GW - 350

PERMITS, RENEWALS, & MODS Application

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

John Bemis
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey
Division Director
Oil Conservation Division

MAY 24, 2013

CERTIFIED MAIL
RETURN RECEIPT NO: 3341 8921

Mr. Kenneth Springer
Project Manager
Shell Oil Products
P.O. Box 1087
Huffman, TX 77336

Dear Mr. Springer:

Based on your response given in the "Oil & Gas Facilities Questionnaire for Determination of a WQCC Discharge Permit" and a file review, the Oil Conservation Division (OCD) has determined that Shell must renew its WQCC Discharge Permit for the Shell Jal Crude Oil Basin **(GW-350)** because of the discharge of treated ground water directly to ground water via injection wells. Please submit a complete permit renewal application pursuant to 20.6.2.3106 NMAC within 120 days of your receipt of this letter. Please include the $100.00 filing fee specified in 20.6.2.3114 NMAC. Please note the renewal application informational requirements specified in 20.6.2.3106 - .3108 NMAC.

If you have any questions regarding this matter, please contact me at 505-476-3488.

Thank you for your cooperation.

Glenn von Gonten
Senior Hydrologist

GvG/gvg

New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez
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Deputy Cabinet Secretary

Jami Bailey
Division Director
Oil Conservation Division

SEPTEMBER 6, 2012

Mr. Ken Springer
Shell Oil Products US
P.O. Box 1087
Huffman, TX 77336

Dear Mr. Springer:

The Oil Conservation Division's (OCD) records indicate that the following Water Quality Control Commission (WQCC) Discharge Permit has already expired or will soon expire.

GW-350 Shell Jal Basin Station

In March 2012, OCD sent Shell a Questionnaire, but to date OCD has not received your response. OCD has revised its permitting policies. These changes may affect the renewal of your discharge permit(s). Please submit an "Oil & Gas Facilities Questionnaire for Determination of a WQCC Discharge Permit" for each of your facilities (see attachment and OCD's "Notifications and Announcements" at **http://www.emnrd.state.nm.us/ocd**). Please submit the completed Questionnaires within 30 days of your receipt of this letter. Based on your response, OCD will determine whether you will need to submit a discharge permit renewal. If OCD determines that you no longer are required to operate under a WQCC Discharge Permit, you may be required to obtain a separate permit(s) for other processes at your facility, such as: pits, ponds, impoundments, below-grade tanks; waste treatment, storage and disposal operations; and landfarms and landfills. OCD will determine if any of these existing processes may require a separate permit under OCD's Oil, Gas, and Geothermal regulations. If OCD determines that a separate permit(s) is required, then a letter will be sent to you indicating what type of permit is required.

Please keep in mind, if your facility has any discharges that would require a WQCC Discharge Permit now or in the future, then you will be required to renew or obtain a WQCC Discharge Permit.

If you have any questions regarding this matter, please contact Glenn von Gonten at 505-476-3488.

Thank you for your cooperation.

Jami Bailey
Director

JB/gvg

Attachment

Lowe, Leonard, EMNRD

From: Lowe, Leonard, EMNRD
Sent: Thursday, February 12, 2009 2:41 PM
To: 'Kenneth.Springer@shell.com'
Cc: 'Iain_Olness@URSCorp.com'; VonGonten, Glenn, EMNRD
Subject: GW-350 Administratively Complete
Attachments: GW-350, Admin Complete Letter.pdf; GW-350, Draft Permit.pdf; GW-350 OCD PN.pdf

Mr. Springer.

Your submit application for GW-350 has been administratively complete.
Attached are documents for your records.
I have spoke with Mr. Olness on your public notice.

I will be handling all discharge plan permits within the OCD. Please submit all inquires pertaining to all your permits to me. My contact information is attached below.

Thank you for your attention.

llowe

Leonard Lowe
Environmental Engineer
Oil Conservation Division/EMNRD
1220 S. St. Francis Drive
Santa Fe, N.M. 87505
Office: 505-476-3492
Fax: 505-476-3462
E-mail: leonard.lowe@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor
Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division

February, 12 2009

Mr. Kenneth Springer

Re: Discharge Plan Renewal Permit GW-350
Shell Oil Products US
Jal Basin Station
Lea County, New Mexico

Dear, Mr. Springer,

The New Mexico Oil Conservation Division (NMOCD) has received Shell Oil Products US request and initial fee, dated February 4, 2008, to renew GW-350 for their Jal Basin Station located in the SE/4 SE/4 of Section 32, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico. The initial submittal and subsequent inquires have provided the required information in order to deem the application "administratively" complete.

The New Mexico Water Quality Control Commission regulations (WQCC) notice requirements of 20.6.2.3108 NMAC was satisfied and demonstrated to the NMOCD. Publish, one time, your approved notice within the most circulated local newspaper. Once published submit the proof of publication affidavit to the OCD. NMOCD will provide public notice pursuant to the WQCC notice requirements of 20.6.2.3108 NMAC to determine if there is any public interest.

If there are any questions regarding this matter, please do not hesitate to contact me at (505) 476-3492 or leonard.lowe@state.nm.us. On behalf of the staff of the NMOCD, I wish to thank you and your staff for your cooperation during this discharge permit review.

Sincerely,

Leonard Lowe
Environmental Engineer

LRL/lrl

xc: OCD District I Office, Hobbs

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor
Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division

February 12, 2009

Mr. Kenneth Springer
P.O. Box 1087
Huffman, TX 77336

Re: **DRAFT** Discharge Permit Renewal
Jal Basin Station (GW-350)
SE/4 SE/4 Section 32, Township 25 South, Range 37 East, NMPM,
Lea County, New Mexico

Dear Mr. Springer:

Pursuant to Water Quality Control Commission (WQCC) Regulations 20.6.2.3104 - 20.6.2.3114 NMAC, the Oil Conservation Division (OCD) hereby approves the discharge permit for the **Shell Oil Products US,** (owner/operator) for the above referenced site contingent upon the conditions specified in the enclosed **Attachment to the Discharge Permit**. Enclosed are two copies of the conditions of approval. **Please sign and return one copy to the New Mexico Oil Conservation Division (OCD) Santa Fe Office within 45 days of receipt of this letter including permit fees.**

Please be advised that approval of this permit does not relieve the owner/operator of responsibility should operations result in pollution of surface water, ground water or the environment. Nor does approval of the permit relieve the owner/operator of its responsibility to comply with any other applicable governmental authority's rules and regulations.

The final permit should be issued in approximately 45 days. If you have any questions, please contact Leonard Lowe of my staff at (505-476-3492) or E-mail leonard.lowe@state.nm.us. On behalf of the staff of the OCD, I wish to thank you and your staff for your cooperation during this discharge permit review.

Sincerely,

Wayne Price
Environmental Bureau Chief

Attachments-1
xc: OCD District Office

ATTACHMENT- DISCHARGE PERMIT APPROVAL CONDITIONS

1. **Payment of Discharge Plan Fees:** All discharge permits are subject to WQCC Regulations. Every billable facility that submits a discharge permit application will be assessed a filing fee of $100.00, plus a flat fee (*see* WQCC Regulation 20.6.2.3114 NMAC). The Oil Conservation Division ("OCD") has received the required $100.00 filing fee. The flat fee for a ground water and vadose zone contamination at oil and gas site is $2600.00. Please submit this amount along with the signed permit conditions. Checks should be made out to the New Mexico Water Quality Management Fund.

2. **Permit Expiration, Renewal Conditions and Penalties:** Pursuant to WQCC Regulation 20.6.2.3109.H.4 NMAC, this permit is valid for a period of five years. **The permit will expire on February, 12, 2013** and an application for renewal should be submitted no later than 120 days before that expiration date. Pursuant to WQCC Regulation 20.6.2.3106.F NMAC, if a discharger submits a discharge permit renewal application at least 120 days before the discharge permit expires and is in compliance with the approved permit, then the existing discharge permit will not expire until the application for renewal has been approved or disapproved. ***Expired permits are a violation of the Water Quality Act {Chapter 74, Article 6, NMSA 1978} and civil penalties may be assessed accordingly.***

3. **Permit Terms and Conditions:** Pursuant to WQCC Regulation 20.6.2.3104 NMAC, when a permit has been issued, the owner/operator must ensure that all discharges shall be consistent with the terms and conditions of the permit. In addition, all facilities shall abide by the applicable rules and regulations administered by the OCD pursuant to the Oil and Gas Act, NMSA 1978, Sections 70-2-1 through 70-2-38.

4. **Owner/Operator Commitments:** The owner/operator shall abide by all commitments submitted in its February 2008 discharge plan application, including attachments and subsequent amendments and these conditions for approval. Permit applications that reference previously approved plans on file with the division shall be incorporated in this permit and the owner/operator shall abide by all previous commitments of such plans and these conditions for approval.

5. **Modifications:** WQCC Regulation 20.6.2.3107.C and 20.6.2.3109 NMAC addresses possible future modifications of a permit. The owner/operator (discharger) shall notify the OCD of any facility expansion, production increase or process modification that would result in any significant modification in the discharge of water contaminants. The Division Director may require a permit modification if any water quality standard specified at 20.6.2.3103 NMAC is being or will be exceeded, or if a toxic pollutant as defined in WQCC Regulation 20.6.2.7 NMAC is present in ground water at any place of withdrawal for present or reasonably foreseeable future use, or that the Water Quality Standards for Interstate and Intrastate streams as specified in 20.6.4 NMAC are being or may be violated in surface water in New Mexico.

6. **Waste Disposal and Storage:** The owner/operator shall dispose of all wastes at an OCD-approved facility. Only oil field RCRA-exempt wastes may be disposed of by injection in a Class II well. RCRA non-hazardous, non-exempt oil field wastes may be disposed of at an OCD-approved facility upon proper waste determination pursuant to 40 CFR Part 261. Any waste

stream that is not listed in the discharge permit application must be approved by the OCD on a case-by-case basis.

A. OCD Rule 712 Waste: Pursuant to OCD Rule 712 (19.15.9.712 NMAC) disposal of certain non-domestic waste without notification to the OCD is allowed at NMED permitted solid waste facilities if the waste stream has been identified in the discharge permit and existing process knowledge of the waste stream does not change.

B. Waste Storage: The owner/operator shall store all waste in an impermeable bermed area, except waste generated during emergency response operations for up to 72 hours. All waste storage areas shall be identified in the discharge permit application. Any waste storage area not identified in the permit shall be approved on a case-by-case basis only. The owner/operator shall not store oil field waste on-site for more than 180 days unless approved by the OCD.

7. Drum Storage: The owner/operator must store all drums, including empty drums, containing materials other than fresh water on an impermeable pad with curbing. The owner/operator must store empty drums on their sides with the bungs in place and lined up on a horizontal plane. The owner/operator must store chemicals in other containers, such as tote tanks, sacks, or buckets on an impermeable pad with curbing.

8. Process, Maintenance and Yard Areas: The owner/operator shall either pave and curb or have some type of spill collection device incorporated into the design at all process, maintenance, and yard areas which show evidence that water contaminants from releases, leaks and spills have reached the ground surface.

9. Above Ground Tanks: The owner/operator shall ensure that all aboveground tanks have impermeable secondary containment (e.g., liners and berms), which will contain a volume of at least one-third greater than the total volume of the largest tank or all interconnected tanks. The owner/operator shall retrofit all existing tanks before discharge permit renewal. Tanks that contain fresh water or fluids that are gases at atmospheric temperature and pressure are exempt from this condition.

10. Labeling: The owner/operator shall clearly label all tanks, drums, and containers to identify their contents and other emergency notification information. The owner/operator may use a tank code numbering system, which is incorporated into their emergency response plans.

11. Below-Grade Tanks/Sumps and Pits/Ponds.

A. All below-grade tanks and sumps must be approved by the OCD prior to installation and must incorporate secondary containment with leak detection into the design. The owner/operator shall retrofit all existing systems without secondary containment and leak detection before discharge permit renewal. All existing below-grade tanks and sumps without secondary containment and leak detection must be tested annually or as specified herein. Systems that have secondary containment with leak detection shall have a monthly inspection of the leak detection system to determine if the primary containment is leaking. Small sumps or depressions in secondary containment systems used to facilitate fluid removal are exempt from these requirements if fluids are removed within 72 hours.

B. All pits and ponds, including modifications and retrofits, shall be designed by a certified registered professional engineer and approved by the OCD prior to installation. In general, all pits or ponds shall have approved hydrologic and geologic reports, location, foundation, liners, and secondary containment with leak detection, monitoring and closure plans. All pits or ponds shall be designed, constructed and operated so as to contain liquids and solids in a manner that will protect fresh water, public health, safety and the environment for the foreseeable future. The owner/operator shall retrofit all existing systems without secondary containment and leak detection before discharge permit renewal.

C. The owner/operator shall ensure that all exposed pits, including lined pits and open top tanks (8 feet in diameter or larger) shall be fenced, screened, netted, or otherwise rendered non-hazardous to wildlife, including migratory birds.

D. The owner/operator shall maintain the results of tests and inspections at the facility covered by this discharge permit and available for OCD inspection. The owner/operator shall report the discovery of any system which is found to be leaking or has lost integrity to the OCD within 15 days. The owner/operator may propose various methods for testing such as pressure testing to 3 pounds per square inch greater than normal operating pressure and/or visual inspection of cleaned tanks and/or sumps, or other OCD-approved methods. The owner/operator shall notify the OCD at least 72 hours prior to all testing.

12. Underground Process/Wastewater Lines:

A. The owner/operator shall test all underground process/wastewater pipelines at least once every five (5) years to demonstrate their mechanical integrity, except lines containing fresh water or fluids that are gases at atmospheric temperature and pressure. Pressure rated pipe shall be tested by pressuring up to one and one-half times the normal operating pressure, if possible, or for atmospheric drain systems, to 3 pounds per square inch greater than normal operating pressure, and pressure held for a minimum of 30 minutes with no more than a 1% loss/gain in pressure. The owner/operator may use other methods for testing if approved by the OCD.

B. The owner/operator shall maintain underground process and wastewater pipeline schematic diagrams or plans showing all drains, vents, risers, valves, underground piping, pipe type, rating, size, and approximate location. All new underground piping must be approved by the OCD prior to installation. The owner/operator shall report any leaks or loss of integrity to the OCD within 15 days of discovery. The owner/operator shall maintain the results of all tests at the facility covered by this discharge permit and they shall be available for OCD inspection. The owner/operator shall notify the OCD at least 72 hours prior to all testing.

13. Class V Wells: The owner/operator shall close all Class V wells (e.g., septic systems, leach fields, dry wells, etc.) that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes unless it can be demonstrated that ground water will not be impacted in the reasonably foreseeable future. Leach fields and other wastewater disposal systems at OCD-regulated facilities that inject non-hazardous fluid into or above an underground source of drinking water are considered Class V injection wells under the EPA UIC program. Class V wells that inject domestic waste only, must be permitted by the New Mexico Environment Department (NMED).

14. Housekeeping: The owner/operator shall inspect all systems designed for spill collection/prevention and leak detection at least monthly to ensure proper operation and to prevent over topping or system failure. All spill collection and/or secondary containment devices shall be emptied of fluids within 72 hours of discovery. The owner/operator shall maintain all records at the facility and available for OCD inspection.

15. Spill Reporting: The owner/operator shall report all unauthorized discharges, spills, leaks and releases and conduct corrective action pursuant to WQCC Regulation 20.6.2.1203 NMAC and OCD Rule 116 (19.15.3.116 NMAC). The owner/operator shall notify both the OCD District Office and the Santa Fe Office within 24 hours and file a written report within 15 days.

16. OCD Inspections: The OCD may perform an inspection of this facility.

17. Storm Water: The owner/operator shall implement and maintain run-on and runoff plans and controls. The owner/operator shall not discharge any water contaminant that exceeds the WQCC standards specified in 20.6.2.3101 NMAC or 20.6.4 NMAC (Water Quality Standards for Interstate and Intrastate Streams) including any oil sheen in any stormwater run-off. The owner/operator shall notify the OCD within 24 hours of discovery of any releases and shall take immediate corrective action(s) to stop the discharge.

18. Unauthorized Discharges: The owner/operator shall not allow or cause water pollution, discharge or release of any water contaminant that exceeds the WQCC standards listed in 20.6.2.3101 NMAC or 20.6.4 NMAC (Water Quality Standards for Interstate and Intrastate Streams) unless specifically listed in the permit application and approved herein. ***An unauthorized discharge is a violation of this permit.***

19. Vadose Zone and Water Pollution: The owner/operator shall address any contamination through the discharge permit process or pursuant to WQCC 20.6.2.4000-.4116 NMAC (Prevention and Abatement of Water Pollution). The OCD may require the owner/operator to modify its permit for investigation, remediation, abatement, and monitoring requirements for any vadose zone or water pollution. Failure to perform any required investigation, remediation, abatement and submit subsequent reports will be a violation of the permit.

20. Additional Site Specific Conditions: N/A

21. Transfer of Discharge Permit (WQCC 20.6.2.3111) Prior to any transfer of ownership, control, or possession (whether by lease, conveyance or otherwise) of a facility with a discharge permit, the transferor shall notify the transferee in writing of the existence of the discharge permit, and shall deliver or send by certified mail to the department a copy of such written notification, together with a certification or other proof that such notification has in fact been received by the transferee.

Upon receipt of such notification, the transferee shall have the duty to inquire into all of the provisions and requirements contained in such discharge permit, and the transferee shall be charged with notice of all such provisions and requirements as they appear of record in the department's file or files concerning such discharge permit. The transferee (new owner/operator)

shall sign and return an original copy of these permit conditions and provide a written commitment to comply with the terms and conditions of the previously approved discharge permit.

22. Closure Plan and Financial Assurance: Pursuant to 20.6.2.3107 NMAC an owner/operator shall notify the OCD when any operations of the facility are to be discontinued for a period in excess of six months. Prior to closure, or as a condition of this permit, or request from the OCD, the operator will submit an approved closure plan, modified plan, and/or provide adequate financial assurance.

23. Certification: (Owner/Operator), by the officer whose signature appears below, accepts this permit and agrees to comply with all submitted commitments, including these terms and conditions contained here. **Owner/Operator** further acknowledges that the OCD may, for good cause shown, as necessary to protect fresh water, public health, safety, and the environment, change the conditions and requirements of this permit administratively

Conditions accepted by: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

_____
Company Name-print name above

_____
Company Representative- print name

_____
Company Representative- Signature

Title _____

Date: _____

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 Water Quality Control Commission Regulations (20.6.2.3106 NMAC), the following discharge permit application(s) has been submitted to the Director of the New Mexico Oil Conservation Division ("NMOCD"), 1220 S. Saint Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(GW-350) Mr. Kenneth Springer, Project Manager, Shell Oil Products, U.S., P.O. 1087, Huffman, TX 77336, has submitted an application for a renewal discharge plan application for the previously approved permit for Shell's Groundwater Remediation System located within the Plain's Pipeline (Plain's) Jal Basin Crude Oil Station. The discharge site is located in the SE ¼ of the SE ¼ of Section 32, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico, approximately two miles south of Jal, New Mexico on State Highway 18. Groundwater most likely to be affected by an accidental discharge is at a depth of approximately 65 feet below ground surface with a total dissolved solids concentration of approximately 759 mg/l. Shell operates a groundwater remediation system to abate groundwater pollution beneath a portion of the Jal Basin Station. The groundwater remediation system consists of groundwater recovery wells and a mobile Hi-Vac system incorporating a liquid ring extraction pump and associated separation and treatment equipment. The liquid ring pump extracts groundwater, non-aqueous phase liquid (NAPL), suspended particles and soil vapors. The collected media is processed through a series of separators and collected fluids are pumped through an 800-gallon oil/water separator (OWS). The system is operated such that NAPL is recovered in a product storage tank and the separated water is treated utilizing air stripping technology, zeolite and carbon filters, as necessary. Treated water is then re-injected into the subsurface. The discharge plan addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

The NMOCD has determined that the application is administratively complete and has prepared a draft permit. The NMOCD will accept comments and statements of interest regarding this application and will create a facility-specific mailing list for persons who wish to receive future notices. Persons interested in obtaining further information, submitting comments or requesting to be on a facility-specific mailing list for future notices may contact the Environmental Bureau Chief of the Oil Conservation Division at the address given above. The administrative completeness determination and draft permit may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday, or may also be viewed at the NMOCD web site http://www.emnrd.state.nm.us/ocd/. Persons interested in obtaining a copy of the application and draft permit may contact the NMOCD at the address given above. Prior to ruling on any proposed discharge permit or major modification, the Director shall allow a period of at least thirty (30) days after the date of publication of this notice, during which interested persons may submit comments or request that NMOCD hold a public hearing. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines that there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed permit based on information available, including all comments received. If a public hearing is held, the director will approve or disapprove the proposed permit based on information in the permit application and information submitted at the hearing.

Para obtener más información sobre esta solicitud en español, sirvase comunicarse por favor: New Mexico Energy, Minerals and Natural Resources Department (Depto. Del Energia, Minerals y Recursos Naturales de Nuevo México), Oil Conservation Division (Depto. Conservacio´n Del Petróleo), 1220 South St. Francis Drive, Santa Fe, New México (Contacto: Dorothy Phillips, 505-476-3461)

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this **12th** day of February 2009.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

S E A L

Mark Fesmire, Director

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised June 10, 2003

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES,GAS PLANTS, REFINERIES, COMPRESSOR, GEOTHERMAL FACILITES AND CRUDE OIL PUMP STATIONS

(Refer to the OCD Guidelines for assistance in completing the application)

☐ New ☒ Renewal ☐ Modification

1. Type: Groundwater Remediation System GW-350
2. Operator: Shell Oil Products US

   Address: P.O. Box 1087, Huffman Texas 77336

   Contact Person: Ken Springer Phone: (281) 324-5921
3. Location: SE /4 SE /4 Section 32 Township 25 South Range 37 East
   Submit large scale topographic map showing exact location.
4. Attach the name, telephone number and address of the landowner of the facility site.
   See Attached
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.
   See Attached
6. Attach a description of all materials stored or used at the facility.
   See Attached
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included.
   See Attached
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures.
   See Attached
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems.
   See Attached
10. Attach a routine inspection and maintenance plan to ensure permit compliance.
    See Attached
11. Attach a contingency plan for reporting and clean-up of spills or releases.
    See Attached
12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included.
    See Attached
13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.
    See Attached
14. CERTIFICATIONI hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Kenneth Springer Title: Project Manager

Signature: Ken Springer Date: 04 February 2008

E-mail Address: kenneth.springer@shell.com

4. Landowner Information

Plains All American Pipeline, L.P.
Jack Bryant
Jal Basin Station
2 miles South of Jal on Highway 18
Jal, New Mexico 88252
(505) 395-2026 (Facility Office)
(432) 682-5397 (Office)

5. Facility Description

Jal Basin Station improvements are situated in the central portion of the property and encompass approximately 55 acres of the 80 acre property. The northern and southern portions of the property are undeveloped (Figure 2). A perimeter fence approximately 6 feet high with 3 strands of barbed wire surrounds the developed portion of the site.

6. Materials Used or Stored

Materials stored on-site for the Hi-Vac system operation may include zeolite and water conditioning agents. The general composition of the material, container type, estimated volume stored, and location is provided below. Material Safety Data Sheets (MSDS) for all materials used at the facility are available upon request and are maintained at the on-site office building. All other materials stored or used at the facility for the storage and transfer of crude oil and operation and maintenance activities associated with these will be covered under a separate facility discharge plan.

A. Zeolite

A filter containing Zeolite is installed in the process stream following the oil/water separator and before the air stripper. The purpose of the Zeolite is to prevent hydrocarbon emulsion with recovered groundwater from reaching the air stripper. The vessel is placed on the ground next to the remediation system.

B. Water Conditioning Agents

Water conditioning agents are added to the process stream to reduce mineral fouling of the equipment. Initial water analysis indicated that Nalco Chemical #7396 and a 2% solution of hydrochloric acid would be the proper water conditioning agent for this site. The chemical solution is injected into the process stream via a peristaltic pump. The chemical is stored in a DOT approved 55-gallon poly drum. The drum is properly labeled and stored next to the remediation system.

7. Disposition of Treated Groundwater

The groundwater is being treated to the Water Quality Control Commission (WQCC) drinking water standards prior to injection. The WQCC standards are presented in Table I as maximum effluent concentrations.

Upon treatment to WQCC standards, the treated water is piped to the two injection wells on the property and injected into the subsurface. Authorization for injection of the effluent was approved on October 23, 2001 by the New Mexico OCD.

8. Wastes Generated and Procedures

A. Zeolite

The Zeolite requires periodic replacement. The used Zeolite is disposed of either on-site via land farming or at a nearby commercial land treatment facility.

B. Recovered Diesel

Recovered diesel is stored in an on-site tank pending disposal or recovery at an approved facility.

9. Proposed Modifications to Existing Collection/Treatment/Disposal Systems

There are no modifications proposed at this time, nor are any anticipated in the near future.

10. Inspections and Maintenance

Periodic inspections of the Hi-Vac system, valves, gauges, and piping are conducted. The equipment is inspected for integrity, spills, drips, and leaks. If a significant leak is detected, appropriate response actions shall be taken.

Maintenance of the remediation system will be conducted as necessary by a trained field technician. Maintenance will consist of inspecting the extraction wells, vacuum pump, separation equipment, air stripping unit, influent and effluent flow meters, gauges, manway covers, discharge hoses and conduits, and control panels. The equipment will be inspected thoroughly and cleaned or repaired as necessary. Filters will be cleaned or changed regularly to assure proper system operation. Readings will be taken of all pressure gauges, vacuum gauges, and flow meters, and necessary adjustments will made to the system. Operations and maintenance may be conducted in conjunction with system monitoring and sampling activities.

No surface impoundments, leach fields or other disposal systems requiring inspection and records maintenance are associated with Hi-Vac system operation.

The system has no surface impoundments, leach fields or other active disposal systems for which groundwater monitoring is used to detect leakage.

11. Contingency Plan for Reporting and Clean-up of Spills and/or Releases

The following response actions are general. Specific actions will be determined based on the type and volume of material spilled, location of the spill, and field conditions at the time of the spill.

1. Shut down Hi-Vac system (including injection wells).
2. Confirm the exact location of the leak. Stop or reduce the flow at the release point. Prompt action in stopping or reducing the flow at the release point is necessary to minimize the impact of the spill. Based on the circumstances, this may be done by:
   - Draining the line into tankage.
   - Closing gate valves to isolate flow to the leak area.
3. Notify the appropriate Company representatives in the response zone. Begin the Incident Command System (ICS), if appropriate.

4. Many petroleum vapors are heavier than air and will migrate to lower elevations. Consideration should be given to warning the public in low lying areas and
   - Notify emergency response agencies (fire, police) so that they can assist in warning the public, if necessary.
   - Notify appropriate government agencies. Be sure to contact all potentially impacted local jurisdictions and water intakes.
   - Determine equipment and personnel needed. The resources needed can be determined by assessing the size of the spill, the location of the spill (inside or outside containment basin), type of material spilled, threatened environmentally sensitive areas (wetlands, wildlife refuges), threatened economically sensitive areas (public water intakes, cooling water intakes), and weather conditions.
5. Mobilize and deploy response personnel and equipment. Local personnel are the primary responders to a spill. Additional personnel can be obtained from:
   - Non Company Personnel
   - Contractors and Co-ops
   - Plains All American Pipeline, L.P. Response Team
6. Investigate the cause of the spill and take corrective action to prevent similar spills.

Containment and Recovery

Containment and recovery activities should be conducted under safe conditions. Evaluate and obtain as necessary atmosphere monitoring, excavation techniques, dig permits, and personal protection equipment.

Release Reporting

The OCD shall be notified of any unauthorized release occurring during the system operation in accordance with the requirements of NMOCD Rule 116.

The OCD shall be notified in accordance with NMOCD Rule 116 with respect to any release from any facility of oil or other water contaminant, in such quantity as may, with reasonable probability, be detrimental to water or cause an exceedance of the standards in 19 NMAC 15.A.19.B(1), B(2) or B(3).

