any additional site investigation tasks to fulfill the Stage I Abatement Plan requirements. After completion of the second phase of field investigation, a Site Investigation Report will be issued that presents a site conceptual model. This work will be followed by a Stage 2 Abatement Plan which will select and design, if necessary, an abatement option that when implemented will result in attainment of groundwater concentrations in compliance with New Mexico Water Quality Control Commission standards.

7.0 SCHEDULE

This investigation is tentatively scheduled for November 2005, pending access agreements with WGR and Praxair, and other scheduling considerations. NMOCD will be notified one week prior to initiation of the field work. Results of the investigation will be provided to NMOCD with recommendations for further activities within 45 days of receipt of analytical data. A schedule for subsequent activities will be provided in that report. EPNG will work with NMOCD to expedite completion of field activities and reporting for the submittal of the final site investigation report pursuant to the Stage I Abatement Plan.

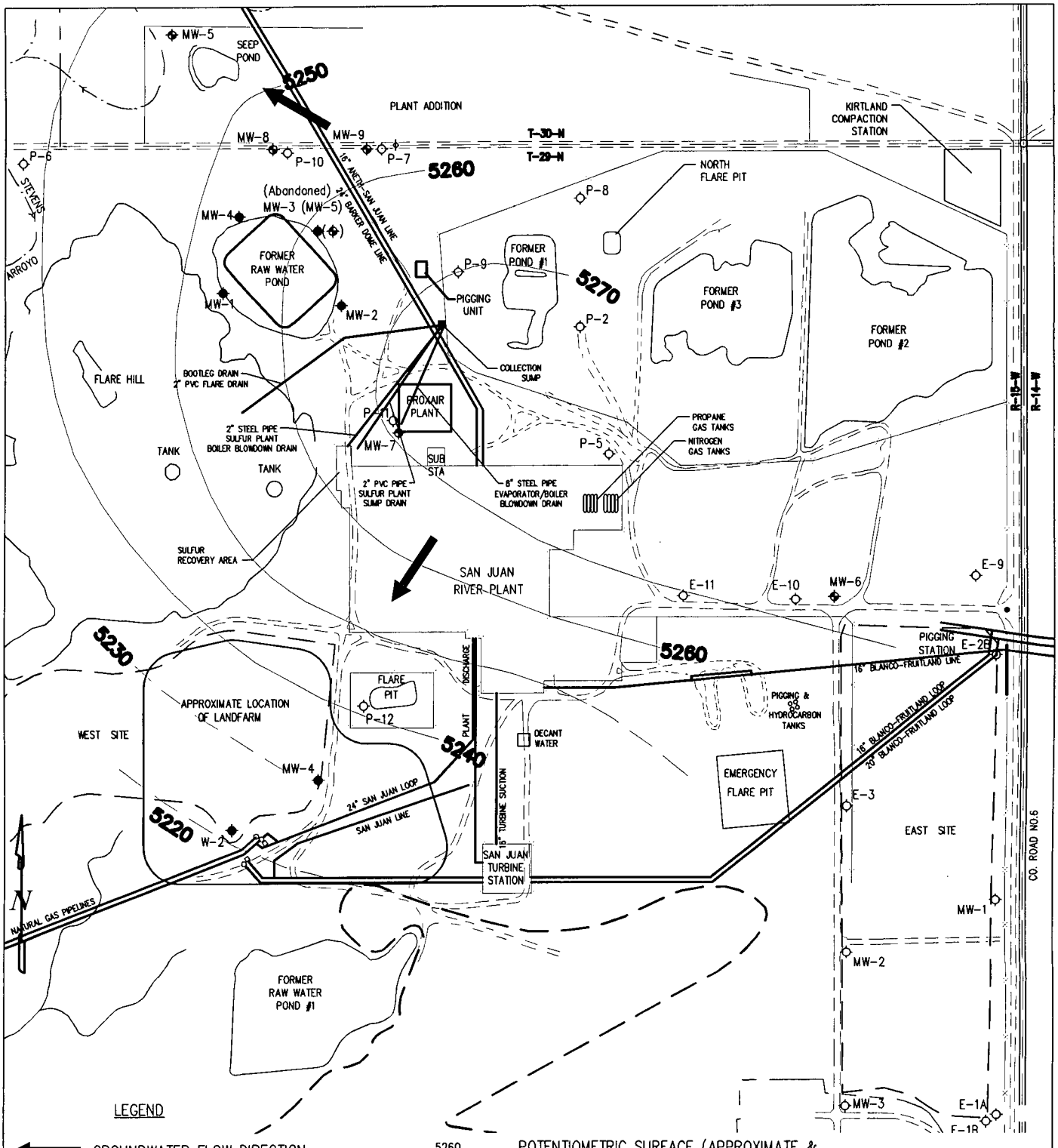
8.0 REFERENCES

K.W. Brown and Associates (KWBA), 1987. *Land Application Feasibility Study, San Juan River Plant, Phase I Final Report*, August 1987.

Philip Environmental, 1998. *Summary of Investigations at the San Juan River Plant, Kirtland, New Mexico.* June 1998. Prepared for El Paso Natural Gas Company.

Stone, W.J., Lyford, F.P., Frenzel, P.F.Mizell, N.H. and Padgett, E.T., 1983. *Hydrogeology and Water Resources of the San Juan Basin, New Mexico.* New Mexico Bureau of Mines and Mineral Resources, 1983.

FIGURES

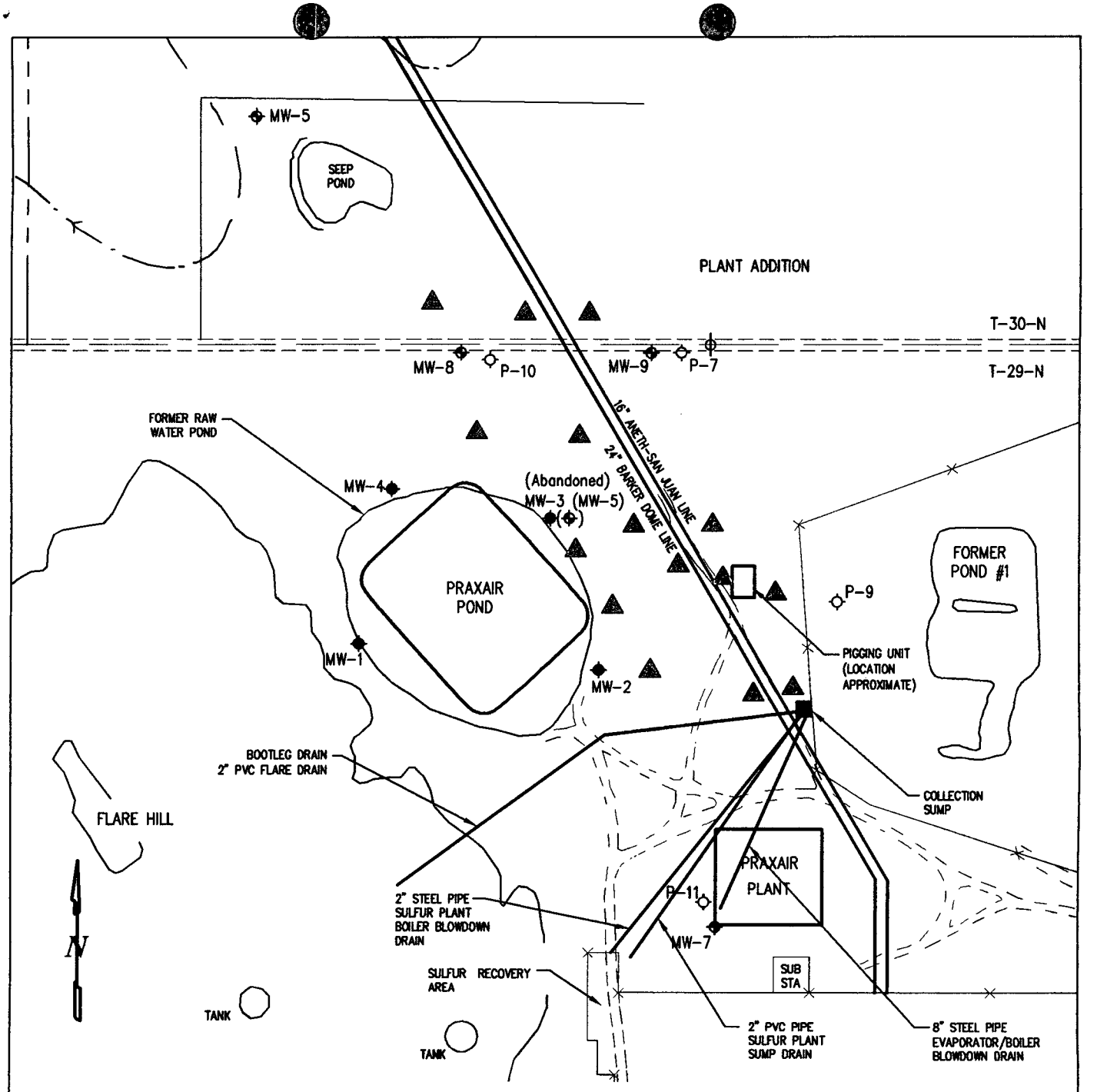


SJRP PONDS FIG 1

SITE MAP
SAN JUAN RIVER PLANT

EL PASO NATURAL GAS

FIGURE 1



LEGEND

MW-4 ◆ GROUNDWATER MONITORING WELL LOCATION

MW-8 ◆ PERCHED WATER MONITORING LOCATION

P-2 ○ SOIL BORING LOCATION

▲ PROPOSED GEOPROBE SOIL BORING AND WATER SAMPLE LOCATION (2005)

SJRP DETAILED PONDS

PRAXAIR FACILITIES
SAN JUAN RIVER PLANT

EL PASO NATURAL GAS

FIGURE 2

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

GW-035

October 11, 2005

Mr. Scott T. Pope
El Paso Corporation
2 North Nevada
Colorado Springs, CO 80903

RE: REQUIREMENT TO SUBMIT STAGE 1 ABATEMENT PLAN
EL PASO NATURAL GAS - SAN JUAN RIVER PLANT/
PRAXAIR NITROGEN PLANT

Dear Mr. Pope:

The New Mexico Oil Conservation Division (OCD) hereby requires El Paso Natural Gas (EPNG) to submit a Stage 1 Abatement Plan to investigate ground water contamination at the Praxair Nitrogen Plant located in Kirtland, New Mexico by October 27, 2005. The Stage 1 Abatement Plan proposal must be submitted to the OCD Santa Fe Office with a copy provided to the OCD Aztec District Office and must meet of all the requirements specified in Rule 19 (19.15.1.19 NMAC), including, but not limited to, the public notice and participation requirements specified in Subsection G of 19.15.1.19 NMAC.

On October 1, 2004, OCD required EPNG to submit a work plan to address petroleum contamination of the ground water beneath the Praxair Nitrogen Plant adjacent to EPNG's former San Juan River Plant. On August 16, 2005, OCD responded to several issues raised by EPNG in it's letter of March 8, 2005. OCD confirmed its