Notification of the above releases shall be made by the person operating or controlling either the release or the location of the release in accordance with the following requirements:

A Major Release shall be reported by giving both verbal notice and timely written notice pursuant to Paragraphs C(1) and C(2) of NMOCD Rule 116. A Major Release is:

- an unauthorized release of a volume, excluding natural gases, in excess of 25 barrels
- an unauthorized release of any volume which:
  - ◊ results in a fire
  - ◊ will reach a water course
  - ◊ may with reasonable probability endanger public health
  - ◊ results in substantial damage to property or the environment
  - ◊ an unauthorized release of natural gases in excess of 500 mcf
  - ◊ a release of any volume which may with reasonable probability be detrimental to water or cause an exceeding of the standards in 19 NMAC 15.A.19.B(1), B(2) or B(3).

A Minor Release shall be reported by giving timely written notice pursuant to NMOCD Rule 116. A Minor Release is an unauthorized release of a volume, greater than 5 barrels but not more than 25 barrels; or greater than 50 mcf but less than 500 mcf of natural gases.

Verbal notification shall be reported within 24 hours of discovery to the OCD District Office for the area within which the release takes place. In addition, verbal notification shall be reported to the OCD's Environmental Bureau Chief. This notification shall provide the information required on OCD Form C-141.

Timely written notification is required to be reported within 15 days to the OCD District Office for the area within which the release takes place by completing and filing OCD Form C-141. In addition, timely written notification required shall also be reported to the OCD's Environmental Bureau Chief within 15 days after the release is discovered. The written notification shall verify the prior verbal notification and provide any appropriate additions or corrections to the information contained in the prior verbal notification.

The responsible person must complete OCD approved corrective action for releases which endanger public health or the environment. Releases will be addressed in accordance with a remediation plan submitted to and approved by the OCD.

12. Regional Geology and Hydrogeology

Geology

The property is located in the geographic region known as the Eunice Plain. The Eunice Plain is bound on the north by the Llano Estacado and on the southwest by San Simon Ridge and Antelope Ridge. The westward extension of the Eunice Plain is bounded by an irregular, low, south-facing scarp which is most prominent at Custer Mountain, where it attains a height of about 60 feet. East and west of Custer Mountain the scarp is less pronounced. To the west the scarp is buried under a mantle of dune sand. To the east the scarp becomes more subdued and irregular, owing to dune sand cover and to dissection by numerous gullies and draws. Monument Draw traverses the east side of Eunice Plain from north to south. The Eunice Plain is the most highly developed part of the area.

The Eunice Plain is underlain by a hard caliche surface and is almost entirely covered by reddish-brown dune sand. In some places the underlying surface consists of alluvial sediments, most commonly calcareous silt in buried valleys or Quaternary lake basins. It has a general southeast slope toward Monument Draw. The underlying surface is exposed only locally, but it is reflected to some degree in many places by the overlying sand cover a few inches to several feet thick.

Hydrogeology

Former City of Jal water wells bottomed out in the Santa Rosa sandstone at depths of 500 feet (Well 25.37.19.221) and 450 feet below ground surface (bgs) (Well 25.37.19.240). The groundwater level was noted to be 284 and 65 feet below ground surface in these 2 wells, respectively. These wells were later abandoned as public supply wells. Jal then bought an irrigation well about 5 miles east of Jal and converted it into a public supply. The well bottomed in the Ogallala formation at a depth of 152 feet bgs (Well 25.37.13.312a). The depth to the water was noted to be 73 feet below ground surface. Jal also drilled 2 other wells in township 26 south, range 36 east (Wells 26.36.18.311, 26.36.21.233, and 26.36.21.443). These wells were drilled in the Quaternary Alluvium to depths of 559 feet, 700 feet, and 159 feet bgs, respectively. The third well

drilled was dry. Groundwater in Wells 26.36.18.311 and 26.36.21.233 were noted at depths of 220.8 and 198.0 feet bgs, respectively.

A pond is located 0.42 miles to the east-southeast of the subject property. An unnamed intermittent stream/creek is located 1.67 miles to the northwest of the subject property. An aqueduct is located approximately 1.78 miles to the northwest of the subject property.

According to Mr. Ken Frescas with the State of New Mexico's Engineering Department, there are no permitted water wells within one-quarter mile radius of the outside perimeter of the facility. Jal water wells include the following:

WELL NUMBER	AQUIFER	TOTAL DEPTH OF WELL	DEPTH TO GROUNDWATER	YEAR DRILLED	TOTAL DISSOLVED SOLIDS
26.37.7.331	Tr	467		1937	
25.37.19.221	Tr	500	284.0	1954	825
25.37.19.240	Tr	450	65	1942	759
25.37.15.310	Qal	70	65	1942	
25.37.13.312a	To	152	73	1954	250/295
26.36.18.311	Qal	559	220.8	1960	
26.36.21.233	Qal	700	198.0	1960	
26.36.21.443	--	137 (?)	Dry	1958	

13. Facility Closure Plan

The groundwater monitoring well network is sampled on a quarterly basis and samples submitted to an independent, fixed-based laboratory for quantification of benzene, toluene, ethylbenzene and total xylenes (BTEX constituents). During fourth quarter monitoring and sampling activities, the samples are also submitted for quantification of volatile organic compounds (VOCs), poly-aromatic hydrocarbons (PAHs), cyanide, nitrate, chloride, fluoride, total dissolved solids (TDS) and pH. Routine monitoring and sampling will continue until constituent concentrations are below the New Mexico Water Quality Commission Standards for a minimum of four (4) consecutive quarterly sampling events (reference Table 1). Upon achieving this, SOPUS will submit a *Closure Report* requesting the site be closed and no additional investigative/remedial work be required at the site. Upon receiving closure from the New Mexico Oil Conservation Division, SOPUS will remove all equipment from the site and plug and abandon all groundwater monitoring wells according to New Mexico Office of the State Engineer's requirements (19.27.4.20 NMAC). In addition, the site will be restored to as close to original conditions as feasible.

TABLE I

SAMPLING SCHEDULE – Hi-VAC SYSTEM
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

CONTAMINANT	SAMPLING FREQUENCY*	SAMPLE LOCATION	TOTAL NO. OF SAMPLES	EPA METHOD	CLOSURE CONCENTRATION (mg/l)
Arsenic	Initial testing Annually	System Effluent	1 1 per year	6010	0.1
Barium	Initial testing Annually	System Effluent	1 1 per year	6010	1.0
Cadmium	Initial testing Annually	System Effluent	1 1 per year	6010	0.01
Chromium	Initial testing Annually	System Effluent	1 1 per year	6010	0.05
Cyanide	Initial testing Every 3 years	System Effluent	1 1 per 3 yrs	335.2	0.2
Fluoride	Initial testing Every 3 years	System Effluent	1 1 per 3 yrs	300	1.6
Lead	Initial testing Annually	System Effluent	1 1 per year	6010	0.05
Total Mercury	Initial testing Annually	System Effluent	1 1 per year	7470	0.002
Nitrate (NO_3 as N)	Initial testing Annually	System Effluent	1 1 per year	353.2	10.0
Selenium	Initial testing Annually	System Effluent	1 1 per year	6010	0.05
Silver	Initial testing Annually	System Effluent	1 1 per year	6010	0.05
Benzene	Initial testing Monthly	System Effluent	1 1 per mo.	8020	0.01
Toluene	Initial testing Monthly	System Effluent	1 1 per mo.	8020	0.75
Carbon Tetrachloride	Initial testing Annually	System Effluent	1 1 per year	8260	0.01
1,2-Dichloroethane	Initial testing Annually	System Effluent	1 1 per year	8260	0.01

TABLE I
(continued)

SAMPLING SCHEDULE – Hi-VAC SYSTEM
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

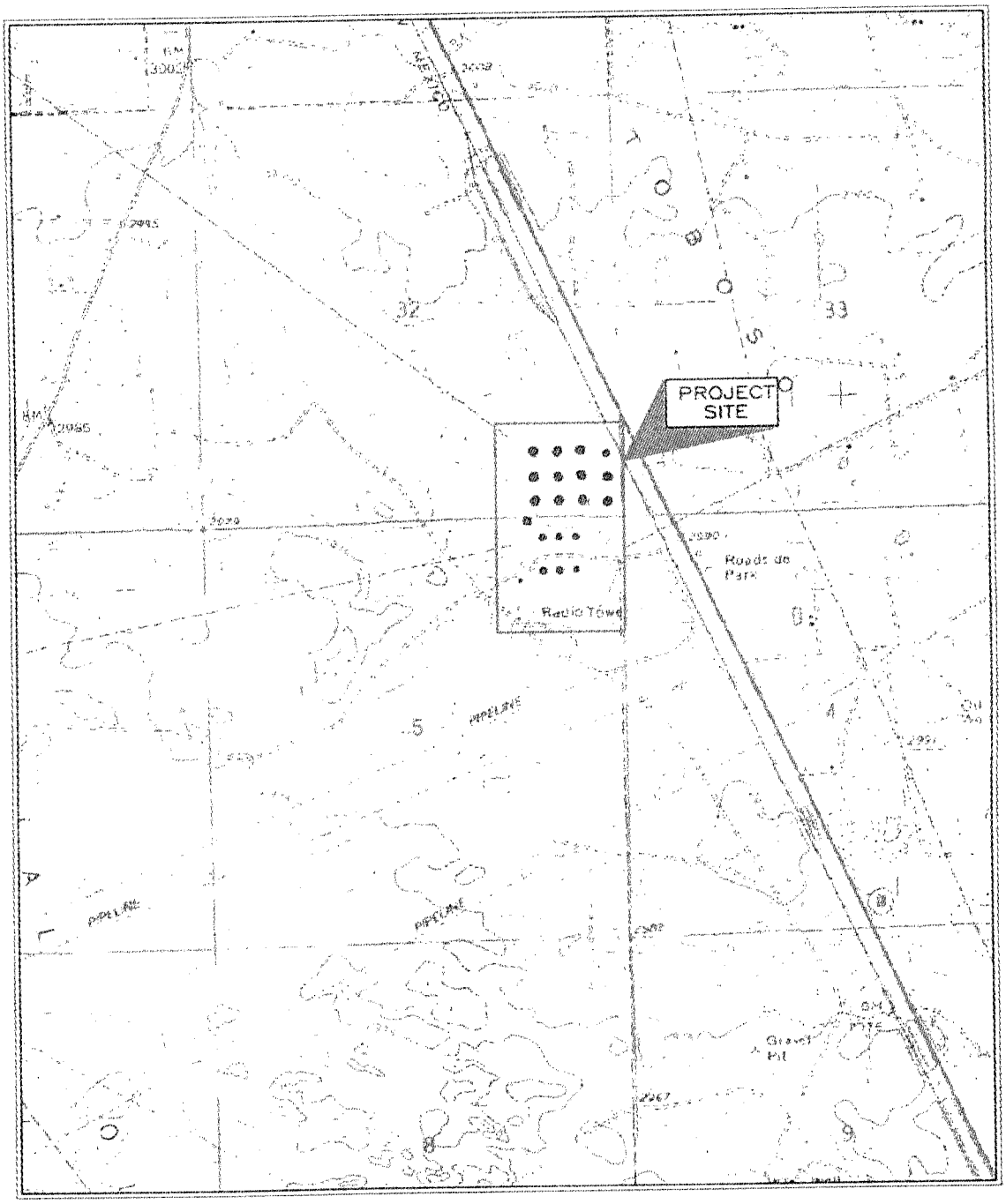
CONTAMINANT	SAMPLING FREQUENCY*	SAMPLE LOCATION	TOTAL NO. OF SAMPLES	EPA METHOD	MAX EFFLUENT CONCENTRATION (mg/l)
1,1-Dichloroethylene	Initial testing Annually	System Effluent	1 1 per year	8260	0.005
1,1,2,2-Tetrachloroethylene	Initial testing Annually	System Effluent	1 1 per year	8260	0.02
1,1,2-Trichloroethylene	Initial testing Annually	System Effluent	1 1 per year	8260	0.1
Ethylbenzene	Initial testing Monthly	System Effluent	1 1 per mo.	8020	0.75
Total Xylenes	Initial testing Monthly	System Effluent	1 1 per mo.	8020	0.62
Methylene Chloride	Initial testing Annually	System Effluent	1 1 per year	8260	0.1
Chloroform	Initial testing Annually	System Effluent	1 1 per year	8260	0.1
1,1-Dichloroethane	Initial testing Annually	System Effluent	1 1 per year	8260	0.025
Ethylene Dibromide	Initial testing Annually	System Effluent	1 1 per year	8260	0.0001
1,1,1-Trichloroethane	Initial testing Annually	System Effluent	1 1 per year	8260	0.06
1,1,2-Trichloroethane	Initial testing Annually	System Effluent	1 1 per year	8260	0.01
1,1,2,2-Tetrachloroethane	Initial testing Annually	System Effluent	1 1 per year	8260	0.01
Vinyl Chloride	Initial testing Annually	System Effluent	1 1 per year	8260	0.001
PAHs: Total Naphthalene plus monomethylnaphthalenes	Initial testing Annually	System Effluent	1 1 per year	8270	0.03
Benzo-a-pyrene	Initial testing Annually	System Effluent	1 1 per year	8270	0.0007
Chloride	Initial testing Annually	System Effluent	1 1 per year	300	250.0
Copper	Initial testing Annually	System Effluent	1 1 per year	6010	1.0
Iron	Initial testing Annually	System Effluent	1 1 per year	6010	1.0
Manganese	Initial testing Annually	System Effluent	1 1 per year	6010	0.2
Phenols	Initial testing Every 3 years	System Effluent	1 1 per 3 yrs	8270	0.005

TABLE I
(continued)

SAMPLING SCHEDULE – Hi-VAC SYSTEM
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

CONTAMINANT	SAMPLING FREQUENCY*	SAMPLE LOCATION	TOTAL NO. OF SAMPLES	EPA METHOD	MAX EFFLUENT CONCENTRATION (mg/l)
Sulfate	Initial testing Annually	System Effluent	1 1 per year	300.0	600.0
Total Dissolved Solids (TDS)	Initial testing Annually	System Effluent	1 1 per year	160.1	1000.0
Zinc	Initial testing Annually	System Effluent	1 1 per year	6010	10.0
pH	Initial testing Annually	System Effluent	1 1 per year	150.1	between 6 and 9
Aluminum	Initial testing Annually	System Effluent	1 1 per year	6010	5.0
Boron	Initial testing Annually	System Effluent	1 1 per year	6010	0.75
Cobalt	Initial testing Annually	System Effluent	1 1 per year	6010	0.05
Molybdenum	Initial testing Annually	System Effluent	1 1 per year	6010	1.0
Nickel	Initial testing Annually	System Effluent	1 1 per year	6010	0.2

JAL QUADRANGLE
NEW MEXICO - TEXAS



LAT=32° 04' 36"
LONG=103° 10' 38"
PHOTOREVISED 1981

SCALE 1:24000

0 1/2 1
(Miles)

0 2000 4000
(Feet)

FIGURE 1

SITE LOCATION MAP

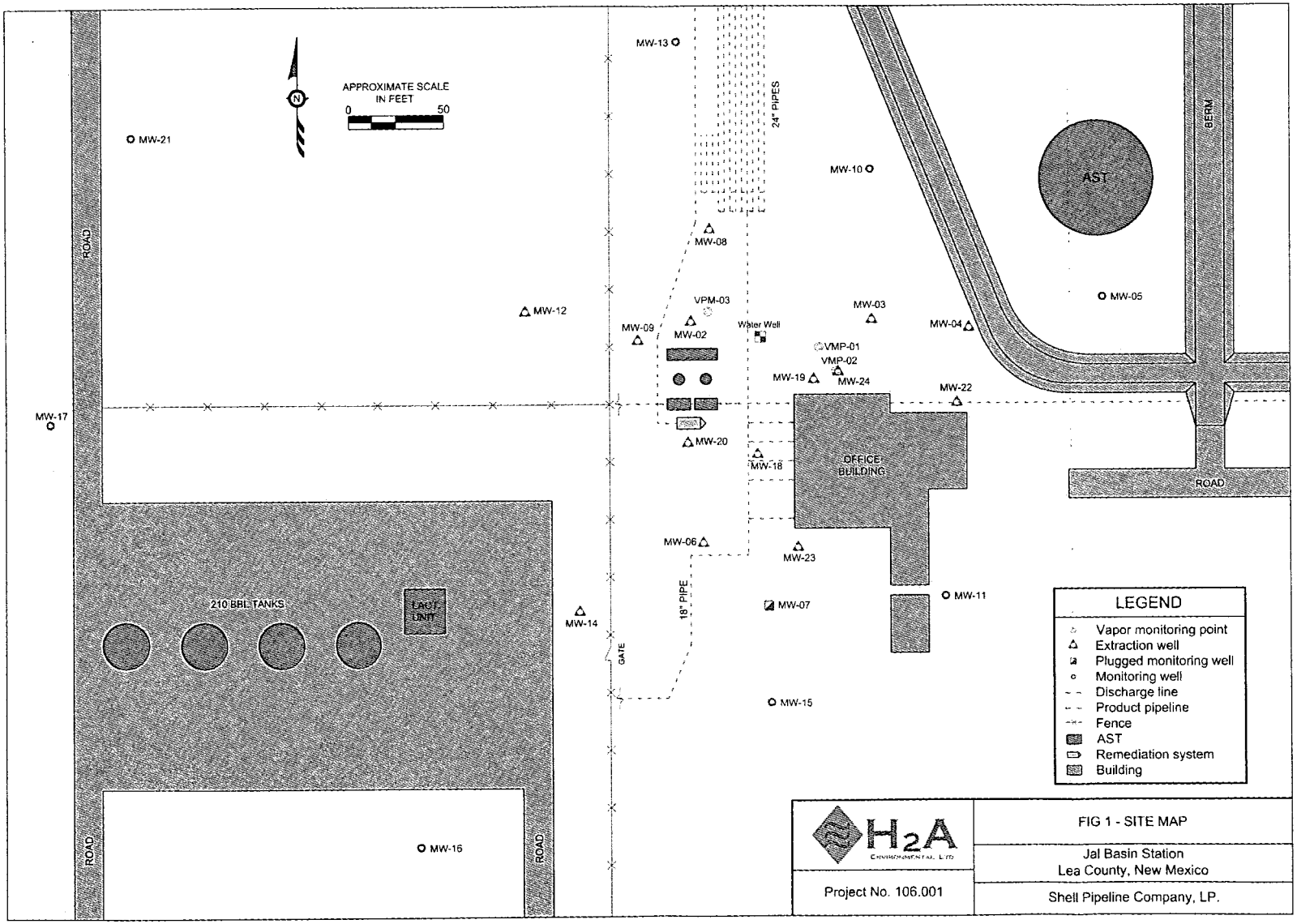
Equilon Pipeline Company LLC

Lea County, New Mexico

Jal Basin Station

PROJECT No. 106.001

H2A\EQUILON\106.001SCHEM


APPROXIMATE SCALE
IN FEET
0
50
MW-21
MW-13
24" PIPES
MW-10
AST
BERM
MW-08
MW-12
VPM-03
MW-09
MW-02
Water Well
MW-03
MW-04
MW-05
VMP-01
VMP-02
MW-19
MW-24
MW-22
MW-17
MW-20
MW-18
OFFICE BUILDING
ROAD
MW-06
MW-23
210 BBL TANKS
EAST UNIT
MW-14
18" PIPE
MW-07
MW-11
GATE
MW-15
MW-16
ROAD
ROAD
LEGEND
Vapor monitoring point
Extraction well
Plugged monitoring well
Monitoring well
Discharge line
Product pipeline
Fence
AST
Remediation system
Building
H2A
ENVIRONMENTAL LTD
FIG 1 - SITE MAP
Jal Basin Station
Lea County, New Mexico
Project No. 106.001
Shell Pipeline Company, LP.

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

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

February 02, 2007

Ken Springer
Shell Oil Products
P.O. Box 1087
Huffman, TX 77336

Re: Discharge Permit GW-350 Jal Basin Crude Oil Station
Abatement of Groundwater (AP-04)

Dear Mr. Springer:

Pursuant to Water Quality Control Commission (WQCC) Regulations 20.6.2.3000 - 20.6.2.3114 NMAC, the Oil Conservation Division (OCD) hereby approves the discharge permit for the Shell Oil Products (owner/operator) Jal Basin Crude Oil Station Abatement of Groundwater (AP-04) GW-350 located in the NE/4 of Section ~~05~~ 32, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico, under the conditions specified in the enclosed **Attachment To The Discharge Permit**. Enclosed are two copies of the conditions of approval. **Please sign and return one copy to the New Mexico Oil Conservation Division (OCD) Santa Fe Office within 30 working days of receipt of this letter including permit fees.**

Please be advised that approval of this permit does not relieve the owner/operator of responsibility should operations result in pollution of surface water, ground water or the environment. Nor does approval of the permit relieve the owner/operator of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If you have any questions, please contact Glenn von Gonten of my staff at (505-476-3488) or E-mail Glenn.VonGonten@state.nm.us. On behalf of the staff of the OCD, I wish to thank you and your staff for your cooperation during this discharge permit review.

Sincerely:

electronic signature-020207702020-1

Wayne Price
OCD-Environmental Bureau Chief

Attachments-1
xc: OCD District Office

ATTACHMENT TO THE DISCHARGE PERMIT
SHELL OIL PRODUCTS
JAL BASIN CRUDE OIL STATION ABATEMENT (AP-04) (GW-350)
DISCHARGE PERMIT APPROVAL CONDITIONS
February 02, 2007

Please remit a check for $2600.00 made payable to Water Quality Management Fund:

Water Quality Management Fund
C/o: Oil Conservation Division
1220 S. Saint Francis Drive
Santa Fe, New Mexico 87505

1. **Payment of Discharge Plan Fees:** All discharge permits are subject to WQCC Regulations. Every billable facility that submits a discharge permit application will be assessed a filing fee of $100.00, plus a renewal flat fee (*see* WQCC Regulation 20.6.2.3114 NMAC). The Oil Conservation Division ("OCD") has received the required $100.00 filing fee. However, the owner/operator still owes the required $2600.00 renewal permit fee for a groundwater abatement site

2. **Permit Expiration and Renewal:** Pursuant to WQCC Regulation 20.6.2.3109.H.4 NMAC, this permit is valid for a period of five years. **The permit will expire on February 12, 2008** and an application for renewal should be submitted no later than 120 days before that expiration date. Pursuant to WQCC Regulation 20.6.2.3106.F NMAC, if a discharger submits a discharge permit renewal application at least 120 days before the discharge permit expires and is in compliance with the approved permit, then the existing discharge permit will not expire until the application for renewal has been approved or disapproved.

3. **Permit Terms and Conditions:** Pursuant to WQCC Regulation 20.6.2.3104 NMAC, when a permit has been issued, the owner/operator must ensure that all discharges shall be consistent with the terms and conditions of the permit. In addition, all facilities shall abide by the applicable rules and regulations administered by the OCD pursuant to the Oil and Gas Act, NMSA 1978, Sections 70-2-1 through 70-2-38.

4. **Owner/Operator Commitments:** The owner/operator shall abide by all commitments and conditions previously submitted and approved in the ***Stage I and II abatement plan (AP-04)*** dated December 18, 2001, including attachments and subsequent amendments and these conditions for approval. Permit applications that reference previously approved plans on file with the division shall be incorporated in this permit and the owner/operator shall abide by all previous commitments of such plans and these conditions for approval.

5. Modifications: WQCC Regulation 20.6.2.3107.C, and 20.6.2.3109 NMAC addresses possible future modifications of a permit. The owner/operator (discharger) shall notify the OCD of any facility expansion, production increase or process modification that would result in any significant modification in the discharge of water contaminants. The Division Director may require a permit modification if any water quality standard specified at 20.6.2.3103 NMAC is being or will be exceeded, or if a toxic pollutant as defined in WQCC Regulation 20.6.2.7 NMAC is present in ground water at any place of withdrawal for present or reasonably foreseeable future use, or that the Water Quality Standards for Interstate and Intrastate streams as specified in 20.6.4 NMAC are being or may be violated in surface water in New Mexico.

6. Waste Disposal and Storage: The owner/operator shall dispose of all wastes at an OCD-approved facility. Only oil field RCRA-exempt wastes may be disposed of by injection in a Class II well. RCRA non-hazardous, non-exempt oil field wastes may be disposed of at an OCD-approved facility upon proper waste determination pursuant to 40 CFR Part 261. Any waste stream that is not listed in the discharge permit application must be approved by the OCD on a case-by-case basis.

A. OCD Rule 712 Waste: Pursuant to OCD Rule 712 (19.15.9.712 NMAC) disposal of certain non-domestic waste without notification to the OCD is allowed at NMED permitted solid waste facilities if the waste stream has been identified in the discharge permit and existing process knowledge of the waste stream does not change.

B. Waste Storage: The owner/operator shall store all waste in an impermeable bermed area, except waste generated during emergency response operations for up to 72 hours. All waste storage areas shall be identified in the discharge permit application. Any waste storage area not identified in the permit shall be approved on a case-by-case basis only. The owner/operator shall not store oil field waste on-site for more than 180 days unless approved by the OCD.

7. Drum Storage: The owner/operator must store all drums, including empty drums, containing materials other than fresh water on an impermeable pad with curbing. The owner/operator must store empty drums on their sides with the bungs in place and lined up on a horizontal plane. The owner/operator must store chemicals in other containers, such as tote tanks, sacks, or buckets on an impermeable pad with curbing.

8. Process, Maintenance and Yard Areas: The owner/operator shall either pave and curb or have some type of spill collection device incorporated into the design at all process, maintenance, and yard areas which show evidence that water contaminants from releases, leaks and spills have reached the ground surface.

9. Above Ground Tanks: The owner/operator shall ensure that all aboveground tanks have impermeable secondary containment (e.g., liners and berms), which will contain a volume of at least one-third greater than the total volume of the largest tank or all interconnected tanks. The owner/operator shall retrofit all existing tanks before discharge permit renewal. Tanks that contain fresh water or fluids that are gases at atmospheric temperature and pressure are exempt from this condition.

10. Labeling: The owner/operator shall clearly label all tanks, drums, and containers to identify their contents and other emergency notification information. The owner/operator may use a tank code numbering system, which is incorporated into their emergency response plans.

11. Below-Grade Tanks/Sumps and Pits/Ponds.

A. All below-grade tanks and sumps must be approved by the OCD prior to installation and must incorporate secondary containment with leak detection into the design. The owner/operator shall retrofit all existing systems without secondary containment and leak detection before discharge permit renewal. All existing below-grade tanks and sumps without secondary containment and leak detection must be tested annually or as specified herein. Systems that have secondary containment with leak detection shall have a monthly inspection of the leak detection system to determine if the primary containment is leaking. Small sumps or depressions in secondary containment systems used to facilitate fluid removal are exempt from these requirements if fluids are removed within 72 hours.

B. All pits and ponds, including modifications and retrofits, shall be designed by a certified registered professional engineer and approved by the OCD prior to installation. In general, all pits or ponds shall have approved hydrologic and geologic reports, location, foundation, liners, and secondary containment with leak detection, monitoring and closure plans. All pits or ponds shall be designed, constructed and operated so as to contain liquids and solids in a manner that will protect fresh water, public health, safety and the environment for the foreseeable future. The owner/operator shall retrofit all existing systems without secondary containment and leak detection before discharge permit renewal.

C. The owner/operator shall ensure that all exposed pits, including lined pits and open top tanks (8 feet in diameter or larger) shall be fenced, screened, netted, or otherwise rendered non-hazardous to wildlife, including migratory birds.

D. The owner/operator shall maintain the results of tests and inspections at the facility covered by this discharge permit and available for OCD inspection. The owner/operator shall report the discovery of any system which is found to be leaking or has lost integrity to the OCD within 15 days. The owner/operator may propose various methods for testing such as pressure testing to 3 pounds per square inch greater than normal operating pressure and/or visual inspection of cleaned tanks and/or sumps, or other OCD-approved methods. The owner/operator shall notify the OCD at least 72 hours prior to all testing.

12. Underground Process/Wastewater Lines:

A. The owner/operator shall test all underground process/wastewater pipelines at least once every five (5) years to demonstrate their mechanical integrity, except lines containing fresh water or fluids that are gases at atmospheric temperature and pressure. Pressure rated pipe shall be tested by pressuring up to one and one-half times the normal operating pressure, if possible, or for atmospheric drain systems, to 3 pounds per square inch greater than normal operating pressure, and pressure held for a minimum of 30 minutes with no more than a 1% loss/gain in pressure. The owner/operator may use other methods for testing if approved by the OCD.

B. The owner/operator shall maintain underground process and wastewater pipeline schematic diagrams or plans showing all drains, vents, risers, valves, underground piping, pipe type, rating, size, and approximate location. All new underground piping must be approved by the OCD prior to installation. The owner/operator shall report any leaks or loss of integrity to the OCD within 15 days of discovery. The owner/operator shall maintain the results of all tests at the facility covered by this discharge permit and they shall be available for OCD inspection. The owner/operator shall notify the OCD at least 72 hours prior to all testing.

13. Class V Wells: The owner/operator shall close all Class V wells (e.g., septic systems, leach fields, dry wells, etc.) that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes unless it can be demonstrated that ground water will not be impacted in the reasonably foreseeable future. Leach fields and other wastewater disposal systems at OCD-regulated facilities that inject non-hazardous fluid into or above an underground source of drinking water are considered Class V injection wells under the EPA UIC program. Class V wells that inject domestic waste only, must be permitted by the New Mexico Environment Department (NMED).

14. Housekeeping: The owner/operator shall inspect all systems designed for spill collection/prevention and leak detection at least monthly to ensure proper operation and to prevent over topping or system failure. All spill collection and/or secondary containment devices shall be emptied of fluids within 72 hours of discovery. The owner/operator shall maintain all records at the facility and available for OCD inspection.

15. Spill Reporting: The owner/operator shall report all unauthorized discharges, spills, leaks and releases and conduct corrective action pursuant to WQCC Regulation 20.5.12.1203 NMAC and OCD Rule 116 (19.15.3.116 NMAC). The owner/operator shall notify both the OCD District Office and the Santa Fe Office within 24 hours and file a written report within 15 days.

16. OCD Inspections: The OCD may place additional requirements on the facility and modify the permit conditions based on OCD inspections.

17. Storm Water: The owner/operator shall implement and maintain run-on and runoff plans and controls. The owner/operator shall not discharge any water contaminant that exceeds the WQCC standards specified in 20.6.2.3101 NMAC or 20.6.4 NMAC (Water Quality Standards for Interstate and Intrastate Streams) including any oil sheen in any stormwater run-off. The owner/operator shall notify the OCD within 24 hours of discovery of any releases and shall take immediate corrective action(s) to stop the discharge.

18. Unauthorized Discharges: The owner/operator shall not allow or cause water pollution, discharge or release of any water contaminant that exceeds the WQCC standards listed in 20.6.2.3101 NMAC or 20.6.4 NMAC (Water Quality Standards for Interstate and Intrastate Streams) unless specifically listed in the permit application and approved herein. ***An unauthorized discharge is a violation of this permit.***

19. Vadose Zone and Water Pollution: The owner/operator shall address any contamination through the discharge permit process or pursuant to WQCC 20.6.2.4000-.4116 NMAC (Prevention and Abatement of Water Pollution). The OCD may require the owner/operator to modify its permit for investigation, remediation, abatement, and monitoring requirements for any vadose zone or water pollution. Failure to perform any required investigation, remediation, abatement and submit subsequent reports will be a violation of the permit.

20. Additional Site Specific Conditions: N/A

21. Transfer of Discharge Permit (WQCC 20.6.2.3111) Prior to any transfer of ownership, control, or possession (whether by lease, conveyance or otherwise) of a facility with a discharge permit, the transfer or shall notify the transferee in writing of the existence of the discharge permit, and shall deliver or send by certified mail to the department a copy of such written notification, together with a certification or other proof that such notification has in fact been received by the transferee.
Upon receipt of such notification, the transferee shall have the duty to inquire into all of the provisions and requirements contained in such discharge permit, and the transferee shall be charged with notice of all such provisions and requirements as they appear of record in the department's file or files concerning such discharge permit. The transferee (new owner/operator) shall sign and return an original copy of these permit conditions and provide a written commitment to comply with the terms and conditions of the previously approved discharge permit.

22. Closure: The owner/operator shall notify the OCD when operations of the facility are to be discontinued for a period in excess of six months. Prior to closure of the facility, the operator shall submit a closure plan for approval. Closure and waste disposal shall be in accordance with the statutes, rules and regulations in effect at the time of closure.

23. Certification: Shell Oil Products, (Owner/Operator), by the officer whose signature appears below, accepts this permit and agrees to comply with all submitted commitments, including these terms and conditions contained here. **Owner/Operator** further acknowledges that the OCD may, for good cause shown, as necessary to protect fresh water, public health, safety, and the environment, change the conditions and requirements of this permit administratively.

Conditions accepted by: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

SHELL OIL PRODUCTS
Company Name-print name above

KEN R. SPRINGER
Company Representative- print name

Company Representative- signature

Title STAFF PROJECT MGR

Date: 2/6/07

URS

7720 North 16th Street, Suite 100
Phoenix, Arizona 85020
Telephone: (602) 371-1100
Fax: (602) 371-1615

LETTER OF TRANSMITTAL

TO: Wayne Price, Environmental Bureau Chief
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

DATE: 12 February 2007

SUBJECT: Discharge Permit GW-350 Jal Basin Crude Oil Station
Abatement of Groundwater (AP-04)

Attached is:

One fully executed copy of *Discharge Permit GW-350 Jal Basin Crude Oil Station* and a check in the amount of $2,600.00 for payment of the *Permit Fees*.

For:

- ☐ Review and Approval
- ☐ Signature and Return
- ☒ Appropriate Action
- ☐ As Requested
- ☐ For Your Information

Dear Mr. Price:

Enclosed are the above-referenced documents. Should you have any questions or concerns, please feel free to contact me at (602) 648-2402 or via e-mail at iain_olness@urscorp.com. Mr. Ken Springer can be contacted at (281) 324-5921 or via e-mail at kenneth.springer@shell.com.

Sincerely,

URS

Iain Olness, P.G.
Senior Geologist

ACKNOWLEDGEMENT OF RECEIPT OF CHECK/CASH

I hereby acknowledge receipt of check No. _____ dated 2/9/07

or cash received on _____ in the amount of $ 2600.00

from URS

for GW-350

Submitted by: Lawrence Romero Date: 2/19/07

Submitted to ASD by: Lawrence Romero Date: 2/19/07

Received in ASD by: _____ Date: _____

Filing Fee _____ New Facility _____ Renewal _____

Modification _____ Other _____

Organization Code 521.07 Applicable FY 2004

To be deposited in the Water Quality Management Fund.

Full Payment ✓ or Annual Increment _____

GW 350

H2A
ENVIRONMENTAL, LTD.

www.h2altd.com
430 N. CARROLL AVE.
SUITE 120
SOUTHLAKE, TX
76092
817.251.9466
817.251.9224 FAX

December 28, 2006

Mr. Edward J. Hansen
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Groundwater Permit Renewal, GW-~~326~~ 350
Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H2A Job No. 106.001

Dear Mr. Hansen:

Transmitted with this letter is the Groundwater Permit Renewal for Permit GW-326 for operation of the Hi-Vac Remediation System located at Jal Basin Station in Lea County, New Mexico. Please note additional information can be found with existing Permit GW-326.

It should be noted that to date the system has recovered virtually all diesel as Light Non-Aqueous Phase Liquid (LNAPL) in the wells at the site. Current operation is focusing on removal of the limited remaining LNAPL and limited remaining dissolved phase hydrocarbons at the site.

Please contact me at (817) 251-9466 or email me at mhawthorne@h2altd.com if you have any questions, comments or need additional information.

Respectfully,

J. Michael Hawthorne, P.G., REM
Principal

Enclosure

cc: Kenneth Springer, Shell Oil Products, U.S.
OCD Hobbs Office

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised June 10, 2003

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES,GAS PLANTS, REFINERIES, COMPRESSOR, GEOTHERMAL FACILITES AND CRUDE OIL PUMP STATIONS

(Refer to the OCD Guidelines for assistance in completing the application)

☐ New ☒ Renewal ☐ Modification

1. Type: HiVac Soil and Groundwater Extraction System GW035D
2. Operator: Plains All American Pipeline, L.P. (facility), H_2A Environmental, LTD. (HiVac System)

   Address: 2 miles south of Jal on State Highway 18

   Contact Person: J. Michael Hawthorne (HiVac System) Phone: (817) 251-9466 (HiVac System)
3. Location: SE /4 SE /4 Section 32 Township 25 South Range 37 East
   Submit large scale topographic map showing exact location.

   See attachment. The facility is also located in the NE/4, NE/4 and NW/4, NW/4 of Section 5, Township 26 South, Range 37 East.
4. Attach the name, telephone number and address of the landowner of the facility site.
   See attachment
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.
   See attachment
6. Attach a description of all materials stored or used at the facility.
   See attachment
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included.
   See attachment
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures.
   See attachment
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems.
   See attachment
10. Attach a routine inspection and maintenance plan to ensure permit compliance.
    See attachment
11. Attach a contingency plan for reporting and clean-up of spills or releases.
    See attachment
12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included.
    See attachment
13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.
    See attachment
14. CERTIFICATIONI hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: J. Michael Hawthorne Title: Principal

Signature: [signature] Date: 12/29/06

E-mail Address: MHAWTHORNE@H2ALTD.COM

Groundwater Permit GW-326
Permit Renewal Application

PLAINS ALL AMERICAN PIPELINE, L.P. FACILITY
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

PREPARED FOR:

SHELL OIL PRODUCTS, U.S.

TWO SHELL PLAZA
HOUSTON, TEXAS

PREPARED BY:

H_2A ENVIRONMENTAL, Ltd.

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TABLE OF CONTENTS

FIGURES

TABLES

TYPE OF OPERATION

The major purpose for installing and operating the mobile Hi-Vac soil and groundwater remediation system is to recover subsurface diesel from the site. The hydrocarbon removal process utilizes a multi-phase recovery system designed to simultaneously extract hydrocarbons from the subsurface in 3 phases (free liquid, dissolved phase, and vapor phase). In general, the system consists of liquid ring pumps, liquid/solid/vapor separation equipment, and a water treatment system. Vapor abatement equipment is not necessary to maintain compliance with emissions requirements. The Hi-Vac remediation system is located on the Jal Basin Station facility in Lea County, New Mexico. However, the Hi-Vac remediation equipment and its processes are being presented for consideration independently from all other equipment and processes currently operating at the Jal Basin Station facility. Plains All American Pipeline, L.P. currently owns the facility, but Shell Oil Products US (formally d/b/a Equilon Pipeline Company) retains responsibility to address the subsurface diesel including operation of the Hi-Vac remediation system. H_2A Environmental, Ltd. operates the Hi-Vac remediation system on behalf of Shell Oil Products US.

NAME OF OPERATOR - FACILITY

The Jal Basin Station is a transportation and storage facility for crude oil. Crude oil is received at Jal Station from area crude oil producing wells via pipeline gathering systems. Approximately 1.8 million barrels of crude oil is stored at Jal Station and pumped via pipeline to refining facilities. Plains All American Pipeline, L.P. currently operates the Jal Basin Station facility. The local contact is:

Jack Bryant
Jal Basin Station
2 miles South of Jal on Highway 18
Jal, New Mexico 88252
(505) 395-2026 (Facility Office)
(432) 682-5397 (Office)

As noted previously, Shell Oil Products US retains responsibility to address the subsurface diesel at the site. The contact for Shell Oil Products US is:

Ken Springer
Staff Project Manager
Shell Oil Products US
P.O. Box 1087
Huffman, TX 77336
(281)324-5921 (Office)
Kenneth.springer@shell.com

NAME OF OPERATOR – HI-VAC SYSTEM

Project management activities are conducted by H_2A Environmental, Ltd. and the contact is as follows:

J. Michael Hawthorne
H_2A Environmental, Ltd.
430 North Carroll Avenue, Suite 120
Southlake, Texas 76092
(817) 251-9466

This report presents the current remediation and abatement of soil and groundwater including recovery, treatment, and discharge systems. This Groundwater Permit Renewal Application is based on previous subsurface investigation activities, pilot testing performed at the project site, and operation of the Hi-Vac system from 2001 to 2006.

LOCATION OF FACILITY

The Jal Basin Station is located approximately 2 miles south of Jal in the northeast quarter of the northeast quarter of Section 5, Township 26 South, Range 37 East, in Lea County, New Mexico. Jal Station is not located in an incorporated city or town. A facility location map is presented on Figure 1. Site details, including the system location, are presented on Figure 2.

FACILITY DESCRIPTION

Jal Basin Station improvements are situated in the central portion of the property and encompass approximately 55 acres of the 80 acre property. The northern and southern portions of the property are undeveloped. A site plan is presented as Figure 2. A perimeter fence approximately 6 feet high with 3 strands of barbed wire surrounds the developed portion of the site.

HI-VAC SYSTEM DESCRIPTION

The system consists of a mobile Hi-Vac system incorporating liquid ring extraction pumps and associated separation and treatment equipment. The system is trailer mounted. In a Hi-Vac multiphase extraction system, a liquid ring pump extracts groundwater, product, suspended particles, and soil vapors with a vacuum up to approximately 26 inches of mercury. The collected media is processed through a series of separators. The vapor stream is discharged to the atmosphere. Collected fluids are pumped through an oil/water separator (OWS) system for separation. During the years of ongoing operation, the groundwater was treated via organoclay and carbon filtration to required levels and re-injected into the subsurface via two infiltration wells. The system will continue to be operated in this manner. The system is

equipped with multiple safety shutoff switches. A process flow diagram for the Hi-Vac system is presented as Figure 3.

Various monitoring wells at the site that have exhibited hydrocarbon impact are utilized as the extraction points. Vacuum readings have been and are being collected during the operation to evaluate the radius of influence and optimum arrangement of the recovery system.

The recovery wells are fitted with a vacuum hose (stinger) extending through a sealed well cap to maximize the recovery of LNAPL while minimizing the recovery of groundwater. The vacuum pipe is plumbed to the separator and vacuum source. All piping and facilities from the well to the separator are under vacuum. A gate valve and vacuum gauge is installed on the line to control the vacuum exerted on each extraction well. A sample port is installed to monitor the hydrocarbon concentrations in the vent stack from the discharge line of the liquid ring pumps. A multi-phase vacuum extraction well detail is presented as Figure 4.

DISPOSITION OF TREATED GROUNDWATER

The groundwater is being treated to the Water Quality Control Commission (WQCC) drinking water standards prior to injection. The WQCC standards are presented in TABLE I as maximum effluent concentrations.

Upon treatment to WQCC standards, the treated water is piped to the two infiltration wells on the property and injected into the subsurface. Authorization for injection of the effluent was approved on October 23, 2001 by the New Mexico OCD. For detailed information regarding injection, please see Groundwater Permit GW-326.

MATERIALS USED OR STORED

Materials stored on-site for the Hi-Vac system operation may include zeolite and carbon. The general composition of the material, container type, estimated volume stored, and location is provided below. Material Safety Data Sheets (MSDS), if appropriate, for all materials used at the facility are available upon request and are maintained at the on-site office building. All other materials stored or used at the facility for the storage and transfer of crude oil and operation and maintenance activities associated with these are not covered under this discharge plan.

ZEOLITE

A filter containing Zeolite is installed in the process stream following the oil/water separator and before the carbon filtration. The purpose of the Zeolite is to prevent hydrocarbon emulsion with recovered groundwater from reaching the carbon.

WASTES GENERATED AND PROCEDURES

ZEOLITE

The Zeolite requires periodic replacement. The used Zeolite is disposed of at a Shell Oil Products US approved facility.

RECOVERED DIESEL

Recovered diesel is stored in an on-site tank pending disposal or recovery at an approved facility. As virtually all diesel as LNAPL has been removed from the site, little further diesel as LNAPL recovery or disposal is anticipated, though some minimal amounts may still occur.

SPILL PREVENTION AND RESPONSE

INSPECTIONS, RECORDS, AND NOTIFICATION

Periodic inspections of the Hi-Vac system, valves, gauges, and piping are conducted. The equipment is inspected for integrity, spills, drips, and leaks. If a significant leak is detected, appropriate response actions shall be taken.

No surface impoundments, leach fields or other disposal systems requiring inspection and records maintenance are associated with Hi-Vac system operation.

The system has no surface impoundments, leach fields or other active disposal systems for which groundwater monitoring is used to detect leakage.

RESPONSE ACTIONS

The following response actions are general. Specific actions will be determined based on the type and volume of material spilled, location of the spill, and field conditions at the time of the spill.

1. Shut down Hi-Vac system (including injection wells).
2. Confirm the exact location of the leak. Stop or reduce the flow at the release point. Prompt action in stopping or reducing the flow at the release point is necessary to minimize the impact of the spill. Based on the circumstances, this may be done by:
   - Draining the line into tankage.
   - Closing gate valves to isolate flow to the leak area.
3. Notify the appropriate Company representatives in the response zone. Begin the Incident Command System (ICS), if appropriate.
4. Many petroleum vapors are heavier than air and will migrate to lower elevations. Consideration should be given to warning the public in low lying areas and
   - Notify emergency response agencies (fire, police) so that they can assist in warning the public, if necessary.
   - Notify appropriate government agencies. Be sure to contact all potentially impacted local jurisdictions and water intakes.
   - Determine equipment and personnel needed. The resources needed can be determined by assessing the size of the spill, the location of the spill (inside or outside containment basin), type of material spilled, threatened environmentally sensitive

areas (wetlands, wildlife refuges), threatened economically sensitive areas (public water intakes, cooling water intakes), and weather conditions.

5. Mobilize and deploy response personnel and equipment. Local personnel are the primary responders to a spill. Additional personnel can be obtained from:
   - Non Company Personnel
   - Contractors and Co-ops
   - Plains All American Pipeline, L.P. Response Team
6. Investigate the cause of the spill and take corrective action to prevent similar spills.

CONTAINMENT AND RECOVERY

Containment and recovery activities should be conducted under safe conditions. Evaluate and obtain as necessary atmosphere monitoring, excavation techniques, dig permits, and personal protection equipment.

RELEASE REPORTING

The OCD shall be notified of any unauthorized release occurring during the system operation in accordance with the requirements of NMOCD Rule 116.

The OCD shall be notified in accordance with NMOCD Rule 116 with respect to any release from any facility of oil or other water contaminant, in such quantity as may, with reasonable probability, be detrimental to water or cause an exceedance of the standards in 19 NMAC 15.A.19.B(1), B(2) or B(3).

Notification of the above releases shall be made by the person operating or controlling either the release or the location of the release in accordance with the following requirements:

A Major Release shall be reported by giving both verbal notice and timely written notice pursuant to Paragraphs C(1) and C(2) of NMOCD Rule 116. A Major Release is:

- an unauthorized release of a volume, excluding natural gases, in excess of 25 barrels
- an unauthorized release of any volume which:
  - ◊ results in a fire
  - ◊ will reach a water course
  - ◊ may with reasonable probability endanger public health
  - ◊ results in substantial damage to property or the environment
  - ◊ an unauthorized release of natural gases in excess of 500 mcf
  - ◊ a release of any volume which may with reasonable probability be detrimental to water or cause an exceeding of the standards in 19 NMAC 15.A.19.B(1), B(2) or B(3).

A Minor Release shall be reported by giving timely written notice pursuant to NMOCD Rule 116. A Minor Release is an unauthorized release of a volume, greater than 5 barrels but not more than 25 barrels; or greater than 50 mcf but less than 500 mcf of natural gases.

Verbal notification shall be reported within 24 hours of discovery to the OCD District Office for the area within which the release takes place. In addition, verbal notification shall be reported

to the OCD's Environmental Bureau Chief. This notification shall provide the information required on OCD Form C-141.

Timely written notification is required to be reported within 15 days to the OCD District Office for the area within which the release takes place by completing and filing OCD Form C-141. In addition, timely written notification required shall also be reported to the OCD's Environmental Bureau Chief within 15 days after the release is discovered. The written notification shall verify the prior verbal notification and provide any appropriate additions or corrections to the information contained in the prior verbal notification.

The responsible person must complete OCD approved corrective action for releases which endanger public health or the environment. Releases will be addressed in accordance with a remediation plan submitted to and approved by the OCD.

PROJECT HISTORY AND SITE CHARACTERISTICS

SITE ASSESSMENT HISTORY

The Equilon diesel release at Jal Basin Station was confirmed during a Phase II Limited Environmental Subsurface Investigation performed by StanTech Environmental Services in January of 1998. During the investigation, 2 monitoring wells (MW-1 and MW-2) and 3 borings (B-1 through B-3) were installed. Light non-aqueous phase liquids (LNAPL) were observed in monitoring well MW-2 with an approximate thickness of 3 feet. A water sample was collected from the on-site water well utilized as a non-potable water source for the facilities located at this site. This sample had non-detectable results for TPH-DRO, TPH-ORO, and BTEX concentrations, however, a TPH-GRO concentration of 0.088 mg/L was observed.

Another 13 monitoring wells (MW-3 through MW-15) were installed to delineate horizontal and vertical extent of hydrocarbon impact from the suspected source area. The facility required the installation of a new electric pump for pipeline operations. The new pump location was near monitoring well MW-7. Therefore, MW-7 was plugged and abandoned and monitoring well MW-15 was installed to replace MW-7. Monitoring wells MW-23 and MW-24 were recently installed (December 2005) to investigate the soil and groundwater underneath the building onsite.

During previous assessment activities, LNAPL was detected in monitoring wells MW-2, MW-3, MW-4, MW-6, MW-8, and MW-9. The LNAPL thickness observed from measurements taken November 2006 indicate one well, MW-9, having measurable product at 0.01 feet. Results of the previous assessments are presented in the Stage 1 Abatement Plan, dated April 8, 1999, and the Additional Stage 1 Abatement Activities, dated January 6, 2000. A groundwater contour map and LNAPL thickness map are presented as Figure 5 and Figure 6.

A pilot test was conducted using the Hi-Vac system on December 15, 1999 and January 19, 2000. The results of the pilot test indicated the Hi-Vac system would be effective at the depths at which groundwater and LNAPL are encountered at the site (approximately 90 feet below ground surface).

The system is currently operating under Groundwater Permit GW-326. This application is for renewal of Permit GW-326.

REGIONAL GEOLOGY AND HYDROGEOLOGY

Geology

The property is located in the geographic region known as the Eunice Plain. The Eunice Plain is bound on the north by the Llano Estacado and on the southwest by San Simon Ridge and Antelope Ridge. The westward extension of the Eunice Plain is bounded by an irregular, low, south-facing scarp which is most prominent at Custer Mountain, where it attains a height of about 60 feet. East and west of Custer Mountain the scarp is less pronounced. To the west the scarp is buried under a mantle of dune sand. To the east the scarp becomes more subdued and irregular, owing to dune sand cover and to dissection by numerous gullies and draws. Monument Draw traverses the east side of Eunice Plain from north to south. The Eunice Plain is the most highly developed part of the area.

The Eunice Plain is underlain by a hard caliche surface and is almost entirely covered by reddish-brown dune sand. In some places the underlying surface consists of alluvial sediments, most commonly calcareous silt in buried valleys or Quaternary lake basins. It has a general southeast slope toward Monument Draw. The underlying surface is exposed only locally, but it is reflected to some degree in many places by the overlying sand cover a few inches to several feet thick.

Hydrogeology

Former City of Jal water wells bottomed out in the Santa Rosa sandstone at depths of 500 feet (Well 25.37.19.221) and 450 feet below ground surface (bgs) (Well 25.37.19.240). The groundwater level was noted to be 284 and 65 feet below ground surface in these 2 wells, respectively. These wells were later abandoned as public supply wells. Jal then bought an irrigation well about 5 miles east of Jal and converted it into a public supply. The well bottomed in the Ogallala formation at a depth of 152 feet bgs (Well 25.37.13.312a). The depth to the water was noted to be 73 feet below ground surface. Jal also drilled 2 other wells in township 26 south, range 36 east (Wells 26.36.18.311, 26.36.21.233, and 26.36.21.443). These wells were drilled in the Quaternary Alluvium to depths of 559 feet, 700 feet, and 159 feet bgs, respectively. The third well drilled was dry. Groundwater in Wells 26.36.18.311 and 26.36.21.233 were noted at depths of 220.8 and 198.0 feet bgs, respectively.

A pond is located 0.42 miles to the east-southeast of the subject property. An unnamed intermittent stream/creek is located 1.67 miles to the northwest of the subject property. An aqueduct is located approximately 1.78 miles to the northwest of the subject property.

According to Mr. Ken Frescas with the State of New Mexico's Engineering Department, there are no permitted water wells within one-quarter mile radius of the outside perimeter of the facility. Jal water wells include the following:

WELL NUMBER	AQUIFER	TOTAL DEPTH OF WELL	DEPTH TO GROUNDWATER	YEAR DRILLED	TOTAL DISSOLVED SOLIDS
26.37.7.331	Tr	467		1937	
25.37.19.221	Tr	500	284.0	1954	825
25.37.19.240	Tr	450	65	1942	759
25.37.15.310	Qal	70	65	1942	
25.37.13.312a	To	152	73	1954	250/295
26.36.18.311	Qal	559	220.8	1960	
26.36.21.233	Qal	700	198.0	1960	
26.36.21.443	--	137 (?)	Dry	1958	

SOIL SURVEY INFORMATION

According to the "Soil Survey of Lea County, New Mexico" the soil type for the center portion and the majority of the property is the Wink fine sand with 0 to 3 percent slopes. The Wink fine sand is moderately permeable, and the water runoff is very slow. The water intake is rapid and the available water holding capacity is 2 to 4 inches. Roots penetrate to a depth of 20 to 35 inches, and the depth of bedrock or caliche is greater than 5 feet. Soil blowing is a severe hazard. The soil profile of the Wink fine sand is as follows:

- From 0 to 12 inches, the unit consists of a brown fine sand, which is darkish brown when moist. The soil is loose when dry or moist, and non-sticky and non-plastic when wet. This layer is moderately alkaline, slightly calcareous with a gradual boundary to the next profile layer. The permeability ranges from 2.0 to 20.0 inches per hour, the available water capacity ranges from 0.06 to 0.08 inch per inch of soil, and the pH ranges from 7.9 to 8.4.
- From 12 to 23 inches, the unit consists of a brown sandy loam, which is dark brown when moist. The soils are weak, with medium, sub-angular blocky structure. The soils are soft, and very friable when moist, and non-sticky and non-plastic when wet. This layer is moderately alkaline, slightly calcareous with a gradual boundary to the next profile layer. The permeability ranges from 2.0 to 6.3 inches per hour, the available water capacity ranges from 0.11 to 0.13 inch per inch of soil, and the pH ranges from 7.9 to 8.4.
- From 23 to 60 inches, the unit consists of a white, soft caliche of sandy loam texture, which is light gray when moist. The soils are massive, hard, and friable when moist, and slightly sticky and slightly plastic when wet. The upper part of this layer contains a few, fine, weakly cemented lime concretions. This layer is strongly alkaline and strongly calcareous. The permeability ranges from 2.0 to 6.3 inches per hour, and the pH ranges from 8.4 to 9.0.