determination that EPNG was the "responsible person" for the Praxair Nitrogen site and again required EPNG to submit a ground water investigation plan. OCD explicitly required EPNG to include a proposal to "...install a sufficient number of additional monitoring wells to delineate the downgradient extent of the ground water contamination in the area of the Praxair lagoon...."

OCD approved EPNG's request for a 30 day extension to due date for the submittal of the work plan and isoconcentration maps for the San Juan River Plant. However, rather than submitting the ground water investigation plan and the isoconcentration maps and cross sections depicting the contamination that OCD required in its letter of August 16, 2005, EPNG submitted a letter in

which it proposed a "phased approach" on September 30, 2005. EPNG did not contact OCD to further discuss the requirements that OCD clearly specified in its letter of August 16, 2005, prior to submitting its letter of September 30, 2005.

OCD has determined that EPNG is the responsible person for the ground water contamination at the Praxair Nitrogen Plant site. More than a year has passed since OCD required EPNG to submit a ground water investigation work plan, but EPNG has failed to comply. OCD will not permit further delays, nor will OCD tolerate further noncompliance by EPNG. EPNG has proposed to perform several "tasks" but has not submitted the required ground water investigation plan. Therefore, OCD requires EPNG to submit a Stage 1 Abatement Plan by October 27, 2005.

EPNG may perform any additional "tasks" that it wishes. However, if EPNG fails to submit the required Abatement Plan by October 27, 2005, then OCD will take appropriate enforcement actions to bring it into compliance. Such actions may include a hearing before a division examiner to set a compliance schedule and to impose sanctions, including penalties.

If you have any questions, please call Glenn von Gonten of my staff at (505) 476-3488.