The soil type for the northwest corner and the southern portion of the site consists of the Pyote and Maljamar fine sands with 0 to 3 percent slopes. The Pyote and Maljamar fine sand has moderately rapid permeability, and very slow water runoff. The water intake is rapid and the available water holding capacity is 5 to 7 inches. Roots penetrate to a depth of 60 inches or more, and the depth of bedrock or caliche is greater than 5 feet. Soil blowing is a severe hazard. The soil profile of the Pyote and Maljamar fine sand is as follows:

- From 0 to 30 inches, the unit consists of light-brown fine sand, which is brown when moist. The soils are loose when dry or moist and non-sticky and non-plastic when wet. This layer is neutral, non-calcareous, and has a clear boundary to the next soil layer. The permeability ranges from 6.3 to 20.0 inches per hour, the available water capacity ranges from 0.06 to 0.08 inch per inch of soil, and the pH ranges from 6.6 to 7.3.
- From 30 to 40 inches, the unit consists of a reddish-yellow fine sandy loam, which has a strong brown color when moist. The soils are soft, very friable when most, slightly sticky and slightly plastic when wet. This layer is neutral, non-calcareous, and has a clear boundary before the next layer. The permeability ranges from 2.0 to 6.3 inches per hour, the available water capacity ranges from 0.13 to 0.15 inch per inch of soil, and the pH ranges from 6.6 to 7.3.
- From 40 to 48 inches, the unit consists of a light-brown fine sandy loam, and is brown when moist. The soils are soft, very friable when moist, slightly sticky and slightly plastic when wet. This layer is neutral, non-calcareous, and has a clear boundary before the next layer. The permeability ranges from 2.0 to 6.3 inches per hour, the available water capacity ranges from 0.13 to 0.15 inch per inch of soil, and the pH ranges from 6.6 to 7.3.
- From 48 to 60 inches, the unit consists of a pink fine sandy loam, which is light brown when moist. The soils are slightly hard, friable when moist, slightly sticky and slightly plastic when wet. This layer is neutral, non-calcareous, and has a clear boundary before the next layer. The permeability ranges from 2.0 to 6.3 inches per hour, the available water capacity ranges from 0.13 to 0.15 inch per inch of soil, and the pH ranges from 6.6 to 7.3.

HI-VAC OPERATION RESULTS

Detailed annual reports for the previous years of operation have been submitted to the OCD per Groundwater Permit GW-326. The next report is due by April 1, 2007.

PERMITTING REQUIRMENTS

In addition to this Groundwater Permit Renewal Application, authorization has been obtained for the operation of the recovery wells, injection of treated effluent to the subsurface, and air emissions according to the requirements of OCD, NMED, SLO, and the State Engineer's office.

RECOVERY WELL PERMIT

Groundwater recovery wells require permitting under the Rules and Regulations of the State Engineer, Article I, Section 17 titled Applications for Pollution Plume Control Wells and Pollution Recovery Wells. Prior to operation of the groundwater recovery system, a permit application will be submitted for each extraction well.

AIR PERMIT

Hydrocarbon emissions are regulated by NMED. Due to the low levels of potential emissions from the Hi-Vac system, a permit is not required. However, a notice of intent (NOI) has been submitted and approved.

INJECTION INTO SUBSURFACE

Injection of treated groundwater (effluent) was approved on October 23, 2001 in Groundwater Permit GW-326

HI-VAC SYSTEM MONITORING

Influent monitoring, effluent monitoring, emissions monitoring, and routine maintenance will be conducted by a technician on a regularly scheduled basis.

Emissions samples will be obtained from the system to verify compliance with standards specified in the NMED NOI.

INFLUENT MONITORING

Water samples will be obtained from the influent to the treatment system to evaluate system treatment efficiency. Analytical data will be used to quantify dissolved phase hydrocarbon recovery.

EFFLUENT MONITORING

The effluent from the groundwater treatment system will be monitored as necessary in accordance with guidelines outlined in this discharge plan and in 20 NMAC 6.2.III.3107. Representative samples of the effluent will be obtained at a point prior to entering the discharge conduit extending to the surface.

EMISSIONS MONITORING

After installation and testing, pre-treatment and post-treatment hydrocarbon emissions will be monitored on a monthly basis using portable field screening equipment. The monitoring data from the liquid ring pump emissions will be used to help quantify total hydrocarbon recovery.

SYSTEM OPERATION AND MAINTENANCE

Maintenance of the remediation system will be conducted as necessary by a trained field technician. Maintenance will consist of inspecting the extraction wells, vacuum pump, separation equipment, air stripping unit, influent and effluent flow meters, gauges, manway covers, discharge hoses and conduits, and control panels. The equipment will be inspected thoroughly and cleaned or repaired as necessary. Filters will be cleaned or changed regularly to assure proper system operation. Readings will be taken of all pressure gauges, vacuum gauges, and flow meters, and necessary adjustments will made to the system. Operations and maintenance may be conducted in conjunction with system monitoring and sampling activities.

REPORTING SCHEDULE

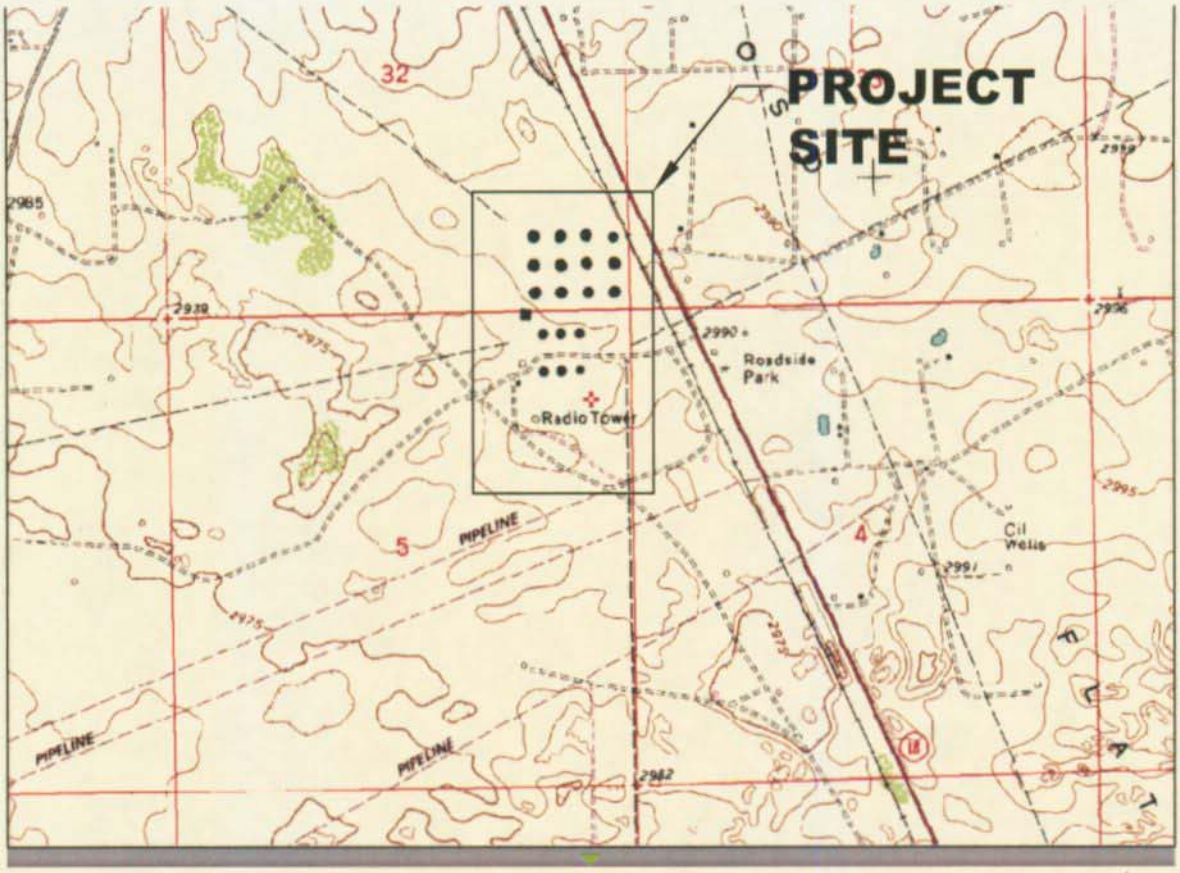
A report summarizing the monitoring activities will be prepared and transmitted annually. The reports will include laboratory results for influent, treated effluent, emissions monitoring, and information obtained during operations and maintenance activities. Additional recommendations will be made, if necessary, to enhance the effectiveness of the recovery system.

GROUNDWATER MONITORING

Monitoring wells will continue to be sampled quarterly for BTEX concentrations. A report summarizing the groundwater results will be prepared and transmitted annually.

JAL QUADRANGLE

NEW MEXICO - TEXAS



SCALE

0 0.7 1.4 2.1 2.8 3.5 km

0 0.4 0.8 1.2 1.6 2 mi

N

W E

S

LAT: 32° 04' 36"

LONG: 103° 10' 38"

CHECK BY	CC
DRAWN BY	WZ
DATE	12-22-06
SCALE	AS SHOWN
CAD NO.	F1
PRJ NO.	106.001

SITE LOCATION MAP

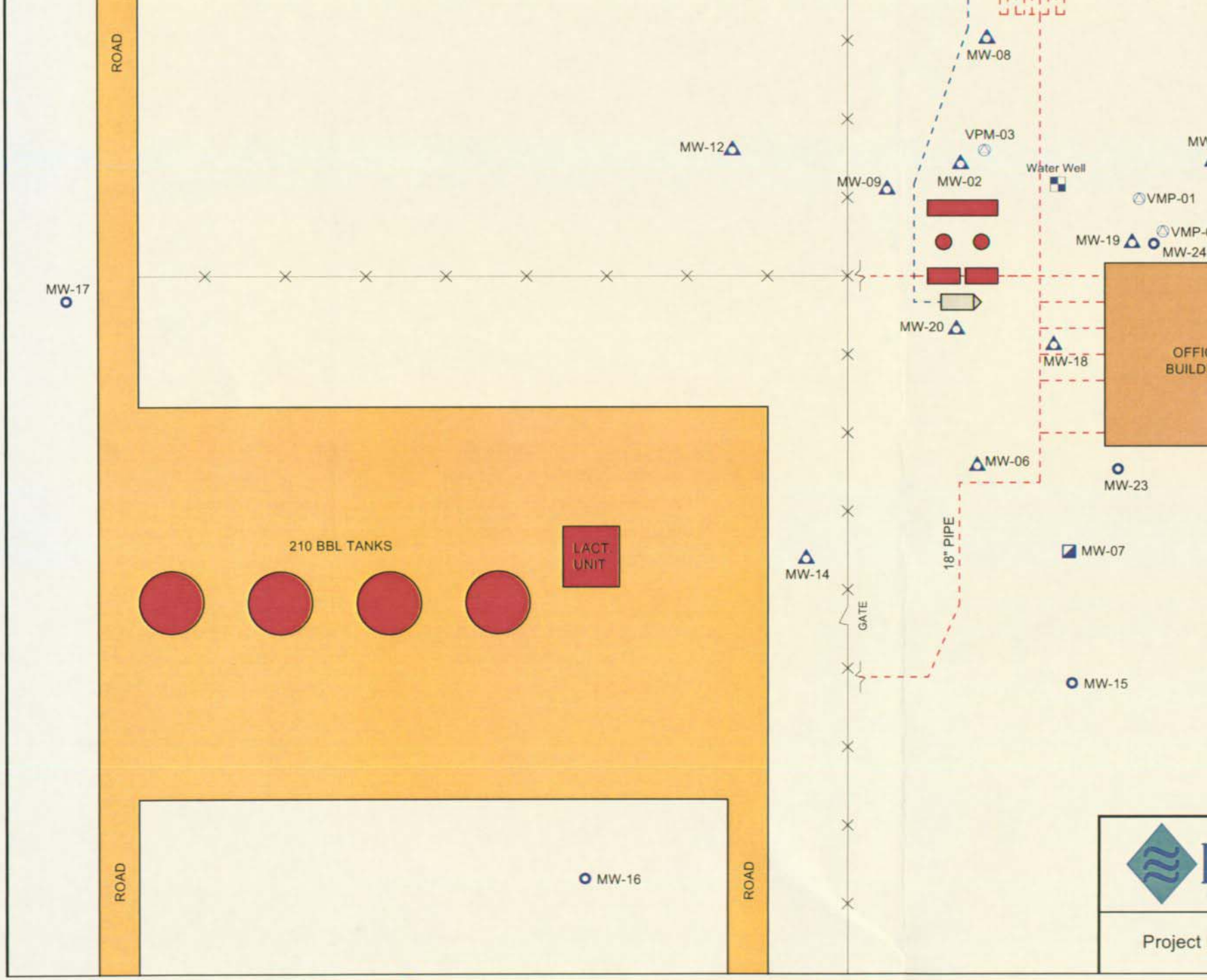
PLAINS ALL AMERICAN PIPELINE, L.P.
LEA COUNTY, NEW MEXICO

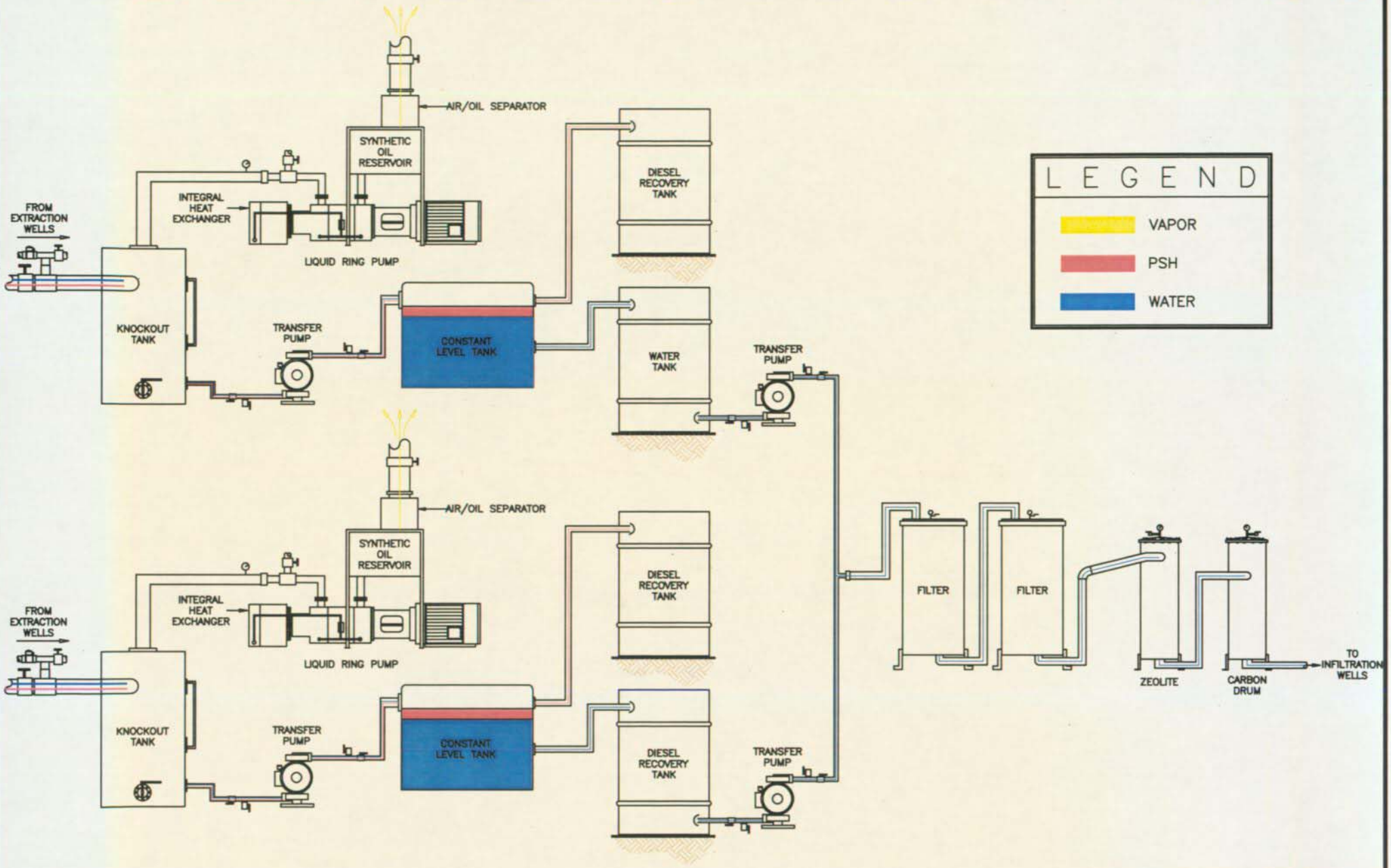
JAL BASIN STATION

H2A ENVIRONMENTAL, LTD.

FIGURE

1


ROAD
MW-08
MW-12
VPM-03
MW-09
MW-02
Water Well
VMP-01
MW-19
MW-24
MW-17
MW-20
MW-18
OFFI
BUILD
MW-06
MW-23
210 BBL TANKS
LACT UNIT
MW-14
18" PIPE
MW-07
GATE
MW-15
ROAD
MW-16
ROAD
Project



CHECK BY	CC
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	12-27-06
SCALE	AS SHOWN
CAD NO.	F3
PRJ NO.	106.001

HIVAC SYSTEM SCHEMATIC

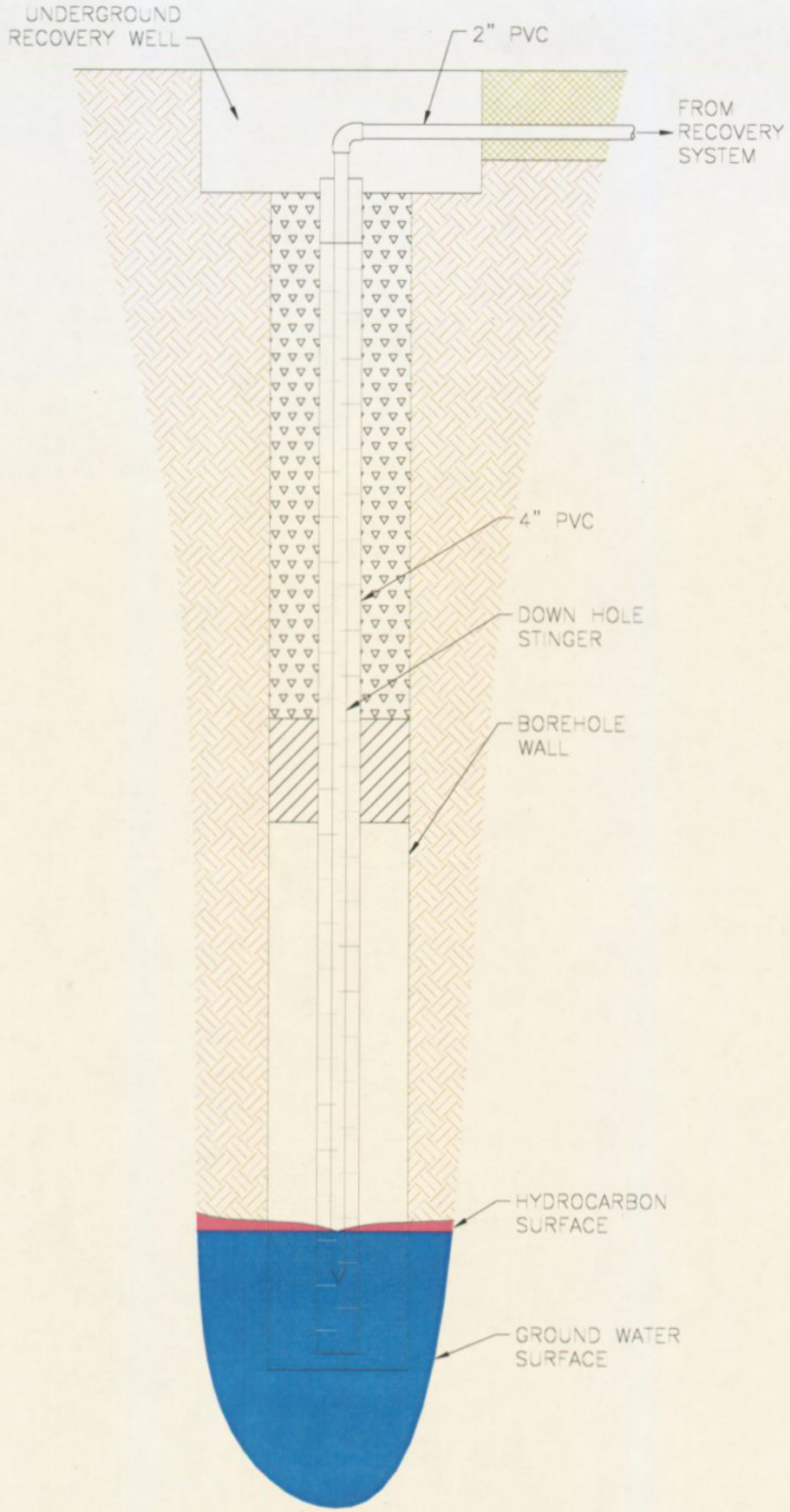
PLAINS ALL AMERICAN PIPELINE, LP
LEA COUNTY, NEW MEXICO

JAL BASIN STATION

H2A ENVIRONMENTAL, LTD.

FIGURE

3



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DRAWN BY	WZ
DATE	12-22-06
SCALE	AS SHOWN
CAD NO.	F1
PRJ NO.	106.001

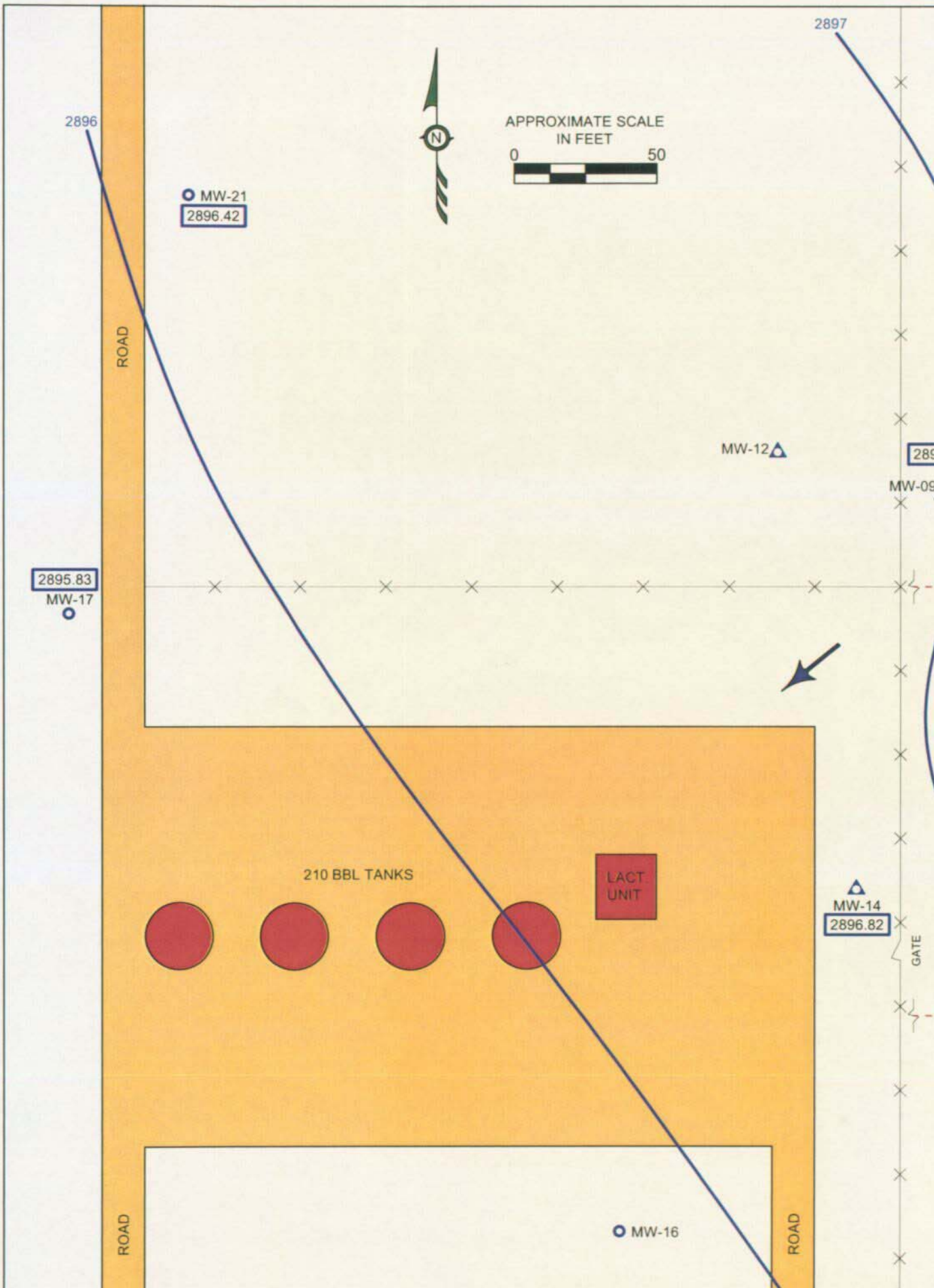
MULTI-PHASE VACUUM
EXTRACTION WELL DETAIL
PLAINS ALL AMERICAN PIPELINE, L.P.
LEA COUNTY, NEW MEXICO

JAL BASIN STATION

H2A ENVIRONMENTAL, LTD.

FIGURE

4


2897
2896
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APPROXIMATE SCALE
IN FEET
0
50
MW-21
2896.42
ROAD
MW-12
MW-09
2895.83
MW-17
210 BBL TANKS
LACT
UNIT
MW-14
2896.82
GATE
ROAD
MW-16
ROAD

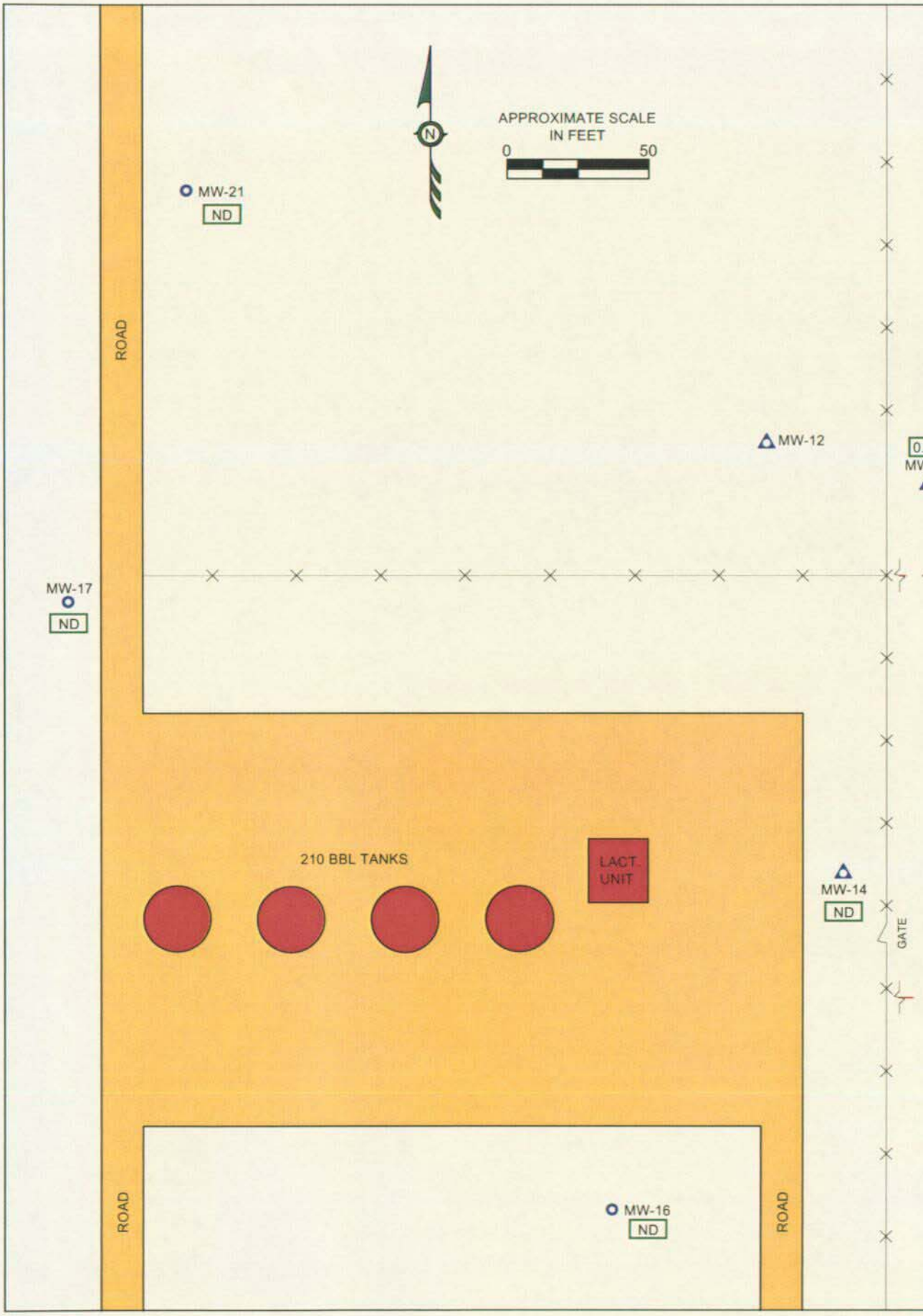

N
APPROXIMATE SCALE
IN FEET
0
50
MW-21
ND
ROAD
MW-12
MW-17
ND
210 BBL TANKS
LACT.
UNIT
MW-14
ND
GATE
ROAD
ROAD
MW-16
ND

TABLE I

SAMPLING SCHEDULE – Hi-VAC SYSTEM
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

CONTAMINANT	SAMPLING FREQUENCY*	SAMPLE LOCATION	TOTAL NO. OF SAMPLES	EPA METHOD	CLOSURE CONCENTRATION (mg/l)
Arsenic	Annually	System Effluent	1 1 per year	6010	0.1
Barium	Annually	System Effluent	1 1 per year	6010	1.0
Cadmium	Annually	System Effluent	1 1 per year	6010	0.01
Chromium	Annually	System Effluent	1 1 per year	6010	0.05
Cyanide	Every 3 years	System Effluent	1 1 per 3 yrs	335.2	0.2
Fluoride	Every 3 years	System Effluent	1 1 per 3 yrs	300	1.6
Lead	Annually	System Effluent	1 1 per year	6010	0.05
Total Mercury	Annually	System Effluent	1 1 per year	7470	0.002
Nitrate (NO_3 as N)	Annually	System Effluent	1 1 per year	353.2	10.0
Selenium	Annually	System Effluent	1 1 per year	6010	0.05
Silver	Annually	System Effluent	1 1 per year	6010	0.05
Benzene	Monthly	System Effluent	1 1 per mo.	8020	0.01
Toluene	Monthly	System Effluent	1 1 per mo.	8020	0.75
Carbon Tetrachloride	Annually	System Effluent	1 1 per year	8260	0.01
1,2-Dichloroethane	Annually	System Effluent	1 1 per year	8260	0.01

TABLE I
(continued)

SAMPLING SCHEDULE – Hi-VAC SYSTEM
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

CONTAMINANT	SAMPLING FREQUENCY*	SAMPLE LOCATION	TOTAL NO. OF SAMPLES	EPA METHOD	MAX EFFLUENT CONCENTRATION (mg/l)
1,1-Dichloroethylene	Annually	System Effluent	1 1 per year	8260	0.005
1,1,2,2-Tetrachloroethylene	Annually	System Effluent	1 1 per year	8260	0.02
1,1,2-Trichloroethylene	Annually	System Effluent	1 1 per year	8260	0.1
Ethylbenzene	Monthly	System Effluent	1 1 per mo.	8020	0.75
Total Xylenes	Monthly	System Effluent	1 1 per mo.	8020	0.62
Methylene Chloride	Annually	System Effluent	1 1 per year	8260	0.1
Chloroform	Annually	System Effluent	1 1 per year	8260	0.1
1,1-Dichloroethane	Annually	System Effluent	1 1 per year	8260	0.025
Ethylene Dibromide	Annually	System Effluent	1 1 per year	8260	0.0001
1,1,1-Trichloroethane	Annually	System Effluent	1 1 per year	8260	0.06
1,1,2-Trichloroethane	Annually	System Effluent	1 1 per year	8260	0.01
1,1,2,2-Tetrachloroethane	Annually	System Effluent	1 1 per year	8260	0.01
Vinyl Chloride	Annually	System Effluent	1 1 per year	8260	0.001
PAHs: Total Naphthalene plus monomethylnaphthalenes	Annually	System Effluent	1 1 per year	8270	0.03
Benzo-a-pyrene	Annually	System Effluent	1 1 per year	8270	0.0007
Chloride	Annually	System Effluent	1 1 per year	300	250.0
Copper	Annually	System Effluent	1 1 per year	6010	1.0
Iron	Annually	System Effluent	1 1 per year	6010	1.0
Manganese	Annually	System Effluent	1 1 per year	6010	0.2
Phenols	Every 3 years	System Effluent	1 1 per 3 yrs	8270	0.005

TABLE I
(continued)

SAMPLING SCHEDULE – Hi-VAC SYSTEM
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

CONTAMINANT	SAMPLING FREQUENCY*	SAMPLE LOCATION	TOTAL NO. OF SAMPLES	EPA METHOD	MAX EFFLUENT CONCENTRATION (mg/l)
Sulfate	Annually	System Effluent	1 1 per year	300.0	600.0
Total Dissolved Solids (TDS)	Annually	System Effluent	1 1 per year	160.1	1000.0
Zinc	Annually	System Effluent	1 1 per year	6010	10.0
pH	Annually	System Effluent	1 1 per year	150.1	between 6 and 9
Aluminum	Annually	System Effluent	1 1 per year	6010	5.0
Boron	Annually	System Effluent	1 1 per year	6010	0.75
Cobalt	Annually	System Effluent	1 1 per year	6010	0.05
Molybdenum	Annually	System Effluent	1 1 per year	6010	1.0
Nickel	Annually	System Effluent	1 1 per year	6010	0.2

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

MR. EDWARD J. HANSEN
ENERGY, MINERALS, AND NATURAL
RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
SANTA FE, NM 87505

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery 1-5

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☒ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 7004 1350 0001 2802 0663

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

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

February 02, 2007

Mr. Ken Springer
Shell Oil Products US
P.O. Box 1087
Huffman, TX 77336

Re: Groundwater Discharge Permit GW-350
Jal Basin Station
Section 5-Ts 25S-R37E
Lea County, NM

Dear Mr. Springer:

Per your request please find enclosed a copy of the discharge permit GW-350 for the groundwater abatement activities for the above referenced site. OCD never received the signed permit or associated fees, so therefore please sign and return with the appropriate fees as soon as possible. As discussed during our technical meeting yesterday, it appears that your abatement activities were approved by OCD and proper public notice was given for this site under abatement plan AP-04. There appeared to be a misunderstanding between all parties involved as to which permit number is associated with which facility or activity.

OCD is hereby resolving this issue by re-stating that the crude oil pump station, which is now owned and operated by All American Plaines PL is covered under permit #GW-326 and Shell's Ground water Discharge Permit for the abatement of groundwater (AP-04) is covered under GW-350. GW-350 was actually issued on February 12, 2003 with an expiration date of January 25, 2006. This expiration date was most likely in error as permits are normally granted for 5 years. Therefore, the expiration date for this facility will be February 12, 2008.

Lastly, this is an excellent example of how successful a ground water remediation program can be when industry, public and OCD work together to meet environmental obligations. Shell Oil has reduced the LNAPL thickness from approximately 8-10 feet over a large area, to a fraction of an inch in a single recovery well, and has recovered approximately 56,000 gallons of diesel as well as an additional 5,000 gallons (equivalent) of vapor. Although Shell Oil has not yet completed its remediation of this ground water contamination site, it has proactively and aggressively addressed its environmental obligation to restore the quality of the ground water in New Mexico.

Mr. Ken Springer
GW-350
February 02, 2007

In you have any questions or concerns please do not hesitate to call or E-mail wayne.price@state.nm.us.

Sincerely:

Electronic signature 020207702020

Wayne Price
OCD-Environmental Bureau Chief
1220 S. Saint Francis Drive
Santa Fe, NM 87505
505-476-3490
fax: 505-476-3462
E-mail: wayne.price@state.nm.us

CC: Don Neeper-NMCCAW e-mail
OCD District Office

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

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

February 02, 2007

Ken Springer
Shell Oil Products
P.O. Box 1087
Huffman, TX 77336

Re: Discharge Permit GW-350 Jal Basin Crude Oil Station
Abatement of Groundwater (AP-04)

Dear Mr. Springer:

Pursuant to Water Quality Control Commission (WQCC) Regulations 20.6.2.3000 - 20.6.2.3114 NMAC, the Oil Conservation Division (OCD) hereby approves the discharge permit for the Shell Oil Products (owner/operator) Jal Basin Crude Oil Station Abatement of Groundwater (AP-04) GW-350 located in the NE/4 of Section 05, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico, under the conditions specified in the enclosed **Attachment To The Discharge Permit**. Enclosed are two copies of the conditions of approval. **Please sign and return one copy to the New Mexico Oil Conservation Division (OCD) Santa Fe Office within 30 working days of receipt of this letter including permit fees.**

Please be advised that approval of this permit does not relieve the owner/operator of responsibility should operations result in pollution of surface water, ground water or the environment. Nor does approval of the permit relieve the owner/operator of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If you have any questions, please contact Glenn von Gonten of my staff at (505-476-3488) or E-mail Glenn.VonGonten@state.nm.us. On behalf of the staff of the OCD, I wish to thank you and your staff for your cooperation during this discharge permit review.

Sincerely:

electronic signature-020207702020-1

Wayne Price
OCD-Environmental Bureau Chief

Attachments-1
xc: OCD District Office

ATTACHMENT TO THE DISCHARGE PERMIT
SHELL OIL PRODUCTS
JAL BASIN CRUDE OIL STATION ABATEMENT (AP-04) (GW-350)
DISCHARGE PERMIT APPROVAL CONDITIONS
February 02, 2007

Please remit a check for $2600.00 made payable to Water Quality Management Fund:

Water Quality Management Fund
C/o: Oil Conservation Division
1220 S. Saint Francis Drive
Santa Fe, New Mexico 87505

1. **Payment of Discharge Plan Fees:** All discharge permits are subject to WQCC Regulations. Every billable facility that submits a discharge permit application will be assessed a filing fee of $100.00, plus a renewal flat fee (*see* WQCC Regulation 20.6.2.3114 NMAC). The Oil Conservation Division ("OCD") has received the required $100.00 filing fee. However, the owner/operator still owes the required $2600.00 renewal permit fee for a groundwater abatement site

2. **Permit Expiration and Renewal:** Pursuant to WQCC Regulation 20.6.2.3109.H.4 NMAC, this permit is valid for a period of five years. **The permit will expire on February 12, 2008** and an application for renewal should be submitted no later than 120 days before that expiration date. Pursuant to WQCC Regulation 20.6.2.3106.F NMAC, if a discharger submits a discharge permit renewal application at least 120 days before the discharge permit expires and is in compliance with the approved permit, then the existing discharge permit will not expire until the application for renewal has been approved or disapproved.

3. **Permit Terms and Conditions:** Pursuant to WQCC Regulation 20.6.2.3104 NMAC, when a permit has been issued, the owner/operator must ensure that all discharges shall be consistent with the terms and conditions of the permit. In addition, all facilities shall abide by the applicable rules and regulations administered by the OCD pursuant to the Oil and Gas Act, NMSA 1978, Sections 70-2-1 through 70-2-38.

4. **Owner/Operator Commitments:** The owner/operator shall abide by all commitments and conditions previously submitted and approved in the ***Stage I and II abatement plan (AP-04)*** dated December 18, 2001, including attachments and subsequent amendments and these conditions for approval. Permit applications that reference previously approved plans on file with the division shall be incorporated in this permit and the owner/operator shall abide by all previous commitments of such plans and these conditions for approval.

5. Modifications: WQCC Regulation 20.6.2.3107.C, and 20.6.2.3109 NMAC addresses possible future modifications of a permit. The owner/operator (discharger) shall notify the OCD of any facility expansion, production increase or process modification that would result in any significant modification in the discharge of water contaminants. The Division Director may require a permit modification if any water quality standard specified at 20.6.2.3103 NMAC is being or will be exceeded, or if a toxic pollutant as defined in WQCC Regulation 20.6.2.7 NMAC is present in ground water at any place of withdrawal for present or reasonably foreseeable future use, or that the Water Quality Standards for Interstate and Intrastate streams as specified in 20.6.4 NMAC are being or may be violated in surface water in New Mexico.

6. Waste Disposal and Storage: The owner/operator shall dispose of all wastes at an OCD-approved facility. Only oil field RCRA-exempt wastes may be disposed of by injection in a Class II well. RCRA non-hazardous, non-exempt oil field wastes may be disposed of at an OCD-approved facility upon proper waste determination pursuant to 40 CFR Part 261. Any waste stream that is not listed in the discharge permit application must be approved by the OCD on a case-by-case basis.

A. OCD Rule 712 Waste: Pursuant to OCD Rule 712 (19.15.9.712 NMAC) disposal of certain non-domestic waste without notification to the OCD is allowed at NMED permitted solid waste facilities if the waste stream has been identified in the discharge permit and existing process knowledge of the waste stream does not change.

B. Waste Storage: The owner/operator shall store all waste in an impermeable bermed area, except waste generated during emergency response operations for up to 72 hours. All waste storage areas shall be identified in the discharge permit application. Any waste storage area not identified in the permit shall be approved on a case-by-case basis only. The owner/operator shall not store oil field waste on-site for more than 180 days unless approved by the OCD.

7. **Drum Storage:** The owner/operator must store all drums, including empty drums, containing materials other than fresh water on an impermeable pad with curbing. The owner/operator must store empty drums on their sides with the bungs in place and lined up on a horizontal plane. The owner/operator must store chemicals in other containers, such as tote tanks, sacks, or buckets on an impermeable pad with curbing.

8. Process, Maintenance and Yard Areas: The owner/operator shall either pave and curb or have some type of spill collection device incorporated into the design at all process, maintenance, and yard areas which show evidence that water contaminants from releases, leaks and spills have reached the ground surface.

9. Above Ground Tanks: The owner/operator shall ensure that all aboveground tanks have impermeable secondary containment (e.g., liners and berms), which will contain a volume of at least one-third greater than the total volume of the largest tank or all interconnected tanks. The owner/operator shall retrofit all existing tanks before discharge permit renewal. Tanks that contain fresh water or fluids that are gases at atmospheric temperature and pressure are exempt from this condition.

10. Labeling: The owner/operator shall clearly label all tanks, drums, and containers to identify their contents and other emergency notification information. The owner/operator may use a tank code numbering system, which is incorporated into their emergency response plans.

11. Below-Grade Tanks/Sumps and Pits/Ponds.

A. All below-grade tanks and sumps must be approved by the OCD prior to installation and must incorporate secondary containment with leak detection into the design. The owner/operator shall retrofit all existing systems without secondary containment and leak detection before discharge permit renewal. All existing below-grade tanks and sumps without secondary containment and leak detection must be tested annually or as specified herein. Systems that have secondary containment with leak detection shall have a monthly inspection of the leak detection system to determine if the primary containment is leaking. Small sumps or depressions in secondary containment systems used to facilitate fluid removal are exempt from these requirements if fluids are removed within 72 hours.

B. All pits and ponds, including modifications and retrofits, shall be designed by a certified registered professional engineer and approved by the OCD prior to installation. In general, all pits or ponds shall have approved hydrologic and geologic reports, location, foundation, liners, and secondary containment with leak detection, monitoring and closure plans. All pits or ponds shall be designed, constructed and operated so as to contain liquids and solids in a manner that will protect fresh water, public health, safety and the environment for the foreseeable future. The owner/operator shall retrofit all existing systems without secondary containment and leak detection before discharge permit renewal.

C. The owner/operator shall ensure that all exposed pits, including lined pits and open top tanks (8 feet in diameter or larger) shall be fenced, screened, netted, or otherwise rendered non-hazardous to wildlife, including migratory birds.

D. The owner/operator shall maintain the results of tests and inspections at the facility covered by this discharge permit and available for OCD inspection. The owner/operator shall report the discovery of any system which is found to be leaking or has lost integrity to the OCD within 15 days. The owner/operator may propose various methods for testing such as pressure testing to 3 pounds per square inch greater than normal operating pressure and/or visual inspection of cleaned tanks and/or sumps, or other OCD-approved methods. The owner/operator shall notify the OCD at least 72 hours prior to all testing.

12. Underground Process/Wastewater Lines:

A. The owner/operator shall test all underground process/wastewater pipelines at least once every five (5) years to demonstrate their mechanical integrity, except lines containing fresh water or fluids that are gases at atmospheric temperature and pressure. Pressure rated pipe shall be tested by pressuring up to one and one-half times the normal operating pressure, if possible, or for atmospheric drain systems, to 3 pounds per square inch greater than normal operating pressure, and pressure held for a minimum of 30 minutes with no more than a 1% loss/gain in pressure. The owner/operator may use other methods for testing if approved by the OCD.

B. The owner/operator shall maintain underground process and wastewater pipeline schematic diagrams or plans showing all drains, vents, risers, valves, underground piping, pipe type, rating, size, and approximate location. All new underground piping must be approved by the OCD prior to installation. The owner/operator shall report any leaks or loss of integrity to the OCD within 15 days of discovery. The owner/operator shall maintain the results of all tests at the facility covered by this discharge permit and they shall be available for OCD inspection. The owner/operator shall notify the OCD at least 72 hours prior to all testing.

13. Class V Wells: The owner/operator shall close all Class V wells (e.g., septic systems, leach fields, dry wells, etc.) that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes unless it can be demonstrated that ground water will not be impacted in the reasonably foreseeable future. Leach fields and other wastewater disposal systems at OCD-regulated facilities that inject non-hazardous fluid into or above an underground source of drinking water are considered Class V injection wells under the EPA UIC program. Class V wells that inject domestic waste only, must be permitted by the New Mexico Environment Department (NMED).

14. Housekeeping: The owner/operator shall inspect all systems designed for spill collection/prevention and leak detection at least monthly to ensure proper operation and to prevent over topping or system failure. All spill collection and/or secondary containment devices shall be emptied of fluids within 72 hours of discovery. The owner/operator shall maintain all records at the facility and available for OCD inspection.

15. Spill Reporting: The owner/operator shall report all unauthorized discharges, spills, leaks and releases and conduct corrective action pursuant to WQCC Regulation 20.5.12.1203 NMAC and OCD Rule 116 (19.15.3.116 NMAC). The owner/operator shall notify both the OCD District Office and the Santa Fe Office within 24 hours and file a written report within 15 days.

16. OCD Inspections: The OCD may place additional requirements on the facility and modify the permit conditions based on OCD inspections.

17. Storm Water: The owner/operator shall implement and maintain run-on and runoff plans and controls. The owner/operator shall not discharge any water contaminant that exceeds the WQCC standards specified in 20.6.2.3101 NMAC or 20.6.4 NMAC (Water Quality Standards for Interstate and Intrastate Streams) including any oil sheen in any stormwater run-off. The owner/operator shall notify the OCD within 24 hours of discovery of any releases and shall take immediate corrective action(s) to stop the discharge.

18. Unauthorized Discharges: The owner/operator shall not allow or cause water pollution, discharge or release of any water contaminant that exceeds the WQCC standards listed in 20.6.2.3101 NMAC or 20.6.4 NMAC (Water Quality Standards for Interstate and Intrastate Streams) unless specifically listed in the permit application and approved herein. ***An unauthorized discharge is a violation of this permit.***

19. Vadose Zone and Water Pollution: The owner/operator shall address any contamination through the discharge permit process or pursuant to WQCC 20.6.2.4000-.4116 NMAC (Prevention and Abatement of Water Pollution). The OCD may require the owner/operator to modify its permit for investigation, remediation, abatement, and monitoring requirements for any vadose zone or water pollution. Failure to perform any required investigation, remediation, abatement and submit subsequent reports will be a violation of the permit.

20. Additional Site Specific Conditions: N/A

21. Transfer of Discharge Permit (WQCC 20.6.2.3111) Prior to any transfer of ownership, control, or possession (whether by lease, conveyance or otherwise) of a facility with a discharge permit, the transfer or shall notify the transferee in writing of the existence of the discharge permit, and shall deliver or send by certified mail to the department a copy of such written notification, together with a certification or other proof that such notification has in fact been received by the transferee.
Upon receipt of such notification, the transferee shall have the duty to inquire into all of the provisions and requirements contained in such discharge permit, and the transferee shall be charged with notice of all such provisions and requirements as they appear of record in the department's file or files concerning such discharge permit. The transferee (new owner/operator) shall sign and return an original copy of these permit conditions and provide a written commitment to comply with the terms and conditions of the previously approved discharge permit.

22. Closure: The owner/operator shall notify the OCD when operations of the facility are to be discontinued for a period in excess of six months. Prior to closure of the facility, the operator shall submit a closure plan for approval. Closure and waste disposal shall be in accordance with the statutes, rules and regulations in effect at the time of closure.

23. Certification: Shell Oil Products, (Owner/Operator), by the officer whose signature appears below, accepts this permit and agrees to comply with all submitted commitments, including these terms and conditions contained here. **Owner/Operator** further acknowledges that the OCD may, for good cause shown, as necessary to protect fresh water, public health, safety, and the environment, change the conditions and requirements of this permit administratively.

Conditions accepted by: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

_____
Company Name-print name above

_____
Company Representative- print name

_____
Company Representative- signature

Title_____

Date:_____

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

February 12, 2003

CERTIFIED MAIL
RETURN RECEIPT NO: 7001-1940-0004-7923-0704

Mr. Ken Springer
Shell Oil Products
777 Walker St. (TSP 1206)
Houston, Texas 77002

CERTIFIED MAIL
RETURN RECEIPT NO: 7001-1940-0004-7923-0711

Mr. Wayne E. Roberts
All American Pipeline, LP
P.O. Box 3371
Midland, Texas 79702

RE: DISCHARGE PERMITS GW-326 AND GW-350
JAL BASIN STATION
JAL, NEW MEXICO

Dear Mr. Springer and Mr. Roberts:

The New Mexico Oil Conservation Division (OCD) has reviewed Shell Pipeline Company's (Shell) and All American Pipeline's (All American) correspondence titled August 30, 2002 "DISCHARGE PLAN (GW-326), JAL BASIN STATION, JAL, NEW MEXICO". This document, jointly submitted by Shell and All American, requests a modification to discharge permit GW-326 to sever the portion of the permit related to reinjection of treated ground water from the overall tank farm facility discharge permit and create a separate discharge permit for this activity. The request is based on the sale of the Jal Basin crude oil tank farm to All American Pipeline, LP, who will be responsible for the operation of the facility, and the contractual agreement for Shell to retain responsibility for ground water remediation activities.

The ground water discharge permit modification for discharge permit GW-326 is hereby approved. The facility operations of the Jal Basin Station by All American shall continue to be permitted under discharge permit GW-326. A new permit has been created for Shell's ground water reinjection activities. Please refer to discharge permit GW-350 in all future correspondence and applications related to ground water reinjection activities at the Jal Basin Station.

Discharge permit GW-326 was originally submitted on November 28, 2000 and approved on January 25, 2001. The discharge permit modification is approved pursuant to Section 3109.C. of the New Mexico Water Quality Control Commission (WQCC) regulations. Please note Section 3109.G, which provides for possible future amendment of the permit. Please be advised that OCD approval does not relieve Shell or All American of responsibility should their operations result in additional pollution of surface water, ground waters, or the environment. In addition, OCD approval does not relieve Shell and All American of responsibility for compliance with any other federal, state or local laws and regulations.

Please note that Section 3104 of the regulations requires that "When a permit has been issued, discharges must be consistent with the terms and conditions of the permit." Pursuant to Section 3107.C, Shell and All American are required to notify the Director of any facility expansion, production increase or process modification that would result in any change in water quality discharge or volume.

Discharge permits GW-326 and GW-350 will expire on January 25, 2006, and Shell and All American should submit renewal applications in ample time before that date. Note that under Section 3106.F of the regulations, if a discharger submits a discharge permit renewal application at least 120 days before the discharge permit expires and is in compliance with the approved permit, then the existing discharge permit will not expire until the application for renewal has been approved or disapproved.

The discharge permit modification for the Jal Basin Pump Station is subject to WQCC regulation 3114. Every facility submitting an application for discharge permit modification is assessed a filing fee of $100.00 dollars plus one-half of the permit fee. Since the permit modification required little cost for issuance, the OCD waives the permit modification and filing fee pursuant to Section 3114.E.

If you have any questions, please contact Bill Olson of my staff at (505) 476-3491.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/wco

xc: Chris Williams OCD Hobbs District Supervisor
Theresa Nix, H2A Environmental, Ltd.
Don Neeper

RECEIVED

AUG 2 6 2002

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

August 12, 2002

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Discharge Plan (GW-326)
Jal Basin Station
Jal, New Mexico

Dear Mr. Olson:

Transmitted with this letter is the discharge plan application for modification to Discharge Plan GW-326 for Equilon Pipeline Company LLC ("Equilon Pipeline"). In 1998, Shell and Texaco combined their pipeline assets into Equilon Pipeline Company LLC. On February 13, 2002, Shell acquired Texaco Refining and Marketing Inc. and thereby now owns 100% of Equilon Pipeline. As a result of this change, effective May 1, 2002, the subject facility was operated under the name of Shell Pipeline Company LP ("Shell Pipeline"). Even though the company was renamed and the structure of the corporation was changed from a Limited Liability Company (LLC) to a Limited Partnership (LP), this did not constitute a transfer in ownership.

All American Pipeline, LP ("All American Pipeline") acquired the Shell Pipeline's Jal Basin Station, effective August 1, 2002. The facility will now be operated by All American Pipeline; however, Shell Pipeline will retain ownership and operating responsibilities of the existing HiVac remediation system located at the site. Shell Pipeline and All American Pipeline request that Discharge Plan GW-326 be divided into two separate plans. Shell Pipeline will retain the HiVac system operation portion of Discharge Plan GW-326 (which was submitted in a discharge plan modification dated March 1, 2001) and All American Pipeline will take ownership and responsibility for the facility operations portion of Discharge Plan GW-326.

In summary, the following changes have been noted on the attached modification.

1. Equilon Pipeline Company LLC has been changed to Shell Pipeline Company LP.
2. The facility owner and operator have been changed to All American Pipeline, LP.
3. Shell Pipeline Company LP is listed ONLY as the HiVac system operator and will retain the responsibilities of the HiVac system portion of Discharge Plan GW-326.
4. All American Pipeline, LP will accept the responsibilities of ONLY the facility operations portion of Discharge Plan GW-326.
5. The contact information for the HiVac system and facility has been updated.

If you have any questions or need additional information, please contact either of the following at the numbers below.

Responsible Officials:

HiVac System Operations
Mark W. Byrd
Regional Operations Manager
Shell Pipeline Company LP
12700 Northborough Drive, MFT #108
Houston, TX 77067

Facility Operations
Wayne E. Roberts
Manager, Environmental & Regulatory Compliance
All American Pipeline, LP
P.O. Box 3371
Midland, TX 79702

We appreciate your assistance in this matter.