Sincerely,

Daniel Sanchez
Enforcement and Compliance Manager

xc: Denny Foust, OCD Aztec District Office
Mr. Mike Matush, New Mexico State Land Office
Mr. William Olson, NMED GWQB

Fax

To: Scott Pope
El Paso Corporation

Fax: 719-520-4716

Pages: 3 , including this cover sheet.

Date: October 11, 2005

RE: REQUIREMENT TO SUBMIT STAGE 1 ABATEMENT PLAN

Scott,

OCD is requiring EPNG to submit a Stage 1 AP by October 27, 2005. If you have any questions, please call me at 505-476-3488.

Glenn von Gonten

Glenn von Gonten
Senior Hydrologist
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
505-476-3488
Fax: 505-476-3462

P.01

TRANSACTION REPORT

OCT-11-2005 TUE 10:46 AM

FOR:

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
OCT-11	10:45 AM	917195204716	55″	3	SEND	OK	606	

TOTAL : 55S PAGES: 3

Fax

To: Scott Pope
El Paso Corporation

Fax: 719-520-4716

Pages: 3 , including this cover sheet.

Date: October 11, 2005

RE: REQUIREMENT TO SUBMIT STAGE 1 ABATEMENT PLAN

Scott,

OCD is requiring EPNG to submit a Stage 1 AP by October 27, 2005. If you have any questions, please call me at 505-476-3488.

elpaso

Certified Mail #: 7001 1940 0002 1371 7973

September 30, 2005

GW-039

RECEIVED
OCT 1 2005
OIL CONSERVATION DIVISION

Mr. Glenn von Gonten
Senior Hydrologist
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RE: PHASED WORKPLAN TO ADDRESS PETROLEUM CONTAMINATION AT THE PRAXAIR NITROGEN PLANT NEAR EPNG'S FORMERLY OWNED SAN JUAN RIVER PLANT

Dear Mr. von Gonten:

El Paso Natural Gas Company (EPNG) is in receipt of your letter dated August 16, 2005 regarding the *El Paso Natural Gas – San Juan River Plant Final 2004 Annual Report and Request for Additional Information and Workplan, GW039R* , in which (1) New Mexico Oil Conservation Division (NMOCD) requested additional information from EPNG related to the 2004 Annual Report; (2) NMOCD stated that it considers EPNG to be the responsible party for hydrocarbon contamination in groundwater near the Praxair lined pond; and (3) NMOCD rejected EPNG's previous proposal to monitor the Praxair wells and requested that EPNG submit a workplan to investigate the extent of contamination in the area of the Praxair pond.

NMOCD's 2004 Final Annual Report Comments

NMOCD's recent letter stated that "EPNG's 2004 Final Annual Report did not include the isoconcentration maps of the constituents of concern that was required by OCD in 1992". The referenced report did include groundwater elevation maps for the four sampling events (February, May, August and November 2004) which presented the corresponding BTEX concentration data from the sampled wells. These data were not contoured because there were very few detections above the method detection limits (only the November sampling event had more than one monitoring point above detection limits for BTEX compounds). If NMOCD would like us to contour these data, we will agree to provide these maps for 2004 events, as well as in subsequent reports.

Groundwater Contamination Near Praxair Lined Pond

EPNG understands NMOCD's position with regard to the groundwater hydrocarbon contamination near the Praxair lined pond to be that EPNG "...is responsible for all contamination existing at the San Juan River Plant prior to June 1992. Because the recently discovered contamination at the Praxair facility is in the vicinity of known contamination, it is assumed to be a continuation of the known contamination". To clarify our letters of November 19, 2004 and March 8, 2005, EPNG has received a copy of the Praxair analytical results. As you are aware, EPNG has not owned or operated the San Juan River Plant since June 1992. EPNG is unaware of a hydrocarbon source in the

El Paso Corporation
PO Box 1087 Colorado Springs, Colorado 80944
tel 719.473.2300 fax 719.520.4318

area of the current Praxair evaporation pond, as this area was not known to store or process hydrocarbons during EPNG ownership. Therefore, EPNG plans to investigate whether the identified contamination at the Praxair facility was caused during EPNG's ownership of the San Juan River Plant or whether it is the result of later releases, after the sale of the plant to Western Gas Resources, Inc. in June 1992. A work plan for conducting this investigation is presented below.

Work Plan for First Phase of Investigation Around Praxair Lined Pond

In our letter dated March 8, 2005, EPNG agreed to perform annual monitoring for BTEX compounds at the three Praxair monitoring wells surrounding the lined pond for a period not to exceed 5 years. NMOCD has rejected EPNG's proposal, and requested that EPNG submit a workplan to investigate the extent of contamination. Therefore, EPNG would like to propose a phased approach to this investigation. The first phase of work, which has already been initiated by EPNG, consists of the following tasks:

- Review existing information regarding operations and monitoring at the former San Juan River Plant. This will include a review of recent and historic site analytical data, hydrogeologic information, site reports and related documents, aerial photos, etc.
- Conduct interviews with employees of the former San Juan River Plant.
- Prepare a summary report which will include the results of these activities, and will present the rationale and scope for the next phase of work in support of this investigation. This report will be provided to NMOCD within 45 days of the date of this letter.

In view of the foregoing, EPNG requests any additional information that NMOCD may have on file regarding the contamination at the Praxair facility.

If you have any questions, please call me at (719) 520-4433.

Sincerely,

Scott T. Pope, P.G.
Project Manager

cc: Mr. Denny Foust, NMOCD
Pam Anderson, MWH
Dan Schnee, EPC
Roger Towe, EPC
Todd Muelhoefer, EPC
Robert Sterrett, EMS
San Juan River Plant General File

NEW MEXICO ENERGY, MINERALS and
NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

August 16, 2005

Mr. Scott T. Pope
El Paso Corporation
2 North Nevada
Colorado Springs, CO 80903

RE: EL PASO NATURAL GAS - SAN JUAN RIVER PLANT
FINAL 2004 ANNUAL REPORT &
REQUEST FOR ADDITIONAL INFORMATION AND WORKPLAN
GW0039

Dear Mr. Pope:

The New Mexico Oil Conservation Division (OCD) has reviewed El Paso Natural Gas' (EPNG) 2004 Annual Report for its former San Juan River Plant and your letter of March 8, 2005. EPNG has requested that OCD justify its October 1, 2004 requirement that it submit a work plan to address petroleum contamination of the ground water beneath the Praxair Nitrogen Plant adjacent to its former San Juan River Plant. OCD provided EPNG with a copy of the analytical results of ground water sampling conducted at the Praxair Nitrogen Plant with its letter of October 1, 2004. However, it is not clear from your letters of November 19, 2004 and March 8, 2005, whether EPNG actually received a copy of the analytical results or merely disagrees with OCD's determination that EPNG is responsible for the petroleum contamination at the Praxair Nitrogen Plant.

The New Mexico Environment Department's Ground Water Quality Bureau (NMED GWQB) issued a Discharge Permit (DP-1422) to the Praxair Nitrogen Plant on August 6, 2003, that required Praxair to collect and analyze ground water samples prior to discharging to its double-lined lagoon equipped with a inter-liner leak detection system. The new Praxair lagoon is located near to known contamination at the San Juan River Plant. Praxair discovered both phase separated and dissolved phase petroleum contamination beneath its lagoon prior to discharging to the new lagoon; therefore, it is not responsible for the petroleum contamination. Analytical results from samples collected by Praxair, Inc. led OCD to conclude that the source of the petroleum contamination was the San Juan River Plant. Based on the data supplied by Praxair

and EPNG, OCD must conclude that the petroleum contamination detected beneath the Praxair lagoon was released from the San Juan River Plant.

EPNG sold the San Juan River Plant to Western Gas Resources, Inc. in June 1992. In its March 8, 2005 letter to OCD, EPNG states that "*EPNG is not convinced the contamination discovered at the Praxair facility was caused by EPNG's operations prior to the sale to Western over 12 years ago, but is willing to add the 3 monitoring wells to the annual sampling program for a period not to exceed 5 years.*" As defined in OCD Rule 7 (19.15.1.7 NMAC - DEFINITIONS), a "*Responsible person shall mean the owner or operator who must complete division approved corrective action for pollution from releases.*" El Paso Natural Gas has been the "responsible person" for the San Juan River Plant contamination since 1986 and is responsible for all contamination existing at the San Juan River Plant prior to June 1992. Because the recently discovered contamination at the Praxair facility is in the vicinity of known contamination, it is assumed to be a continuation of the known contamination. If EPNG has evidence that demonstrates that the newly discovered contamination was released since 1992, EPNG should immediately submit it to OCD. OCD has no authority over agreements stipulating who shall assume responsibility for remediation such as was apparently entered into by EPNG and Western Gas Resources in June 1992. If EPNG is stating that Western Gas Resources is the responsible person and if Western Gas Resources is willing to accept that responsibility for this plume of ground water contamination, then a jointly signed letter stating that should be submitted to OCD.