Mark W. Byrd 5/15/02
Mark W. Byrd Date
Shell Pipeline Company LP

Wayne E. Roberts 08/19/02
Wayne E. Roberts Date
All American Pipeline, LP

Attachment

C:\Theresa\H2A\Jal - 106.001\Discharge Plan\Discharge Mod 08-2002.doc

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised January 24, 2001

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES, GAS PLANTS, REFINERIES, COMPRESSOR, GEOTHERMAL FACILITES AND CRUDE OIL PUMP STATIONS

(Refer to the OCD Guidelines for assistance in completing the application)

☐ New ☐ Renewal ☒ Modification

1. Type: **HiVac Soil and Groundwater Extraction System & Crude Oil Pump Station**
2. Operator: **All American Pipeline, LP (Facility only), Shell Pipeline Company LP (HiVac system only)**

   Address: **2 miles south of Jal on State Highway 18**

   Contact Person: **Marc C. Oler (HiVac system only)** Phone: **303-663-2503 (HiVac system only)**
   Wayne E. Roberts (Facility only) Phone: **915-682-5392 (Facility operations only)**
3. Location: **SE** /4 **SE** /4 Section **32** Township **25 South** Range **37 East**
   Submit large scale topographic map showing exact location.
   See Discharge Plan GW-326 and modification dated 03/01/2001. The facility is also located in the NE/4, NE/4 and NW/4, NE/4 of Section 5, Township 26 South, Range 37 East.
4. Attach the name, telephone number and address of the landowner of the facility site.
   See Discharge Plan GW-326.
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.
   See Discharge plan GW-326 for facility layout and APPENDIX A and FIG. 2 of modification dated 03/01/2001.
6. Attach a description of all materials stored or used at the facility.
   See Discharge Plan GW-326 and APPENDIX B of modification dated 03/01/2001.
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included.
   See Discharge Plan GW-326.
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures.
   See Discharge Plan GW-326 and APPENDIX C of modification dated 03/01/2001.
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems.
   See Discharge Plan GW-326 and APPENDIX D of modification dated 03/01/2001.
10. Attach a routine inspection and maintenance plan to ensure permit compliance.
    See Discharge Plan GW-326 and APPENDIX E of modification dated 03/01/2001.
11. Attach a contingency plan for reporting and clean-up of spills or releases.
    See Discharge Plan GW-326.
12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included.
    See Discharge Plan GW-326 and TABLES II and III of modification dated 03/01/2001.
13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders. **See Discharge Plan GW-326.**

14. CERTIFICATION I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: **Mark W. Byrd** Title: **Regional Operations Manager**

Signature: Mark W. Byrd Date: 8/15/02

NEW MEXICO ENERGY, MINERALS and
NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

October 23, 2001

CERTIFIED MAIL
RETURN RECEIPT NO: 5357-7980

Mr. William K. Keenan
Equilon Pipeline Company
8023 East 63rd Place
Tulsa, Oklahoma 74133

RE: DISCHARGE PLAN (GW-326)
JAL BASIN STATION
JAL, NEW MEXICO

Dear Mr. Keenan:

The New Mexico Oil Conservation Division (OCD) has completed a review of Equilon Pipeline Company's (Equilon) April 30, 2001 "DISCHARGE PLAN (GW-326) MODIFICATION, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001" and March 1, 2001 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001" which were submitted on behalf of Equilon by their consultant H2A Environmental, Ltd. These documents contain Equilon's proposed discharge plan modification for treatment and reinjection of contaminated ground water at Equilon's Jal Basin Station located in the SE/4, SE/4 and the SW/4, SE/4 of Section 32, Township 25 South, Range 37 East and in the NE/4, NE/4 and the NW/4, NE/4 of Section 5, Township 26 South, Range 37 East NMPM, Lea County, New Mexico.

The ground water discharge plan modification for discharge plan GW-326 is hereby approved under the conditions contained in the enclosed attachment. Enclosed are two copies of the conditions of approval. **Please sign and return one copy to the OCD Santa Fe Office within thirty (30) days of receipt of this letter.**

The discharge plan was originally submitted on November 28, 2000 and approved on January 25, 2001. The discharge plan modification is approved pursuant to Section 3109.C. of the New Mexico Water Quality Control Commission (WQCC) regulations. Please note Section 3109.G, which provides for possible future amendment of the plan. Please be advised that OCD approval does not relieve Equilon of responsibility should their operations result in additional pollution of surface water, ground waters, or the environment. In addition, OCD approval does not relieve Equilon of responsibility for compliance with any other federal, state or local laws and regulations.

Please be advised that all exposed pits, including lined pits and open tanks (exceeding 16 feet in diameter) shall be screened, netted or otherwise rendered nonhazardous to wildlife including migratory birds.

Please note that Section 3104 of the regulations requires that "When a plan has been approved, discharges must be consistent with the terms and conditions of the plan." Pursuant to Section 3107.C, Equilon is required to notify the Director of any facility expansion, production increase or process modification that would result in any change in water quality discharge or volume.

The discharge plan will expire on January 25, 2006 and Equilon should submit an application in ample time before that date. Note that under Section 3106.F of the regulations, if a discharger submits a discharge plan renewal application at least 120 days before the discharge plan expires and is in compliance with the approved plan, then the existing discharge plan will not expire until the application for renewal has been approved or disapproved.

The discharge plan modification for the Equilon Jal Basin Pump Station is subject to WQCC regulation 3114. Every facility submitting an application for discharge plan modification will be assessed a filing fee of $100.00 dollars plus one-half of the permit fee. Since the permit was recently issued and the modification required little cost for issuance, the OCD waives the permit modification fee pursuant to Section 3114.E. The OCD has no record of receiving the filing fee for this modification. Please remit the filling fee upon receipt of this approval.

On behalf of the staff of the OCD, I wish to thank you and your staff for your cooperation during this discharge plan review.

If you have any questions, please contact Bill Olson of my staff at (505) 476-3491.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/wco

Attachment

xc: Chris Williams OCD Hobbs District Supervisor
Theresa Nix, H2A Environmental, Ltd.
Don Neeper

ATTACHMENT TO DISCHARGE PLAN MODIFICATION APPROVAL
Equilon Jal Basin Station (GW-326)
APPROVAL CONDITIONS
October 5, 2001

1. Payment of Discharge Plan Fees: The $100.00 filing fee has **not** been received by the OCD. The filing fee was payable at the time of application and is due upon receipt of this approval. Please make all checks payable to:

   Water Quality Management Fund
   c/o New Mexico Oil Conservation Division
   1220 South. St. Francis Dr.
   Santa Fe, NM 87505

2. Commitments: Equilon Pipeline Company (Equilon) shall abide by all commitments submitted in the discharge plan modification requests dated April 30, 2001 and March 1, 2001 and these conditions for approval.

3. Waste Disposal: All wastes shall be disposed of at an OCD approved facility. Any waste stream that is not listed in the discharge plan will be approved by OCD on a case-by-case basis. Only oilfield exempt wastes shall be disposed of down Class II injection wells. Non-exempt wastes shall be disposed of at an OCD approved facility upon proper waste determination per 40 CFR Part 261. **Rule 712 Waste:** Pursuant to OCD Rule 712, disposal of certain non-domestic waste is permitted at solid waste facilities permitted by the New Mexico Environment Department as long as:
   1. the waste stream is identified, and authorized, as such in the discharge plan, and;
   2. existing process knowledge of such waste streams does not change without notification to the OCD.

4. Drum Storage: All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums should be stored on their sides with the bungs in place and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets must also be stored on an impermeable pad with curbing.

5. Process Areas: All process and maintenance areas which show evidence that leaks and spills are reaching the ground surface must be either paved and curbed or have some type of spill collection device incorporated into the design.

6. Above Ground Tanks: All above ground tanks which contain fluids other than fresh water must be bermed to contain a volume of one-third more than the total volume of the largest tank or of all interconnected tanks. All new facilities or modifications to existing facilities must place the tank on an impermeable type pad within the berm.

7. Above Ground Saddle Tanks: Above ground saddle tanks must have impermeable pad and curb type containment unless they contain fresh water or fluids that are gases at atmospheric temperature and pressure.

8. Labeling: All tanks, drums, and other containers should be clearly labeled to identify their contents and other emergency information necessary if the tank were to rupture, spill, or ignite.

9. Below Grade Tanks/Sumps: All new below grade tanks, sumps, and pits must be approved by the OCD prior to installation or upon modification and must incorporate secondary containment and leak-detection into the design.

10. Underground Process/Wastewater Lines: All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity prior to operation. Permittees may propose various methods for testing such as pressure testing to 3 psi above normal operating pressure or other means acceptable to the OCD. The OCD will be notified at least 72 hours prior to all testing. The test results will be submitted to OCD in the quarterly report.

11. Housekeeping: All systems designed for spill collection/prevention and leak detection will be inspected daily to ensure proper operation and to prevent overtopping or system failure.

12. Spill Reporting: Effluent discharges that exceed the New Mexico Water Quality Control Commission (WQCC) standards and spills shall be reported pursuant to OCD Rule 116 and WQCC Rule 1203.

13. Treatment System Monitoring: Effluent from the ground water treatment system will be sampled and analyzed for concentrations of aromatic volatile organics initially, on a weekly basis for one month, and thenceforth on a monthly basis using EPA approved methods and quality assurance/quality control (QA/QC).

14. Ground Water Monitoring: Ground water from all site monitor wells which do not contain free phase products will be sampled and analyzed for concentrations of aromatic volatile organics on a quarterly basis using EPA approved methods and QA/QC.

15. Reporting: Equilon shall file an annual report on the remediation and monitoring system. The report shall be submitted to the OCD Santa Fe Office by April 1 of each year with a copy provided to the OCD Hobbs District Office. The report shall contain:

    a. A description of all remediation and monitoring activities which have occurred during the last calendar year.

    b. A geologic/lithologic log and well completion diagram for any injection well and monitor well installed during the last calendar year.

    c. A quarterly water table potentiometric map showing the location of the spill areas, monitor wells, injection wells and any other pertinent site features as well as the direction and magnitude of the hydraulic gradient.

d. A quarterly product thickness map created using the measured free product thickness observed in each ground water monitoring well.

e. Isopleth maps for contaminants of concern which were observed during the investigations.

f. Summary tables of all past and present effluent and ground water quality sampling results including copies of all recent laboratory analytical data sheets and associated QA/QC data.

g. The monthly volume of product and water recovered from each recovery well and the total volume of product and water recovered to date.

h. The monthly volume of effluent injected in each injection well and the total volume injected in each well to date.

i. The disposition of all wastes generated.

16. Transfer of Discharge Plan: The OCD shall be notified prior to any transfer of ownership, control, or possession of a facility with an approved discharge plan. A written commitment to comply with the terms and conditions of the previously approved discharge plan must be submitted by the purchaser and approved by the OCD prior to transfer.

17. Closure: The OCD shall be notified when operations of the Equilon Jal Basin Pump Station are discontinued for a period in excess of six months. Prior to closure of the Jal Basin Pump Station, Equilon shall submit a closure plan for approval. Closure shall be in accordance with the statutes, rules and regulations in effect at the time of closure.

18. Conditions accepted by: Equilon, by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Equilon further acknowledges that the conditions and requirements of this permit may be changed administratively by the Division for good cause shown as necessary to protect fresh water, human health and the environment.

Equilon Pipeline Company

Print Name:_____

Signature:_____

Title:_____

Date:_____

Olson, William

From: Olson, William
Sent: Thursday, October 11, 2001 3:29 PM
To: Theresa Nix (E-mail)
Cc: Don Neeper (E-mail)
Subject: Jal Basin Station

The OCD has reviewed Equilon's October 8, 2001 correspondence titled "EFFLUENT SAMPLES RESULTS, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001". This document presents the results of effluent samples from the ground water treatment system at Equilon's Jal Basin Station and requests authorization to proceed with re-injecting the treated water.

The temporary authorization to discharge was previously approved by the OCD on May 11, 2001. The 120 day temporary discharge authorization period will start upon commencement of reinjection.

H_2A ENVIRONMENTAL, LTD.

ASSESSMENT • REMEDIATION • RISK ASSESSMENT • COMPLIANCE • LITIGATION / ENFORCEMENT SUPPORT

FAX TRANSMITTAL

TO: Bill Olson
OCD

FAX: 505-476-3462

FROM: Theresa Nix

PHONE: 361-777-0860

DATE: October 8, 2001

RE: Effluent Results & Re-Injection Request

H_2A Job No. 106.001.02

Total No. of Pages (including cover sheet): 6

Mr. Olson,

Attached are the treated groundwater effluent results. Please review the attached letter and tables and call me if you have any questions. I appreciate your assistance with this approval.

418 SAN SABA
PORTLAND, TX 78374

(361) 777-0860
FAX (361) 777-0971

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, KATHI BEARDEN

Publisher

of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period.

of 1

_____ weeks.

Beginning with the issue dated

May 18 2001

and ending with the issue dated

May 18 2001

Kathi Bearden

Publisher

Sworn and subscribed to before me this 18th day of May 2001

Jodi Henson

Notary Public.

My Commission expires
October 18, 2004
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

01100060000 02547126

State of New Mexico Oil &
1220 S. St. Francis
Santa Fe, NM 87505

NOTICE OF PUBLICATION
May 18, 2001
STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission (WQCC) Regulations, the following discharge plan modification application(s) have been submitted to the Director of the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(GW-326) – Equilon Pipeline Company LLC, William K. Keenan, (918) 461-2598, 8023 East 63rd Place, Tulsa, OK 74133, has submitted a discharge plan modification application for the Jal Basin Tank Farm located in the SE/4 of Section 32, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico. The proposed discharge plan modification involves treatment of contaminated ground water to New Mexico Water Quality Control Commission ground water standards, reinjection of the treated ground water and monitoring of the treatment system. All other treatment wastes are proposed to be trucked off site and disposed of in an OCD approved disposal facility. Ground water most likely to be affected from the discharge ranges from a depth of approximately 85 to 95 feet. Ground water at this site is currently under a remediation plan to remove liquid hydrocarbons and dissolved hydrocarbons in concentrations above WQCC ground water standards. The discharge plan addresses how the treatment system will be managed and how spills, leaks, and other accidental discharges to the surface will be managed.

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 discharge plan modification application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan modification application, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan(s) based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan(s) based on the information in the discharge plan modification application(s) and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 17th day of April, 2001.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

SEAL
LORI WROTENBERY, Director
#18189

H2A ENVIRONMENTAL, LTD.
ASSESSMENT • REMEDIATION • RISK ASSESSMENT • COMPLIANCE • LITIGATION / ENFORCEMENT SUPPORT

October 8, 2001

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Effluent Samples Results
Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H_2A Job No. 106.001

Dear Mr. Olson:

Transmitted with this letter are the treated groundwater effluent results (TABLES I through IV) for the above referenced site. Please note that the fluoride and total dissolved solids concentrations exceed the New Mexico Water Quality Control Commission (WQCC) drinking water standards but these constituents are naturally occurring in groundwater located in Lea County, New Mexico and at the site. All of the constituents treated due to the diesel release meet the WQCC drinking water standards. Therefore, Equilon requests authorization to proceed with re-injecting the treated groundwater.

If you have any questions concerning this information please feel free to contact me at (361) 777-0860 or email tnix@h2altd.com.

Respectfully,

Theresa Nix

Theresa Nix
Project Manager

Attachment

cc: Mr. Marc Oler, Equiva Services Co. LLC
Chris Williams, OCD Hobbs
Ernest Richarte, Equilon
Jimmy Sheppard, Equilon

C:\Theresa\H2A\Jal - 106.001\Hi-Vac\Re-injection request.doc

418 SAN SABA
PORTLAND, TX 78374
(361) 777-0860
FAX (361) 777-0971

TABLE I

EFFLUENT LABORATORY RESULTS - BTEX
EQUILON PIPELINE COMPANY LLC
JAL BASIN STATION, NEW MEXICO

Constituent	Acceptable Concentration	Concentration (mg/L)											
		8/29/01	8/30/01	8/31/01	9/1/01	9/2/01	9/3/01	9/4/01	9/5/01	9/6/01	9/7/01	9/15/01	9/22/01
Benzene	0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene	0.75	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Ethylbenzene	0.75	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Xylenes	0.62	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total BTEX	—	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

TABLE II

EFFLUENT LABORATORY RESULTS - METALS
EQUILON PIPELINE COMPANY LLC
JAL BASIN STATION, NEW MEXICO

Constituent	Concentration (mg/L)	Concentration (mg/L)	
		8/29/01	9/15/01
Arsenic	0.1	**0.11**	<0.050
Barium	1	<0.100	---
Cadmium	0.01	**<0.025**	<0.01
Chromium	0.05	<0.010	---
Lead	0.05	<0.010	---
Total Mercury	0.002	<0.0002	---
Selenium	0.05	<0.050	---
Silver	0.05	<0.013	---
Copper	1	<0.013	---
Iron	1	<0.050	---
Manganese	0.2	**0.410**	<0.025
Aluminum	5	0.634	---
Boron	0.75	0.314	---
Cobalt	0.05	<0.025	---
Molybdenum	1	<0.050	---
Nickel	0.2	<0.025	---

NOTE:
Sock filters were added to the treatment process and the effluent was resampled for the constituents which previously exceeded the re-inection requirements.

TABLE III

EFFLUENT LABORATORY RESULTS - PAH
EQUILON PIPELINE COMPANY LLC
JAL BASIN STATION, NEW MEXICO

Constituent	Acceptable Concentration	Concentration (mg/L) 8/29/01	9/15/01
Carbon Tetrachloride	0.01	<0.001	---
1,2-Dichloroethane	0.01	<0.001	---
1,1-Dichloroethylene	0.005	<0.001	---
1,1,2,2-Tetrachloroethylene	0.02	---	<0.001
1,1,2-Trichloroethylene	0.1	<0.001	---
Methylene Chloride	0.1	0.00112	---
Chloroform	0.1	<0.001	---
1,1-Dichloroethane	0.025	<0.001	---
Ethylene Dibromide	0.0001	---	<0.001
1,1,1-Trichloroethane	0.06	<0.001	---
1,1,2-Trichloroethane	0.01	<0.001	---
1,1,2,2-Tetrachloroethane	0.01	<0.001	---
Vinyl Chloride	0.001	<0.001	---
PAHs: Total Naphthalene plus monomethylnaphthalenes	0.03	<0.005	---
Benzo-a-pyrene	0.0007	<0.005	---
Phenols	0.005	<0.005	---

TABLE IV

EFFLUENT LABORATORY RESULTS - MISCELLANEOUS
EQUILON PIPELINE COMPANY LLC
JAL BASIN STATION, NEW MEXICO

Constituent	Acceptable Concentration	Concentration (mg/L) 8/29/01
Cyanide	0.2	<0.01
Fluoride	1.6	**3.12**
Nitrate (NO_3 as N)	10	2.90
Chloride	250	168
Sulfate	600	366
Total Dissolved Solids (TDS)	1000	**1160**
pH	between 6 and 9	7.9

NOTE:
The fluoride and total dissolved solids concentrations are within background concentrations within groundwater.

ATTACHMENT TO DISCHARGE PLAN MODIFICATION APPROVAL
Equilon Jal Basin Station (GW-326)
APPROVAL CONDITIONS
October 5, 2001

1. Payment of Discharge Plan Fees: The $100.00 filing fee has **not** been received by the OCD. The filing fee was payable at the time of application and is due upon receipt of this approval. Please make all checks payable to:

   Water Quality Management Fund
   c/o New Mexico Oil Conservation Division
   1220 South. St. Francis Dr.
   Santa Fe, NM 87505

2. Commitments: Equilon Pipeline Company (Equilon) shall abide by all commitments submitted in the discharge plan modification requests dated April 30, 2001 and March 1, 2001 and these conditions for approval.

3. Waste Disposal: All wastes shall be disposed of at an OCD approved facility. Any waste stream that is not listed in the discharge plan will be approved by OCD on a case-by-case basis. Only oilfield exempt wastes shall be disposed of down Class II injection wells. Non-exempt wastes shall be disposed of at an OCD approved facility upon proper waste determination per 40 CFR Part 261. **Rule 712 Waste:** Pursuant to OCD Rule 712, disposal of certain non-domestic waste is permitted at solid waste facilities permitted by the New Mexico Environment Department as long as:
   1. the waste stream is identified, and authorized, as such in the discharge plan, and;
   2. existing process knowledge of such waste streams does not change without notification to the OCD.

4. Drum Storage: All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums should be stored on their sides with the bungs in place and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets must also be stored on an impermeable pad with curbing.

5. Process Areas: All process and maintenance areas which show evidence that leaks and spills are reaching the ground surface must be either paved and curbed or have some type of spill collection device incorporated into the design.

6. Above Ground Tanks: All above ground tanks which contain fluids other than fresh water must be bermed to contain a volume of one-third more than the total volume of the largest tank or of all interconnected tanks. All new facilities or modifications to existing facilities must place the tank on an impermeable type pad within the berm.

7. Above Ground Saddle Tanks: Above ground saddle tanks must have impermeable pad and curb type containment unless they contain fresh water or fluids that are gases at atmospheric temperature and pressure.

8. Labeling: All tanks, drums, and other containers should be clearly labeled to identify their contents and other emergency information necessary if the tank were to rupture, spill, or ignite.

9. Below Grade Tanks/Sumps: All new below grade tanks, sumps, and pits must be approved by the OCD prior to installation or upon modification and must incorporate secondary containment and leak-detection into the design.

10. Underground Process/Wastewater Lines: All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity prior to operation. Permittees may propose various methods for testing such as pressure testing to 3 psi above normal operating pressure or other means acceptable to the OCD. The OCD will be notified at least 72 hours prior to all testing. The test results will be submitted to OCD in the quarterly report.

11. Housekeeping: All systems designed for spill collection/prevention and leak detection will be inspected daily to ensure proper operation and to prevent overtopping or system failure.

12. Spill Reporting: Effluent discharges that exceed the New Mexico Water Quality Control Commission (WQCC) standards and spills shall be reported pursuant to OCD Rule 116 and WQCC Rule 1203.

13. Treatment System Monitoring: Effluent from the ground water treatment system will be sampled and analyzed for concentrations of aromatic volatile organics initially, on a weekly basis for one month, and thenceforth on a monthly basis using EPA approved methods and quality assurance/quality control (QA/QC).

14. Ground Water Monitoring: Ground water from all site monitor wells which do not contain free phase products will be sampled and analyzed for concentrations of aromatic volatile organics on a quarterly basis using EPA approved methods and QA/QC.

15. Reporting: Equilon shall file an annual report on the remediation and monitoring system. The report shall be submitted to the OCD Santa Fe Office by April 1 of each year with a copy provided to the OCD Hobbs District Office. The report shall contain:

    a. A description of all remediation and monitoring activities which have occurred during the last calendar year.

    b. A geologic/lithologic log and well completion diagram for any injection well and monitor well installed during the last calendar year.

    c. A quarterly water table potentiometric map showing the location of the spill areas, monitor wells, injection wells and any other pertinent site features as well as the direction and magnitude of the hydraulic gradient.

d. A quarterly product thickness map created using the measured free product thickness observed in each ground water monitoring well.

e. Isopleth maps for contaminants of concern which were observed during the investigations.

f. Summary tables of all past and present effluent and ground water quality sampling results including copies of all recent laboratory analytical data sheets and associated QA/QC data.

g. The monthly volume of product and water recovered from each recovery well and the total volume of product and water recovered to date.

h. The monthly volume of effluent injected in each injection well and the total volume injected in each well to date.

i. The disposition of all wastes generated.

16. Transfer of Discharge Plan: The OCD shall be notified prior to any transfer of ownership, control, or possession of a facility with an approved discharge plan. A written commitment to comply with the terms and conditions of the previously approved discharge plan must be submitted by the purchaser and approved by the OCD prior to transfer.

17. Closure: The OCD shall be notified when operations of the Equilon Jal Basin Pump Station are discontinued for a period in excess of six months. Prior to closure of the Jal Basin Pump Station, Equilon shall submit a closure plan for approval. Closure shall be in accordance with the statutes, rules and regulations in effect at the time of closure.

18. Conditions accepted by: Equilon, by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Equilon further acknowledges that the conditions and requirements of this permit may be changed administratively by the Division for good cause shown as necessary to protect fresh water, human health and the environment.

Equilon Pipeline Company

Print Name: WILLIAM K. KEENAN

Signature: William K. Keenan

Title: ENVIRONMENTAL ENGINEER

Date: 11/28/01

THE SANTA FE
NEW MEXICAN
Founded 1849

NEW MEXICO OIL CONSERVATION DIVISION
ATTN: ED MARTIN
2040 S. PACHECO
SANTA FE, NM 87505

AD NUMBER: 206749 ACCOUNT: 56689
LEGAL NO: 69266 P.O.#: 01199000033
213 LINES 1 time(s) at $ 93.89
AFFIDAVITS: 5.25
TAX: 6.20
TOTAL: 105.34

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE
I, M M Weideman 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 #69266 a copy of which is hereto attached was published in said newspaper 1 day(s) between 05/18/2001 and 05/18/2001 and that the notice was published in the newspaper proper and not in any supplement; the first publication being on the 18 day of May, 2001 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

/S/ M M Weideman
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 18 day of May A.D., 2001

Notary Laura E. Harding

Commission Expires 11/23/03

RECEIVED
MAY 25 2001
OIL CONSERVATION DIVISION

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 Water Quality Control Commission (WQCC) Regulations, the following discharge plan modification application(s) have been submitted to the Director of the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(GW-326) - Equilon Pipeline Company LLC, William K. Keenan, (918) 461-2598, 8023 East 63rd Place, Tulsa, OK 74133, has submitted a discharge plan modification application for the Jal Basin Tank Farm located in the SE/4 of Section 32, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico. The proposed discharge plan modification involves treatment of contaminated ground water to New Mexico Water Quality Control Commission ground water standards, reinjection of the treated ground water and monitoring of the treatment system. All other treatment wastes are proposed to be trucked off site and disposed of in an OCD approved disposal facility. Ground water most likely to be affected from the discharge ranges from a depth of approximately 85 to 95 feet. Ground water at this site is currently under a remediation plan to remove liquid hydrocarbons and dissolved hydrocarbons in concentrations above WQCC ground water standards. The discharge plan addresses how the treatment system will be managed and how spills, leaks, and other accidental discharges to the surface will be managed.

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 discharge plan modification application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan modification application, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan(s) based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan(s) based on the information in the discharge plan modification application(s) and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 17th day of April, 2001.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
LORI WROTENBERY, Director
Legal #69266
Pub. May 18, 2001

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

May 11, 2001

CERTIFIED MAIL
RETURN RECEIPT NO: 5051-4362

Mr. William K. Keenan
Equilon Pipeline Company
8023 East 63rd Place
Tulsa, Oklahoma 74133

RE: TEMPORARY DISCHARGE AUTHORIZATION
DISCHARGE PLAN (GW-326)
JAL BASIN STATION
JAL, NEW MEXICO

Dear Mr. Keenan:

The New Mexico Oil Conservation Division (OCD) has reviewed Equilon Pipeline Company's (Equilon) April 30, 2001 "DISCHARGE PLAN (GW-326) MODIFICATION, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001", April 3, 2001 "TEMPORARY AUTHORIZATION FOR DISCHARGE, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001" and March 1, 2001 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001" which were submitted on behalf of Equilon by their consultant H2A Environmental, Ltd. These documents contain Equilon's request for temporary authorization for a period of up to 120 days for treatment and reinjection of contaminated ground water at Equilon's Jal Basin Station located in the SE/4, SE/4 and the SW/4, SE/4 of Section 32, Township 25 South, Range 37 East and in the NE/4, NE/4 and the NW/4, NE/4 of Section 5, Township 26 South, Range 37 East NMPM, Lea County, New Mexico. The temporary discharge authorization is requested to control migration of the contaminated ground water while Equilon's proposed modification to discharge plan GW-326 is pending.

Pursuant to 20 NMAC 6.2.3106.B. the temporary discharge authorization request, as contained in the above-referenced documents, is approved under the conditions contained in the enclosed attachment. This authorization will expire on September 8, 2001.

Please be advised that OCD approval does not relieve Equilon of responsibility should their operations result in additional pollution of surface water, ground waters, or the environment. In addition, OCD approval does not relieve Equilon of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please contact Bill Olson of my staff at (505)-476-3491.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/wco

Attachment

xc: Chris Williams OCD Hobbs District Supervisor
Theresa Nix, H2A Environmental, Ltd.
Also sent copy to Don Neeper 2nd

ATTACHMENT TO TEMPORARY DISCHARGE AUTHORIZATION APPROVAL
Equilon Jal Basin Station (GW-326)
APPROVAL CONDITIONS
May 11, 2001

1. Commitments: Equilon shall abide by all commitments submitted in the temporary discharge authorization requests dated April 30, 2001, April 3, 2001 and March 1, 2001 and these conditions for approval.

2. Drum Storage: All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums should be stored on their sides with the bungs in place and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets must also be stored on an impermeable pad with curbing.

3. Process Areas: All process and maintenance areas which show evidence that leaks and spills are reaching the ground surface must be either paved and curbed or have some type of spill collection device incorporated into the design.

4. Above Ground Tanks: All above ground tanks which contain fluids other than fresh water must be bermed to contain a volume of one-third more than the total volume of the largest tank or of all interconnected tanks. All new facilities or modifications to existing facilities must place the tank on an impermeable type pad within the berm.

5. Above Ground Saddle Tanks: Above ground saddle tanks must have impermeable pad and curb type containment unless they contain fresh water or fluids that are gases at atmospheric temperature and pressure.

6. Labeling: All tanks, drums, and other containers should be clearly labeled to identify their contents and other emergency information necessary if the tank were to rupture, spill, or ignite.

7. Below Grade Tanks/Sumps: All new below grade tanks, sumps, and pits must be approved by the OCD prior to installation or upon modification and must incorporate secondary containment and leak-detection into the design.