Until OCD receives such a signed letter, it will consider EPNG to be the responsible party for the San Juan River Plant. The recently discovered petroleum contamination must be addressed immediately. In its letter of October 1, 2004, OCD required EPNG to submit a work plan to address the ground water contamination released from the San Juan River Plant that has moved onto the Praxair Nitrogen Plant. In response, EPNG has provided a proposal to add existing monitor wells to its annual sampling program for a period not to exceed 5 years. OCD hereby rejects EPNG's proposal because it would not properly address the petroleum contamination. EPFS must submit a ground water investigation plan to install a sufficient number of additional monitoring wells to delineate the downgradient extent of the ground water contamination in the area of the Praxair lagoon by September 16, 2005. The purpose of the ground water investigation is for EPFS to demonstrate that it has adequately delineated the hydrocarbon contamination. EPFS should be prepared to install as many monitoring wells as needed to delineate the full extent of the contaminant plume to concentrations less than the WQCC Abatement Standards (20.6.2.3103 NMAC) using an appropriate number of isoconcentration maps and cross sections that depict the contamination that has been released from the former pit.

The workplan must also propose additional contingent soil borings and monitor wells if the next phase of its ground water investigation fails to completely delineate the release. OCD will require EPNG to remediate any ground water contamination to meet WQCC standards. Therefore, it may be more cost effective for EPNG to implement a presumptive remediation program to be implemented concurrently with its ground water investigation.

EPNG's 2004 Final Annual Report did not include the isoconcentration maps of the constituents of concern that was required by OCD in 1992. EPNG must submit appropriate maps and cross sections depicting the contamination by September 16, 2005, and in all future submittals.

If you have any questions, please call me at (505) 476-3488.

Sincerely,

Glenn von Gonten
Senior Hydrologist
Environmental Bureau

xc: Denny Foust, OCD Aztec District Office
Mr. Mike Matush, New Mexico State Land Office
Mr. William Olson, NMED GWQB

elpaso Natural Gas

Certified Mail: #7002 0510 0000 4509 2779

March 8, 2005

Mr. Ed Martin
New Mexico Oil Conservation Division
1220 St. Francis Dr.
Santa Fe, NM 87504

RE: REQUEST FOR ADDITIONAL INFORMATION AND WORK PLAN FOR SAMPLING PETROLEUM CONTAMINATION IN GROUND WATER MONITORING WELLS AT THE PRAXAIR NITROGEN PLANT NEAR EPNG'S FORMERLY OWNED SAN JUAN RIVER PLANT

Dear Mr. Martin:

On November 19, 2004 El Paso Natural Gas Company (EPNG) sent a letter to Mr. Bill Olson requesting supporting data that the contamination in the Praxair area of the formerly owned San Juan River Plant was caused by EPNG's former activities. As stated in the November 19, 2004 letter, the plant was sold to Western Gas Resources (Western) in June 1992. On January 10, 2005 EPNG received a letter from the New Mexico Oil Conservation Division (NMOCD) granting the request for extension for a work plan addressing the above mentioned contamination to April 6, 2005; however, the letter did not address the request for data supporting the contamination was caused by EPNG's former operations at the plant.

EPNG is still interested in any documentation that would support the contention that the contamination was caused by EPNG's former operations. In discussions with Bill Olson prior to his leaving NMOCD, he indicated adding the Praxair monitoring wells to our annual sampling program would be an appropriate action. EPNG is not convinced the contamination discovered at the Praxair facility was caused by EPNG's operations prior to the sale to Western over 12 years ago, but is willing to add the 3 monitoring wells to the annual sampling program for a period not to exceed 5 years. EPNG proposes that the Praxair wells be sampled for BTEX only, based on sample results provided by NMOCD. The annual sampling takes place in August of every year.

If you have any questions, please call me at (719) 520-4433.

Sincerely,

Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # 7002 0510 0000 4509 2762**

El Paso Natural Gas
Two North Nevada Colorado Springs, CO 80903
PO Box 1087 Colorado Springs, CO 80903
tel 719.473.2300

bc: MWH – Pam Anderson MWH
Dan Schnee EPC - Legal
San Juan River Plant General File

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

January 6, 2005

Mr. Scott T. Pope P.G.
Senior Environmental Scientist
El Paso Natural Gas
Two North Nevada
Colorado Springs, CO 80903

Dear Scott:

The New Mexico Oil Conservation Division (NMOCD) has received your letter dated November 19, 2004 regarding "Petroleum Contamination in Ground Water Monitoring Wells at the Praxair Nitrogen Plant Near EPNG's Formerly Owned San Juan River Plant". In it, you have requested an extension of the deadline imposed by NMOCD's letter dated October 1, 2004, for EPNG to submit a work plan to address this petroleum contamination. This request is granted. The deadline (formerly December 3, 2004) is hereby extended to April 6, 2005.

Mr. William C. Olson is no longer employed by the NMOCD. He has moved on to the New Mexico Environment Department. NMOCD is in the process of filling Mr. Olson's position. Any correspondence regarding the above subject may temporarily be addressed to me at the address below.

If you have any questions, contact me at 505-476-3492 or emartin@state.nm.us

NEW MEXICO OIL CONSERVATION DIVISION

Ed Martin

Edwin E. Martin
Environmental Engineer
Environmental Bureau

Cc: Denny Foust, NMOCD, Aztec
Karen Menetrey, NMED

elpaso Natural Gas

Certified Mail: #7001 1940 0002 1371 7911

November 19, 2004

Mr. William C. Olson
New Mexico Oil Conservation Division
1220 St. Francis Dr.
Santa Fe, NM 87504

RE: PETROLEUM CONTAMINATION IN GROUND WATER MONITORING WELLS AT THE PRAXAIR NITROGEN PLANT NEAR EPNG'S FORMERLY OWNED SAN JUAN RIVER PLANT

Dear Mr. Olson:

El Paso Natural Gas Company (EPNG) is in receipt of your letter dated October 1, 2004 "Case # GW039R San Juan River Plant Kirtland, New Mexico". In the letter, NMOCD indicates the data has been reviewed regarding the petroleum contamination of ground water in monitoring wells around the lined pond at the newly-constructed Praxair Nitrogen Plant on the Northwest side of the San Juan River Plant. It is stated that "it appears that the petroleum contamination in this area is a result of EPC's activities." As you are probably aware, EPNG has not owned or operated the plant since June of 1992. EPNG respectfully requests that NMOCD provide it with any data NMOCD has which indicates that the identified contamination was caused during EPNG's ownership of the San Juan River Plant and is not the result of later releases, after the sale of the plant to Western Gas Resources in June 1992.

Based on water level data and monitoring well installation information supplied to EPNG by Praxair, it appears there is potential for cross contamination in wells MW-3 and MW-5. Based on water level data obtained on August 6, 2004 (3 days after they were installed), both MW-3 and 5 have virtually the same ground water elevation. Without the installation of casing to seal the upper zone from the lower zone, it appears there has been communication between the two zones. Based on the sample results provided, it does appear that the concentrations in MW-5 (screened in the perched zone) are much higher than in MW-3, which is screened in the lower zone. Contamination of the lower zone could easily have been caused by the drilling process and the installation of both wells in the same boring without a competent seal between the two zones. EPNG should not have to take responsibility for inadequate drilling and monitoring well installation practices by

El Paso Natural Gas
Two North Nevada Colorado Springs, CO 80903
PO Box 1087 Colorado Springs, CO 80903
tel 719.473.2300

Praxair. It is our understanding from Praxair, MW-3 and MW-5 were scheduled for abandonment in March 2004.

In view of the foregoing, EPNG requests additional information regarding OCD's conclusion that EPNG has caused the contamination at the Praxair facility. EPNG also requests a 90 day extension of the December 3, 2004 deadline for a work plan addressing ground water contamination in this area. This will allow EPNG sufficient time to review existing site data, additional information requested of NMOCD and EPNG's potential liabilities at this formerly owned facility.

If you have any questions, please call me at (719) 520-4433.