8. Underground Process/Wastewater Lines: All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity prior to operation. Permittees may propose various methods for testing such as pressure testing to 3 pounds per square inch above normal operating pressure or other means acceptable to the OCD. The OCD will be notified at least 72 hours prior to all testing. The test results will be submitted to OCD in the quarterly report.

9. Housekeeping: All systems designed for spill collection/prevention and leak detection will be inspected daily to ensure proper operation and to prevent overtopping or system failure.

10. Spill Reporting: Effluent discharges that exceed the New Mexico Water Quality Control Commission (WQCC) standards and spills shall be reported pursuant to OCD Rule 116 and WQCC Rule 1203.

11. Waste Disposal: All wastes will be disposed of at an OCD approved facility.

12. OCD Inspections: Additional requirements may be placed on the facility based upon results from OCD inspections.

13. Treatment System Monitoring: Effluent from the ground water treatment system will be sampled and analyzed for concentrations of aromatic volatile organics initially, on a weekly basis for one month, and thenceforth on a monthly basis using EPA approved methods and quality assurance/quality control (QA/QC).

14. Ground Water Monitoring: Ground water from all site monitor wells which do not contain free phase products will be sampled and analyzed for concentrations of aromatic volatile organics on a quarterly basis using EPA approved methods and QA/QC.

15. Reporting: Equilon shall file a quarterly report on the remediation and monitoring system. The report shall contain:

    a. A description of all remediation and monitoring activities which have occurred including conclusions and recommendations.

    b. A geologic/lithologic log and well completion diagram for each injection well.

    c. A water table potentiometric map showing the location of the spill areas, monitor wells, injection wells and any other pertinent site features as well as the direction and magnitude of the hydraulic gradient.

    d. A product thickness map created using the measured free product thickness observed in each ground water monitoring well.

    e. Isopleth maps for contaminants of concern which were observed during the investigations.

    f. Summary tables of all past and present effluent and ground water quality sampling results including copies of all recent laboratory analytical data sheets and associated QA/QC data.

    g. The monthly volume of product and water recovered from each recovery well and the total volume of product and water recovered to date.

    h. The monthly volume of effluent injected in each injection well and the total volume injeced in each well to date.

    i. The disposition of all wastes generated.

H2A ENVIRONMENTAL, LTD.
ASSESSMENT • REMEDIATION • RISK ASSESSMENT • COMPLIANCE • LITIGATION / ENFORCEMENT SUPPORT

April 30, 2001

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 St. Francis Drive
Santa Fe, New Mexico 87505

Fax recieved 4/29/01 WCO

Re: Discharge Plan (GW-326) Modification
Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H_2A Job No. 106.001

Dear Mr. Olson:

Transmitted as an attachment to this letter is the information requested in OCD's letter dated April 17, 2001 for the above referenced site. The attached plan represents an addendum to our Discharge Plan (GW-326) modification, dated March 1, 2001.

With this submittal and per the New Mexico Water Quality Control Commission Title 20 Section 3106.B, Equilon requests temporary authorization to discharge without an approved plan modification for a period not to exceed 120 days, while the OCD reviews the modification. Please feel free to contact me at (361) 777-0860 or email at tnix@h2altd.com if you have any questions or need additional information.

Sincerely,

Theresa Nix

Theresa Nix
Project Manager

Attachment

cc: Marc Oler, Equiva Services LLC
William Keenan, Equilon Pipeline Company
Chris Williams, OCD Hobbs District Supervisor

C:\Theresa\H2A\Jal - 106.001\Discharge Plan\Revised inj well 04-30-01.doc

418 SAN SABA
PORTLAND, TX 78374

(361) 777-0860
FAX (361) 777-0971

The following plan addendum is formatted as a response to the OCD letter dated April 17, 2001, concerning the Jal Basin Station site operated by Equilon Pipeline Company, LLC. The two directives specified in the OCD letter are in bold. Equilon's compliance with these information directives follows each.

First OCD Directive

While the two proposed injection wells are located upgradient of the contaminated ground water plume, these wells are in close proximity to the free phase hydrocarbon portion of the contaminated ground water. The OCD is concerned that water reinjected in these areas could potentially push free phase hydrocarbons into previously uncontaminated areas. Please provide technical information on the proposed effects of the reinjection system on the existing ground water contamination plume.

The ideal location for the infiltration wells is directly upgradient from the hydrocarbon plume. However, the direct upgradient direction is within the tank battery containment area. We do not recommend installation of the infiltration wells within the containment area for the following reasons.

- The discharge piping would have to be installed through the containment berm, which would potentially jeopardize the integrity of the berm.

- The wells will be installed with flush mounts and all piping will be underground. In the event of a release from one of the tanks within the berm, we do not want these wells within the containment area having a direct connection with groundwater.

Previously, we anticipated the wells could be installed between the aboveground 24" pipes and the containment berm due north of the system. However, after reviewing the site with operational personnel, high voltage overhead power lines prevent access to that area with a drilling rig. Therefore, the wells have been relocated as identified on the attached FIG. 1.

The infiltration wells have been relocated obliquely upgradient of the hydrocarbon plume. The nearest impacted monitoring well, MW-8, will be approximately 150 feet from the nearest infiltration well, IW-1. The result of groundwater numerical modeling to determine the impact of the injection system on the existing wells is outlined below.

Mounding Calculation (see attached TABLES 1 through 4)

Assumptions:

- Hydraulic Conductivity for a clean sand = 100 ft/day.
- Maximum groundwater pumping rate (from 3 wells) of 6 gpm split into 3 gpm for each injection well.
- A distance of 150 feet and 200 feet to the nearest monitoring well, MW-8, with LNAPL from each of the infiltration wells, IW-1 and IW-2.

- A distance of 50 feet and 100 feet to the nearest non-impacted monitoring well, MW-13, from each of the infiltration wells, IW-1 and IW-2.

Mounding Effect on MW-8 at 3 gpm (see TABLE 4) = 0.022 ft + 0.017 ft
= 0.039 feet maximum mounding at MW-8

The estimated vacuum influence at MW-8 when pumping from three wells will be approximately 0.65 feet of water.

Therefore, Vacuum Influence @ MW-8 > Maximum Mounding @ MW-8

Mounding Effect on MW-13 at 3 gpm (see TABLE 4) = 0.059 ft + 0.031 ft
= 0.090 feet maximum mounding at MW-13

The estimated vacuum influence at MW-13 when pumping from three wells will be approximately 0.65 feet of water.

Therefore, Vacuum Influence @ MW-13 > Maximum Mounding @ MW-13

When the system is not extracting from three wells simultaneously, the pumping rate will decrease, as well as the mounding effect. Several pumping rate scenarios are presented on the attached TABLES 1 through 4.

Second OCD Directive

Does Equilon plan on using below grade lines for the conveyance of either contaminated or treated ground water? If below grade lines are proposed to be used, please provide a commitment to pressure test the lines to a minimum of 3 psi above operating pressure prior to operation and upon discharge plan renewal.

Yes, Equilon is using below grade lines under a vacuum to convey impacted groundwater to the HiVac system and does plan on using underground lines to convey treated groundwater to the infiltration wells. Equilon will pressure test the existing lines from the extraction wells to the HiVac system as soon as possible and will pressure test the discharge lines prior to operation. All of the underground lines will be pressure tested to a minimum of 3 psi above operating pressure and will be tested again upon discharge plan renewal.

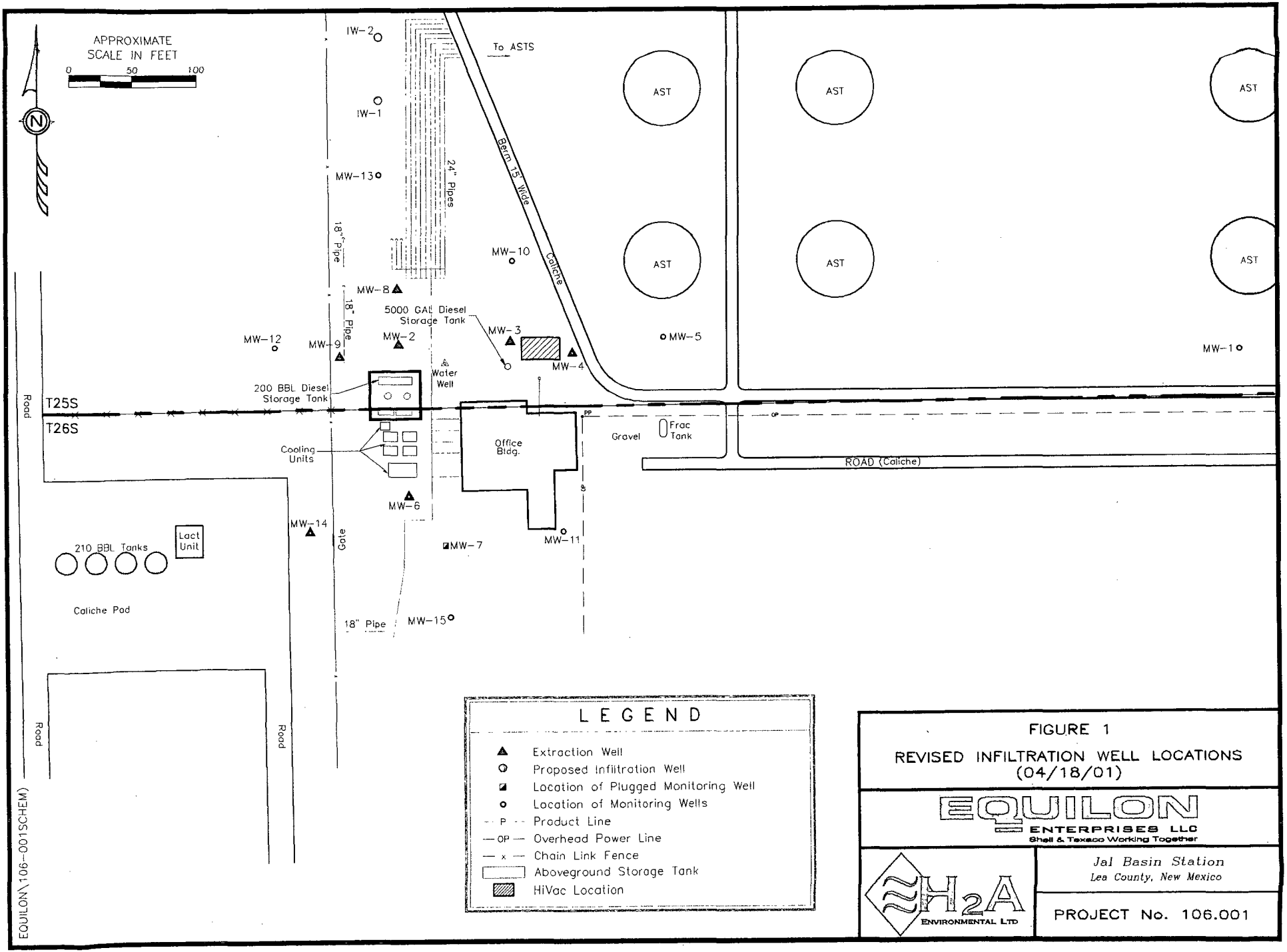


FIGURE 1

REVISED INFILTRATION WELL LOCATIONS
(04/18/01)

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A ENVIRONMENTAL LTD

Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

EQUILON\106-001SCHEM)

Table 1. Mounding under 0.5 gpm per well injection rate

	Distance (feet)							
K (ft/day)	**0.05**	**1**	**5**	**10**	**50**	**100**	**150**	**200**
10	0.971	0.484	0.243	0.157	0.051	0.034	0.028	0.024
50	0.218	0.120	0.070	0.049	0.015	0.009	0.006	0.005
100	0.114	0.065	0.040	0.029	0.010	0.005	0.004	0.003

Table 2. Mounding under 1 gpm per well injection rate

	Distance (feet)							
K (ft/day)	**0.05**	**1**	**5**	**10**	**50**	**100**	**150**	**200**
10	1.934	0.957	0.480	0.313	0.103	0.069	0.056	0.047
50	0.436	0.240	0.138	0.098	0.031	0.017	0.013	0.010
100	0.228	0.130	0.079	0.058	0.020	0.010	0.007	0.006

Table 3. Mounding under 2 gpm per well injection rate

	Distance (feet)							
K (ft/day)	**0.05**	**1**	**5**	**10**	**50**	**100**	**150**	**200**
10	3.845	1.885	0.942	0.620	0.205	0.137	0.111	0.094
50	0.869	0.477	0.275	0.195	0.062	0.034	0.025	0.020
100	0.455	0.259	0.157	0.116	0.039	0.021	0.015	0.011

Table 4. Mounding under 3 gpm per well injection rate

	Distance (feet)							
K (ft/day)	**0.05**	**1**	**5**	**10**	**50**	**100**	**150**	**200**
10	5.743	2.795	1.391	0.922	0.308	0.206	0.166	0.141
50	1.302	0.712	0.410	0.292	0.093	0.052	0.038	0.030
100	0.682	0.387	0.234	0.173	0.059	0.031	0.022	0.017

NEW MEXICO ENERGY, MINERALS and
NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

April 17, 2001

CERTIFIED MAIL
RETURN RECEIPT NO: 5051-4300

Mr. William K. Keenan
Equilon Pipeline Company
8023 East 63rd Place
Tulsa, Oklahoma 74133

RE: DISCHARGE PLAN (GW-326) MODIFICATION
JAL BASIN STATION
JAL, NEW MEXICO

Dear Mr. Keenan:

The New Mexico Oil Conservation Division (OCD) has reviewed Equilon Pipeline Company's April 3, 2001 "TEMPORARY AUTHORIZATION FOR DISCHARGE, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001" and March 1, 2001 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001" which were submitted on behalf of Equilon by their consultant H2A Environmental, Ltd. These documents contain Equilon's proposed modification to discharge plan GW-326 for treatment and reinjection of contaminated ground water at Equilon's Jal Basin Station located in the SE/4, SE/4 and the SW/4, SE/4 of Section 32, Township 25 South, Range 37 East and in the NE/4, NE/4 and the NW/4, NE/4 of Section 5, Township 26 South, Range 37 East NMPM, Lea County, New Mexico.

The OCD has the following comments and requests for information regarding the above-referenced documents:

1. While the two proposed injection wells are located upgradient of the contaminated ground water plume, these wells are in close proximity to the free phase hydrocarbon portion of the contaminated ground water. The OCD is concerned that water reinjected in these areas could potentially push free phase hydrocarbons into previously uncontaminated areas. Please provide technical information on the proposed effects of the reinjection system on the existing ground water contamination plume.

2. Does Equilon plan on using below grade lines for the conveyance of either contaminated or treated ground water? If below grade lines are proposed to be used, please provide a commitment to pressure test the lines to a minimum of 3 psi above operating pressure prior to operation and upon discharge plan renewal.

Please provide the above information to the OCD Santa Fe Office by May 17, 2001 with a copy provided to the OCD Hobbs District Office. Submission of this information will allow the OCD to continue with a review of Equilon's proposed discharge plan modification.

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

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Supervisor
Marc Oler, Equiva Services
Theresa Nix, H2A Environmental, Ltd.

H_2A ENVIRONMENTAL, LTD.

ASSESSMENT • REMEDIATION • RISK ASSESSMENT • COMPLIANCE • LITIGATION / ENFORCEMENT SUPPORT

April 3, 2001

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 St. Francis Drive
Santa Fe, New Mexico 87505

Re: Temporary Authorization for Discharge
Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H_2A Job No. 106.001

Dear Mr. Olson:

A discharge plan application for modification to Discharge Plan GW-326 for Equilon Pipeline Company LLC was submitted to your office on March 1, 2001. As per the New Mexico Water Quality Control Commission Title 20 Section 3106.B, Equilon requests temporary authorization to discharge without an approved plan modification for a period not to exceed 120 days, while the OCD reviews the modification.

The purpose of this request is to eliminate any further delays in remediating the impacted groundwater aquifer. The impacted groundwater is migrating off-site and in order to control and capture the plume, remediation must continue unabated. The extracted groundwater will be treated prior to re-infiltration into the subsurface.

Please feel free to contact me at (361) 777-0860 or email at tnix@h2aitd.com if you have any questions or need additional information.

Sincerely,

Theresa Nix

Theresa Nix
Project Manager

Original Filed in Abatement Plan AP-4
mc

cc: Marc Oler, Equiva
OCD Hobbs Office

PORTLAND, TX 78374

361) 777-0860
FAX (361) 777-0971

H_2A ENVIRONMENTAL, LTD.

ASSESSMENT • REMEDIATION • RISK ASSESSMENT • COMPLIANCE • LITIGATION / ENFORCEMENT SUPPORT

March 1, 2001

RECEIVED

MAR 02 2001

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 St. Francis Drive
Santa Fe, New Mexico 87505

Re: Stage 2 Abatement/Discharge Plan
Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H_2A Job No. 106.001

Dear Mr. Olson:

Transmitted with this letter is the discharge plan application for modification to Discharge Plan GW-326 for Equilon Pipeline Company LLC. This modification includes information for the existing HiVac groundwater and soil remediation system installed at the facility. Currently, the groundwater recovered from the system is stored in an on-site frac tank prior to off-site disposal. Equilon is requesting approval to install two infiltration wells for re-infiltration of treated groundwater into the subsurface upgradient of the hydrocarbon impact.

Please call me at (361) 777-0860 if you have any questions or need additional information. I appreciate your immediate attention to this matter.

Sincerely,

Theresa Nix

Theresa Nix
Project Manager

cc: Marc Oler, Equiva
OCD Hobbs Office

Original and plan filed in Abatement Plan AP-4

418 SAN SABA
PORTLAND, TX 78374

361) 777-0860
FAX (361) 777-0971

AP - 004

TRANSFERRED TO GW 350

GENERAL CORRESPONDENCE

YEAR(S):

Price, Wayne, EMNRD

From: Price, Wayne, EMNRD
Sent: Friday, February 02, 2007 2:17 PM
To: 'kenneth.springer@shell.com'; 'mhawthorne@h2altd.com'; 'iain_olness@urscorp.com'
Cc: dneeper@earthlink.net
Subject: Jal Basin GW-350
Attachments: Shell Abatement GW-350 Jal Basin.doc; DPAPP_GW350.doc

Please find attached a cover letter and permit.

Wayne Price
Environmental Bureau Chief
Oil Conservation Division
1220 S. Saint Francis
Santa Fe, NM 87505
505-476-3490
Fax: 505-476-3462

H2A
ENVIRONMENTAL, LTD.

www.h2altd.com
430 N. CARROLL AVE.
SUITE 120
SOUTHLAKE, TX
76092
817.251.9466
817.251.9224 FAX

March 31, 2004

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 St. Francis Drive
Santa Fe, New Mexico 87505

Re: 2003 Annual Report
Shell Pipeline Company LP
Jal Basin Station (GW-350)
Jal, New Mexico

Section 5, Township 26 South, Range 37 East
Section 32, Township 25 South, Range 37 East

H_2A Job No. 106.001

Dear Mr. Olson:

Transmitted with this letter is the annual report for 2003, as required by the OCD letter dated December 18, 2001, for the above referenced site. The attached report presents the results of all remediation and monitoring activities conducted during 2003 at Jal Basin Station.

If you have any questions concerning this information please feel free to contact me at (713) 647-8367 or email at mslentz@h2altd.com.

Respectfully,

Monica Slentz
Project Manager

Attachment

cc: Mr. Kenneth Springer, Shell Oil Products US
Chris Williams, OCD Hobbs

C:\H2A\Jal - 106.001\GW Reports\2003\2003 Annual Report.doc

Olson, William

From: Monica Slentz [mslentz@h2altd.com]
Sent: Tuesday, April 06, 2004 10:57 AM
To: Olson, William
Subject: Jal Station Remediation - Effluent

Bill,
Last week I sent you a copy of the 2003 annual groundwater monitoring report for remediation at Jal Basin Station. You will see that the effluent sample collected in October 2003 exceeding acceptable levels for benzene (though not for total BTEX). I believe those results were related to a temporary drop in pressure on the filter vessel related to one of the pumps failing on the remediation system. That pump has been replaced and the filter media changed. Subsequent effluent results indicate a return to acceptable concentrations. Please let me know if you require additional information.

Thank you,
Monica Slentz
H2A Environmental, Ltd.
(713) 647-8367
(713) 984-2064 fax
(713) 397-1214 mobile

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

December 31, 2003

Mr. K.R. Springer
Shell Oil Products US
777 Walker St.
Houston, Texas 77002

RE: SPILL INCIDENT CLOSURE REPORT
JAL BASIN STATION

Dear Mr. Springer:

The New Mexico Oil Conservation Division (OCD) has reviewed Shell Oil Products' (Shell) November 6, 2003 "SPILL INCIDENT CLOSURE REPORT, JAL BASIN STATION, BOOSTER PUMP RELEASE, JAL, NEW MEXICO, SHELL INCIDENT #300480". This document contains the results of Shell's investigation and remediation of soil contamination from a July 31, 2002 oil spill at Shell's Jal Basin Station located in the SE/4, SE/4 and the SW/4, SE/4 of Section 32, Township 25 South, Range 37 East and in the NE/4, NE/4 and the NW/4, NE/4 of Section 5, Township 26 South, Range 37 East NMPM, Lea County, New Mexico. The document also contains a risk evaluation of remaining contamination and requests closure of the spill remedial actions.

Based upon the limited extent of remaining contamination at the site, the OCD approves of the above closure request on the condition that Shell backfill the excavated areas with clean fill. Please be advised that OCD approval does not relieve Shell of responsibility if remaining contamination poses a future threat to surface water, ground water, human health or the environment. In addition, OCD approval does not relieve Shell of responsibility for compliance with any other federal, state or local laws and regulations.

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

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

cc: Chris Williams, OCD Hobbs District Supervisor
Monica Slentz, H2A Environmental, Ltd.

Shell Oil Products US
HSE Science & Engineering
777 Walker Street (TSP)
Houston, TX. 77002
Tel (713) 241 9979
Fax (713) 241 1110
Email krspringer@shellopus.com

Mr. William C. Olson
Energy, Minerals and Natural Resources Dept.
Oil Conservation Division
Santa Fe, New Mexico 87505

November 6, 2003

Re: Spill Incident Closure Report
Jal Basin Station, Booster Pump Release
Jal, New Mexico
Shell Incident #300480

Dear Mr. Olson,

Transmitted with this letter is the closure report for the booster pump release which occurred at Jal Basin Station in July of 2002. The report presents the methodology and results of a risk assessment conducted for the release. Evaluation of the site with respect to risk-based standards indicates that no further action is necessary to protect human health and the environment.

Should you have any questions regarding this report, please contact me at (713) 241-9979 or by email at krspringer@shellopus.com.

Sincerely,
Shell Oil Products US

K. R. Springer,
Senior Environmental Engineer
SHE/Science & Engineering

Attachment

cc: ***Chris Williams*** ***Oil Conservation Division, District 1***
Monica Slentz ***H_2A Environmental, Ltd.***

Olson, William

AP-4

From: Monica Slentz [mslentz@h2altd.com]
Sent: Tuesday, September 16, 2003 12:28 PM
To: William Olson
Subject: Jal Basin Station groundwater monitoring

Mr. Olson,
This is notification that H2A Environmental will be conducting quarterly groundwater monitoring at Shell's Jal Basin Station beginning on Thursday, September 18th.

Thanks,
Monica Slentz
H2A Environmental, Ltd.
(713) 647-8367
(713) 984-2064 fax
(713) 397-1214 mobile

Olson, William

AP-4

From: Monica Slentz [mslentz@h2altd.com]
Sent: Monday, June 16, 2003 1:53 PM
To: William Olson
Subject: Jal Basin Station groundwater monitoring

Mr. Olson,
This is notification that H2A Environmental will be conducting quarterly groundwater monitoring at Shell's Jal Basin Station beginning on Wednesday, June 18th.

Thanks,
Monica Slentz
Staff Geologist
H2A Environmental, Ltd.
(713) 647-8367
(713) 984-2064 fax
(713) 397-1214 mobile

Olson, William

From: Monica Slentz [mslentz@h2altd.com]
Sent: Friday, March 21, 2003 11:41 AM
To: William Olson
Subject: Jal Basin Station groundwater monitoring

AP-4

Mr. Olson,
This is notification that H2A Environmental will be conducting quarterly groundwater monitoring at Shell's Jal Basin Station beginning on Saturday, March 22nd.

Monica

Olson, William

From: Monica Slentz [mslentz@h2altd.com]
Sent: Wednesday, December 25, 2002 12:39 PM
To: William Olson
Subject: sampling notification - Jal Basin Station

Mr. Olson:

This is notification that H2A Environmental will be conducting groundwater monitoring activities at Equilon's Jal Basin Station on Friday and Saturday, December 27th and 28th. Please contact me if you have any questions or concerns.

Respectfully,

Monica Slentz
Field Geologist
H2A Environmental, Ltd.
(713) 647-8367 phone
(713) 984-2064 fax

H_2A ENVIRONMENTAL, LTD.

ASSESSMENT ◦ REMEDIATION ◦ RISK ASSESSMENT ◦ COMPLIANCE ◦ LITIGATION / ENFORCEMENT SUPPORT

May 29, 2002

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: HiVac System Enhancement
Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H_2A Job No. 106.001

Dear Mr. Olson:

Shell Pipeline Company LP's Jal Basin Station is currently operating a HiVac remediation system under a Stage 2 Abatement Plan (AP-4). The significant delays caused by the Stage II Abatement Plan public comment and approval process resulted in further off-site migration of the LNAPL plume. HiVac remediation was implemented during the approval process in order to control this off-site migration, but had to be operated at a significantly reduced scale in order to minimize production of groundwater prior to OCD's final plan approval. Therefore, the LNAPL plume continued to migrate off-site onto Bureau of Land Management and State of New Mexico land. Additional HiVac equipment is needed and will be added to the existing system to enhance LNAPL recovery and control further off-site migration. The HiVac system modifications / additions are presented on the attached figure.

If you have any questions concerning this information please feel free to contact me at (361) 777-0860 or email tnix@h2altd.com.