Sincerely,

Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - ~~w/ enclosures~~; **Certified Mail # 7001 1940 0002 1371 7928**

bc: MWH – Pam Anderson MWH
Dan Schnee EPC - Legal
San Juan River Plant General File

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

October 1, 2004

Mr. Scott T. Pope
El Paso Corporation
2 North Nevada
Colorado Springs, CO 80903

RE: CASE # GW039R
SAN JUAN RIVER PLANT
KIRTLAND, NEW MEXICO

Dear Mr. Pope:

The New Mexico Oil Conservation Division (OCD) has recently reviewed data from the New Mexico Environment Department regarding petroleum contamination of ground water in monitor wells around the lined pond at the newly constructed Praxair Nitrogen Plant on the northwest side of the San Juan River Gas Plant. El Paso Corporation's (EPC) petroleum remediation activities at the San Juan River Plant are adjacent to the Praxair Plant and it appears that the petroleum contamination in this area is a result of EPC's activities. Attached is a copy of the OCD's information on Praxair's monitoring wells.

The OCD requires that EPC submit a work plan to address petroleum ground water contamination in this area. The work plan shall be submitted to the OCD Santa Fe Office by December 3, 2004 with a copy provided to the OCD Aztec District Office.

If you have any questions, please call me at (505) 476-3491.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

cc: Denny Foust, OCD Aztec District Office
Karen Menetrey, NMED

Olson, William

From: Ron LePlatt [Rleplatt@westerngas.com]
Sent: Wednesday, August 13, 2003 3:41 PM
To: wolson@state.nm.us
Subject: San Juan River Gas Plant - Kirtland

Bill - I realized that I typed your email address incorrectly. My apologies.

> -----Original Message-----
> From: Ron LePlatt
> Sent: Wednesday, August 13, 2003 3:02 PM
> To: 'WPrice@state.nm.us'; 'DFoust@state.nm.us'; 'BOlson@state.nm.us'
> Cc: Bruce Portz; Kent McEvers; Mike Brinkmeyer; 'Mike_Barsottelli@praxair.com'; 'Scott.Pope@elpaso.com'
> Subject:
>
> Praxair, Inc. is currently constructing a nitrogen plant at Western Gas Resources' San Juan River Gas Plant in Kirtland, San Juan County. The construction includes a lined evaporation pond that will be used to collect cooling tower blowdown, storm water, and air compression condensate. The pond is in the location of the former water containment pond, approximately 400 feet northwest of WGR's sulfur recovery unit.
>
> Praxair's evaporation pond was constructed according to the terms of Discharge Permit DP-1422, which was issued by the NMED. The discharge permit requires the installation of four ground water monitoring wells near the pond. Samples collected from the wells are to be analyzed for TDS, nickel, copper, and zinc. During installation of the wells, evidence of hydrocarbon contamination was discovered. The following information was provided by Praxair to WGR:
>
> SUMMARY OF DRILLER'S FINDINGS (from boring logs) :
>
> MW-1 (SW of pond) - No petroleum odors or observations throughout the whole boring, down to 90 feet below ground surface. Water table at 69 feet.
>
> MW-2 (SE of pond) - No petroleum odors down to 55 feet. Strong petroleum odors from 55 to 60 feet, and slight odors from 60 to 65 feet. Water table at 63 feet.
>
> MW-3, MW-5 (NE of pond) - No petroleum odors down to 25 feet. Petroleum odors from 25 to 35 feet. Perched water table at 35 feet. No petroleum odors from 40 to 55 feet. Petroleum odors from 55 to 60 feet, and slight petroleum odors from 60 to 70 feet. Water table at 67 feet. Strong petroleum odor at water table level, and oily liquid in cuttings from that area. MW-3 and MW-5 were installed in same borehole, with MW-3 screened for deep water table (67 feet) and MW-5 screened for perched water table (35 feet).
>
> MW-4 (NW of pond) - No petroleum odors down to 55 feet. Slight petroleum odors from 55 to 70 feet. Water table at 65 feet.
>
> Praxair verbally notified Jake Knutson of the NMED (Santa Fe) on Monday, August 11. Praxair will meet with Jake Knutson and Karen Menetrey at the NMED's office in Santa Fe on Thursday, August 14 at 9:00 am.
> As I discussed with Bill Olson, I will provide him with a drawing showing the location of the monitoring wells. If you have any questions, please contact me. Thank you.

>
> Ron LePlatt
> Sr. Environmental Engineer
> Western Gas Resources, Inc.
> (303) 252-6237
> (303) 450-6960 (fax)
>