Respectfully,

Theresa Nix

Theresa Nix
Project Manager

Attachment

cc: Mr. Marc Oler, Equiva Services Co. LLC
Chris Williams, OCD Hobbs
Ernest Richarte, Shell Pipeline Company LP

C:\Theresa\H2A\Jal - 106.001\Hi-Vac\Enhancement 05-02\System change notification.doc

418 SAN SABA
PORTLAND, TX 78374

(361) 777-0860
FAX (361) 777-0971

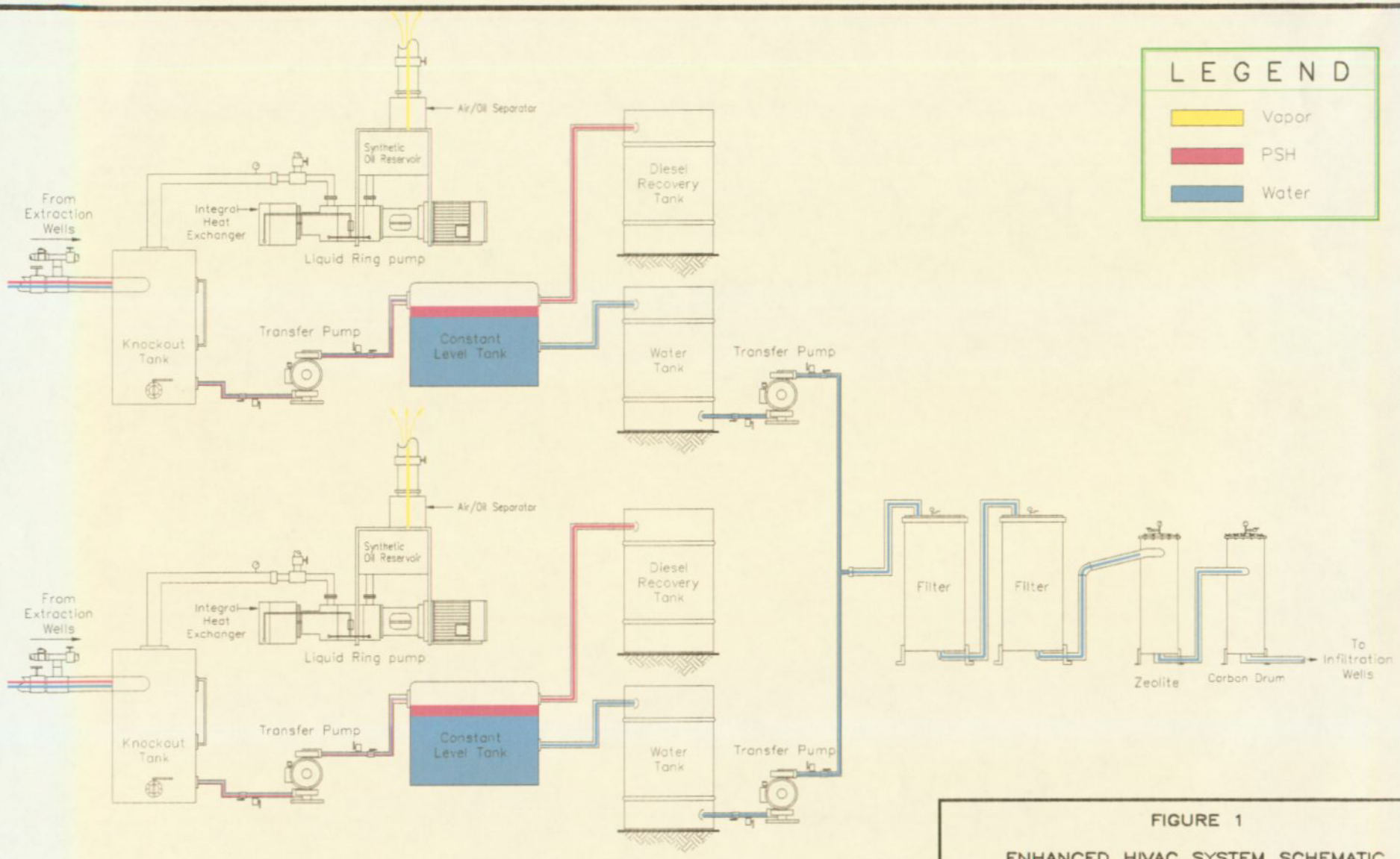


FIGURE 1

ENHANCED HIVAC SYSTEM SCHEMATIC

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A Environmental Ltd

Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

106001HIVACSYSTEM

AP-4

Olson, William

From: Monica Slentz [monicaslentz@usa.net]
Sent: Tuesday, September 24, 2002 7:22 AM
To: William Olson
Subject: Equilon's Jal Basin Station

Mr. Olson:

This is notification that H2A Environmental will be conducting groundwater monitoring activities at Equilon's Jal Basin Station on September 25, 2002. Please call me with any questions or concerns.

Respectfully,

Monica Slentz
Staff Geologist
H2A Environmental, Ltd.
(713) 647-8367 phone
(713) 984-2064 fax

AP-4

Olson, William

From: Monica Slentz [MSlentz@h2altd.com]
Sent: Monday, June 24, 2002 10:48 AM
To: William Olson
Cc: Theresa Nix
Subject: 48 hour sampling notification

Mr. Olson:

This is 48 hour notification that H2A Environmental will be conducting groundwater monitoring activities at Equilon's Jal Basin Station on Wednesday and Thursday, June 26th and 27th. Please call me with any questions or concerns.

Respectfully,

Monica Slentz
Staff Geologist
H2A Environmental, Ltd.
(713) 647-8367 phone
(713) 984-2064 fax

FAX TRANSMITTAL

To: Bill Olson From: Monica Slentz, H2A

Fax Number: (505) 476-3462 Date: 3/25/02

Subject: 48 hour notice - groundwater sampling

Total number of pages including cover sheet : 1

H2A Environmental Ltd. will be sampling groundwater at Equilon's Jal Basin Station on Wednesday, March 27th, 2002.

Please call if you have questions or concerns.

Monica Slentz
H2A Env. Ltd
(713) 647-8367

AP-4

Olson, William

From: Monica Slentz [MSlentz@h2altd.com]
Sent: Monday, March 25, 2002 1:38 PM
To: William Olson
Subject: 48 hour sampling notification

Mr. Olson:

This afternoon I faxed our 48 hour sampling notification to you for Equilon's Jal Basin Station and just wanted to drop you a note to let you know it's there. We'll be sampling on Wednesday (3/27/02).

Respectfully,

Monica Slentz
Staff Geologist
H2A Environmental, Ltd.
(713) 647-8367 phone
(713) 984-2064 fax

Olson, William

From: Theresa Nix [tnix@h2altd.com]

Sent: Wednesday, January 23, 2002 12:22 AM

To: Bill Olson

Subject: Jal Groundwater Event Schedule

Mr. Olson,

This email is to notify OCD that we are scheduled to conduct a groundwater monitoring and sampling event at Equilon's Jal Basin Station on January 26, 2002. Please let me know if anyone would like to be present for the event.

Theresa Nix
H2A Environmental, Ltd.
(361) 777-0860
(361) 777-0971 fax

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

December 18, 2001

CERTIFIED MAIL
RETURN RECEIPT NO: 5357-8086

Mr. Marc Oler
Equiva Services, LLC
308 Wilcox, No. 101
Castle Rock, Colorado 80104

RE: STAGE 2 ABATEMENT PLAN (AP-4)
JAL BASIN STATION
JAL, NEW MEXICO

Dear Mr. Oler:

The New Mexico Oil Conservation Division (OCD) has completed a review of the following Equilon Enterprises, LLC/Equiva Services, LLC (Equilon) documents:

- December 17, 2001 e-mail titled "JAL BASIN STATION" which was submitted on behalf of Equilon by their consultant H2A Environmental, Ltd.

- December 13, 2001 "JAL BASIN STATION, STAGE II ABATEMENT PLAN ADDENDUM CORRECTIONS".

- December 10, 2001 "STAGE 2 ABATEMENT PLAN (AP-4) PROPOSAL, JAL BASIN STATION, LEA COUNTY, NM, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, SECTION 32, TOWNSHIP 25 SOUTH, RANGE 37 EAST, H2A JOB NO. 106.001".

- October 23, 2001 e-mail titled "EQUILON'S JAL BASIN STATION" which was submitted on behalf of Equilon by their consultant H2A Environmental, Ltd.

- May 16, 2001 "STAGE 2 ABATEMENT PLAN (AP-4) PROPOSAL, JAL BASIN STATION, LEA COUNTY, NM, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, SECTION 32, TOWNSHIP 25 SOUTH, RANGE 37 EAST, H2A JOB NO. 106.001".

- December 8, 2000 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001 which was submitted on behalf of Equilon by their consultant H2A Environmental, Ltd.

- October 3, 2000 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001" which was submitted on behalf of Equilon by their consultant H2A Environmental, Ltd.

- July 26, 2000 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001" which was submitted on behalf of Equilon by their consultant H2A Environmental, Ltd.

These documents contain Equilon's Stage 2 Abatement Plan Proposal and proof of public notice for remediation of soil and ground water contamination at Equilon's Jal Basin Station located in the SE/4, SE/4 and the SW/4, SE/4 of Section 32, Township 25 South, Range 37 East and in the NE/4, NE/4 and the NW/4, NE/4 of Section 5, Township 26 South, Range 37 East NMPM, Lea County, New Mexico.

The Stage 2 Abatement Plan for the Jal Basin Station, as contained in the above-referenced documents, is approved with the following conditions:

1. Equilon shall operate the ground water treatment and reinjection system in accordance with OCD's October 23, 2001 discharge plan modification approval for the Jal Basin Station.

2. Equilon shall install an additional monitor well to monitor containment of the plume at the location designated on the attached figure #1.

3. All soil and ground water samples shall be obtained and analyzed using EPA approved methods and quality assurance/quality control procedures.

4. All soil samples analyzed for total petroleum hydrocarbons (TPH) using Modified EPA Method 8015 shall be analyzed for gasoline range organics (GRO) and diesel range organics (DRO).

5. Ground water from all site monitor wells that do not contain free phase products shall be sampled and analyzed on a quarterly basis for concentrations of benzene, toluene, ethylbenzene and xylene (BTEX). Ground water from all monitor wells shall also be sampled and analyzed on an annual basis for concentrations of polycyclic aromatic hydrocarbons (PAH) and Water Quality Control Commission metals.

6. All wastes generated shall be disposed of at an OCD approved facility.

7. Equilon shall submit the results of all remediation and monitoring activities in an annual report. The report shall be submitted to the OCD Santa Fe Office by April 1 of each year with a copy provided to the OCD Hobbs District Office. The report shall contain:

   a. A description of all soil and ground water remediation and monitoring activities which occurred during the previous calendar year.

   b. Geologic logs and well construction logs for any soil borings, monitor wells and vapor extraction or monitoring wells constructed during the previous calendar year.

   c. Quarterly water table potentiometric maps showing the location of pipelines, excavations, spills, monitor wells, recovery wells, vapor extraction or monitoring wells, and any other pertinent site features, as well as, the direction and magnitude of the hydraulic gradient.

   d. Quarterly isopleth maps for contaminants of concern.

   e. Summary tables of all past and present soil and ground water quality monitoring results and effluent sampling including copies of all recent laboratory analytical data sheets and associated QA/QC data.

   f. Summary tables of the monthly amount of product recovered from each recovery well and the total volume recovered to date.

   g. Summary tables of the monthly volume of effluent injected in each injection well and the total volume injected in each well to date.

   h. The disposition of all wastes generated.

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

Please be advised that OCD approval does not relieve Equilon of responsibility if the abatement plan fails to adequately remediate or monitor contamination related to Equilon's facility. In addition, OCD approval does not relieve Equilon of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please contact Bill Olson at (505) 476-3491.

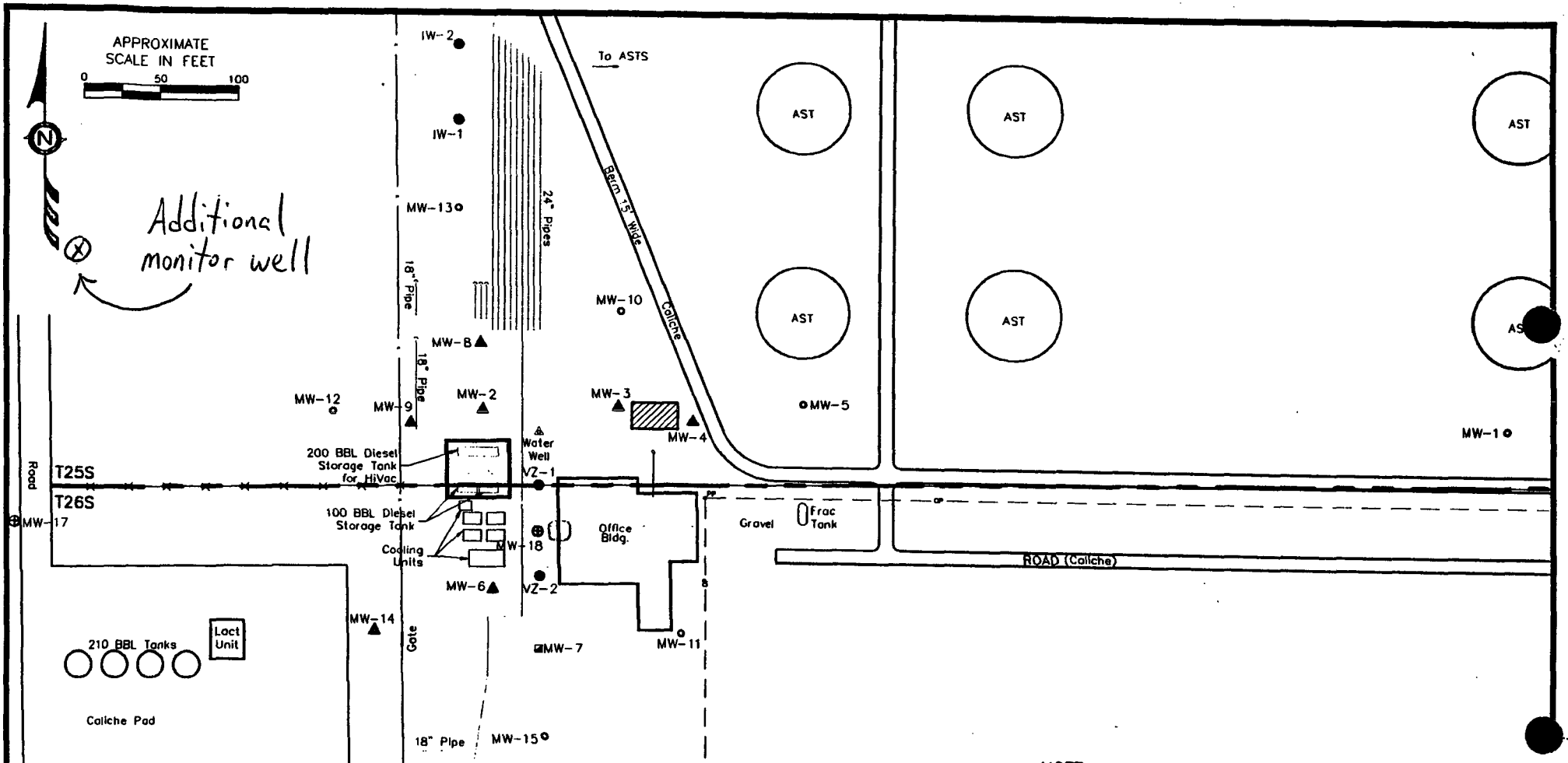
Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/wco

attachment

cc w/attachment: Chris Williams, OCD Hobbs District Supervisor
Theresa Nix, H2A Environmental, Ltd.
Donald A. Neeper



LEGEND

- Vadose-Zone Monitoring Point
- Proposed Monitoring Well
- Extraction Well
- Proposed Infiltration Well
- Location of Plugged Monitoring Well
- Location of Monitoring Wells
- P — Product Line
- OP — Overhead Power Line
- x — Chain Link Fence
- Aboveground Storage Tank
- HiVac Location
- Approximate Source Area

NOTE:
The final location of MW-18 will be confirmed upon subsurface clearance.

FIGURE 1

SITE PLAN

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A ENVIRONMENTAL LTD

Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

Olson, William

From: Happynix@aol.com

Sent: Monday, December 17, 2001 3:06 PM

To: Wolson@state.nm.us

Subject: Jal Basin Station

Mr. Olson,

Per our telephone conversation, I want to clarify that 3 soil borings will be installed in addition to monitoring well MW-18. The screened interval for MW-18 will be a total of 20 feet with 10 feet above and 10 feet below groundwater.

Please call me if you have any questions. I appreciate your help with this approval.

Theresa Nix
H2A Environmental, Ltd.
(361) 777-0860

2708 B. Walnut St.
Los Alamos, NM 87544
13 December 01

Mr. William Olson
Environmental Bureau
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Re: **Stage 2 Abatement Plan**
Jal Basin Station

Dear Mr. Olson:
Today, Equilon submitted to you by fax a corrected version of the corrected addendum to the Stage II abatement plan for Jal Basin Station. With these corrections, the addendum is acceptable to NMCCA&W, Inc. We therefore withdraw our request for a public hearing on the plan.

Sincerely,

Donald A. Neeper

Donald A. Neeper
NMCCA&W, Inc.

cc Oler, Equilon

ValueFax

FAX COVERPAGE

To:	**William Olson**
Company:	**Environmental Bureau, OCD**
From:	**D. A. Neeper**
Company:	**Computer Solution**
Date:	**Dec 13, 2001**
Our Fax Number:	**(505) 662 4592 by appointment**
Our Phone Number:	**(505) 662 4592**
Transmitting a total of	**2 pages including this one.**

If you do not receive all the pages,
please contact us immediately.

Fax for Bill Olson from D. Neeper.
Hard copy is in the mail.

2708 B. Walnut St.
Los Alamos, NM 87544
13 December 01

Mr. William Olson
Environmental Bureau
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Re: **Stage 2 Abatement Plan**
Jal Basin Station

Dear Mr. Olson:
Today, Equilon submitted to you by fax a corrected version of the corrected addendum to the Stage II abatement plan for Jal Basin Station. With these corrections, the addendum is acceptable to NMCCA&W, Inc. We therefore withdraw our request for a public hearing on the plan.

Sincerely,

Donald A. Neeper

Donald A. Neeper
NMCCA&W, Inc.

cc Oler, Equilon

H_2A ENVIRONMENTAL, LTD.

ASSESSMENT • REMEDIATION • RISK ASSESSMENT • COMPLIANCE • LITIGATION / ENFORCEMENT SUPPORT

FAX TRANSMITTAL

TO:	Bill Olson w/OCD	FAX:	505-476-3462
	Don Neeper w/NMCCAW	FAX:	505-662-4592
FROM:	Theresa Nix	PHONE:	361-777-0860
DATE:	December 13, 2001		
RE:	Equilon's Jal Basin Station		

H_2A Job No. 106.001.02

Total No. of Pages (including cover sheet): 9

418 SAN SABA
PORTLAND, TX 78374

(361) 777-0860
FAX (361) 777-0971

EQUIVA SERVICES LLC

December 13, 2001

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 St. Francis Drive
Santa Fe, New Mexico 87505

RE: Jal Basin Station
Stage II Abatement Plan Addendum Corrections

Dear Mr. Olson:

Our recently submitted Stage II Abatement Plan Addendum for the referenced site dated December 10, 2001, contained several typographical errors. Please accept this letter as a modification to the addendum correcting those errors.

- Page 1, last line, first paragraph.
- Replace the words "should take place" with "shall take place."

- Page 3, first paragraph under Fate and Transport, last two lines.
Replace "figure x" and "figure y" with "Figure 1" and "Figure 2" respectively.

- Page 5, first paragraph after bulleted items.
Replace "The calculated timeframe" with "the calculated timeframe"

- Page 3, first paragraph under Fate and Transport, after second sentence.
Add the sentence "VM-1, VM-2, and VM-3 will be approximately 10 feet, 20 feet, and 40 feet, respectively, from MW-18."

Please contact me at (303) 663-2503, Don Neeper at (505) 662-4592, or Theresa Nix at (361) 777-0860 if you have any questions.

Respectfully,

Marc Oler

Marc C. Oler
Environmental Engineer

cc: Don Neeper, NMCCAW
Chris Williams, OCD Hobbs
Theresa Nix, H_2A Environmental, Ltd.
Ernest Richarte, Equilon

C:\Theresa\H2A\Jal - 106.001\Stage 2 Abatement Plan\Addendum 3\Stage II Addendum Corrections.doc

H2A ENVIRONMENTAL, LTD.

STAGE II ABATEMENT PLAN
Jal – Basin Station, Jal, NM

The following plan is provided as an addendum to the previously submitted Stage II Abatement Plan dated July 26, 2000 and the previously submitted Stage II Abatement Plan Addendum dated May 16, 2001. This submittal augments the previous submittals, providing further technical detail in the areas identified. If any inconsistencies exist, this submittal shall take precedence over the previous submittals.

Characterization of Contaminant Distribution in the Vadose Zone

Vadose zone characterization to be performed is limited to the apparent vadose zone source area near the western edge of the office / pump building. As noted in the May 16, 2001 Stage II Abatement Plan Addendum, one boring/well will be installed in the apparent source area to characterize this zone and to provide an extraction well in the apparent heart of the plume source. The two vadose zone monitoring points also identified in that addendum (VZ-1 and VZ-2) will not be installed. Instead, a minimum of three additional borings will be installed from the ground surface to the water table (see figure 1). The intent of these borings is to define within 25 feet the nature and extent of the source area plume in the vadose zone, particularly to locate within 25 feet the horizontal boundary of the vadose zone plume. Following evaluation of the sample results from these four borings, additional borings will be installed to meet the delineation criteria, if necessary.

Soil samples will be collected at 10 foot intervals for the upper 80 feet and then continuously sampled to groundwater utilizing split spoon samplers. These field samples will be screened by head-space analysis utilizing a calibrated photoionization detector (PID). Five soil samples from each boring will be selected for laboratory analysis. The samples to be selected will include the sample with the highest PID reading and the sample immediately above the water table, with the remaining samples selected based on most pronounced PID readings and vertical distribution in the borehole.

All soil samples submitted to the laboratory, at a minimum, will be analyzed for the following parameters:

- Benzene, toluene, ethyl benzene, and xylenes (BTEX) via EPA Method SW846-8021B
- Total petroleum hydrocarbons – diesel range organics (TPH-DRO) via Modified EPA Method 8015 M Diesel

The sample exhibiting the highest TPH-DRO concentration from all four borings will also be tested, at a minimum, for:

- SPLP volatile organic compounds (VOC) via EPA Method 1312/8260B
- SPLP semi-volatile organic compounds (SVOC) via EPA Method 1312/8270
- SPLP TPH concentrations via EPA Method 418.1
- PAH and SPLP PAH via EPA Method 8270, and
- TPH analysis via Texas Method 1006

One sample will be obtained from an undisturbed depth and analyzed for:

- Bulk density via ASTM D2850
- Porosity via calculation from dry bulk density and particle density
- Water content via ASTM D2216-92
- Grain size via ASTM D422-6
- pH via EPA Method 9040 or 9045

The boring to be advanced closest to the apparent release area will be converted into a source area extraction well (to be designated MW-18). This well will be installed as close to the day tank and associated underground lines as feasible since they appear to represent the source area for the release. Upon advancement to total depth and collection of soil samples, a 4-inch diameter monitoring well consisting of 20 feet of 0.010 inch slotted PVC screen extending into the water table and blank riser to the surface will be placed in the open hole. The well will be completed with an annular sand pack extending approximately 2 feet above the slotted screen interval, a 2-foot thick bentonite clay seal above the sand pack, an annular seal to the surface, and a 2-foot by 2-foot concrete surface pad with a locking steel stick-up cover.

Upon completion and development, MW-18 will be gauged for depth to water and LNAPL thickness (if present). If LNAPL is not present in MW-18, a groundwater sample will be obtained from the well and submitted for the following analyses:

- BTEX via EPA Method SW846-8021B;
- PAH via EPA Method 8270C;
- TPH-DRO via Modified EPA Method 8015 M Diesel;
- ICP total metals via EPA ICP Method 6020;
- Cations (bicarbonates, carbonates) via EPA Method 310.1;
- Anions (chlorides, sulfates) via EPA Method 300.0; and
- Total dissolved solids (TDS) via EPA Method 160.1.

The soil borings / monitoring well will be surveyed by a Professional Land Surveyor registered in the State of New Mexico.

The soil borings / monitoring well will be installed within 60 days of receipt of OCD approval, subject to physical access to the source-migration area. In the event that additional borings are required to satisfy the vadose zone source area delineation

criteria identified above, these borings will be installed prior to cessation of HiVac Remediation at the site.

Fate and Transport Characteristics for Vadose Zone Remedy Selection and Design

Vadose zone vapor flow and respirometry pilot tests will be performed to assess the potential for, or feasibility of, bioventing as a remedy for vadose zone impact at the site and to provide design criteria for any such system. Three dimensional, nested monitoring points will be installed in vadose zone wells VM-1, VM-2, and VM-3, and any additional wells that may be required for these tests. VM-1, VM-2, and VM-3 will be approximately 10 feet, 20 feet, and 40 feet, respectively, from MW-18. The locations of these points are illustrated on figure 1. A typical construction diagram for these points is provided as figure 2.

During installation of the nested monitoring points, soil samples will be collected at the depth of installation of each of the monitoring points. These samples will be analyzed for:

- Benzene, toluene, ethyl benzene, and xylenes (BTEX) via EPA Method SW846-8021B
- Total petroleum hydrocarbons – diesel range organics (TPH-DRO) via Modified EPA Method 8015 M Diesel
- Bulk density via ASTM D2850
- Porosity via calculation from dry bulk density and particle density
- Water content via ASTM D2216-92

The vapor flow test will consist of the extraction of soil gas from monitoring well MW-18 (screened immediately above the water table) and simultaneous monitoring of the vacuum response in the three nested monitoring points. This pressure and flow data will be evaluated utilizing one and two-dimensional vapor flow screening models to determine radial and vertical permeabilities and the radius of flow response at the site. This data will be utilized to design the well-spacing and screening interval requirements for the vadose zone bioventing system.

The respirometry test will be performed concurrently with the vapor flow test. VOC and oxygen depletion as well as carbon dioxide generation will be measured from the three nested monitoring points. This data will be utilized to determine a potential biodegradation rate, forming the basis for bioventing design.

If the pressure, oxygen, and carbon dioxide data are inconclusive in defining oxygenation of the vadose zone plume, then additional flow and respirometry testing will be conducted using a vapor well screened at a shallower depth.

The tests described in this section will be completed prior to the cessation of the HiVac Remediation (HVR) at the site.

ASSESSMENT OF ABATEMENT OPTIONS

With respect to the LNAPL plume on ground water, we have previously estimated a total LNAPL volume ranging from approximately 40,000 to 150,000 gallons. HVR has been selected as the most viable technology for this site. Extensive comparison studies performed primarily by the military have demonstrated that HVR provides the highest LNAPL removal rates of the technologies currently available. In seven months of operation, the current HVR system removed approximately 15,000 gallons of LNAPL from the site, and continues to operate at similar or higher extraction rates. This data supports the effectiveness of this technology at the site for the removal of LNAPL.

Bioventing has been proposed as the selected remedy for vadose zone impacts. This technology has been evaluated extensively by both the government and private sectors. The site homogeneity, high permeability, and product characterization fall into the ideal range of bioventing operational properties. The pilot tests previously described will provide the design parameters for the bioventing system or alternative remedy.

JUSTIFICATION OF DESIGN

As noted above, the highly effective operation of the current HVR system demonstrates its appropriateness for the site. The information collected in the pilot tests will be utilized to justify the bioventing system or alternative remedy design.

SUPPLEMENTAL SYSTEM MONITORING

In addition to previously proposed monitoring activities, the following tasks will be performed during remediation:

- Annual monitoring of oxygen, carbon dioxide, and pressure from the three nested monitoring points
- Quarterly monitoring of off-gases for VOC, oxygen, and carbon dioxide utilizing SUMMA canisters, and
- Monthly monitoring of off-gases for VOC utilizing a field meter.

DURATION OF ABATEMENT ACTIVITIES

Based on

- An estimated full-scale recovery rate of 6 gph

- The estimated calculated in-place volume of approximately 100,000 gallons of LNAPL, and
- An assumed maximum recovery of 50% of the LNAPL, based on a report submitted to the American Petroleum Institute titled "Evaluating the Necessity of Hydrocarbon Removal from Source Zones: Tools to Assess Concentration Reduction" (1999),

the calculated timeframe to completion of LNAPL recovery is approximately 1 year. Due to anticipated reductions in LNAPL recovery rate and other unknown variables, a design uncertainty factor of 2 is applied to the estimate to yield a predicted timeframe of LNAPL recovery of approximately two (2) years from the date of initiation of full-scale recovery operations.

The vadose zone remediation schedule initiates at the conclusion of HVR operation. The duration of the vadose zone remediation will be based on the biovent pilot test results. However, consideration of results of this technology application at other sites suggests that the duration should not exceed ten years from the date of vadose zone remediation initiation.

System performance will be reviewed annually. Tailing and other pertinent site factors that may affect the remediation duration will be evaluated. The objective of this work is to complete remediation within ten years of plan approval. Closure is anticipated within twelve (12) years of OCD approval of the Stage II Abatement plan (ten years of operation and two years of monitoring). If the annual system performance evaluations indicate that this timeframe will not be met, the remediation strategy will be modified to accelerate remediation.

POST ABATEMENT ACTIVITIES

Post abatement activities for the site will include the following:

- Maintain all monitoring well risers and pads from deterioration
- Perform eight consecutive quarters of ground water monitoring from monitoring wells. Groundwater will be sampled quarterly for BTEX (EPA Method SW846-8020) and annually for PAH and metals concentrations (EPA Methods 8100 and 6010, respectively).
- Obtain source area vadose zone confirmation soil samples from areas that previously exhibited hydrocarbon concentrations exceeding OCD cleanup standards for soil. A maximum of 15 confirmation samples will be obtained. A minimum of one sample will be obtained from within the capillary fringe.
- Plug and abandon all monitoring wells following attainment of closure standards for groundwater.

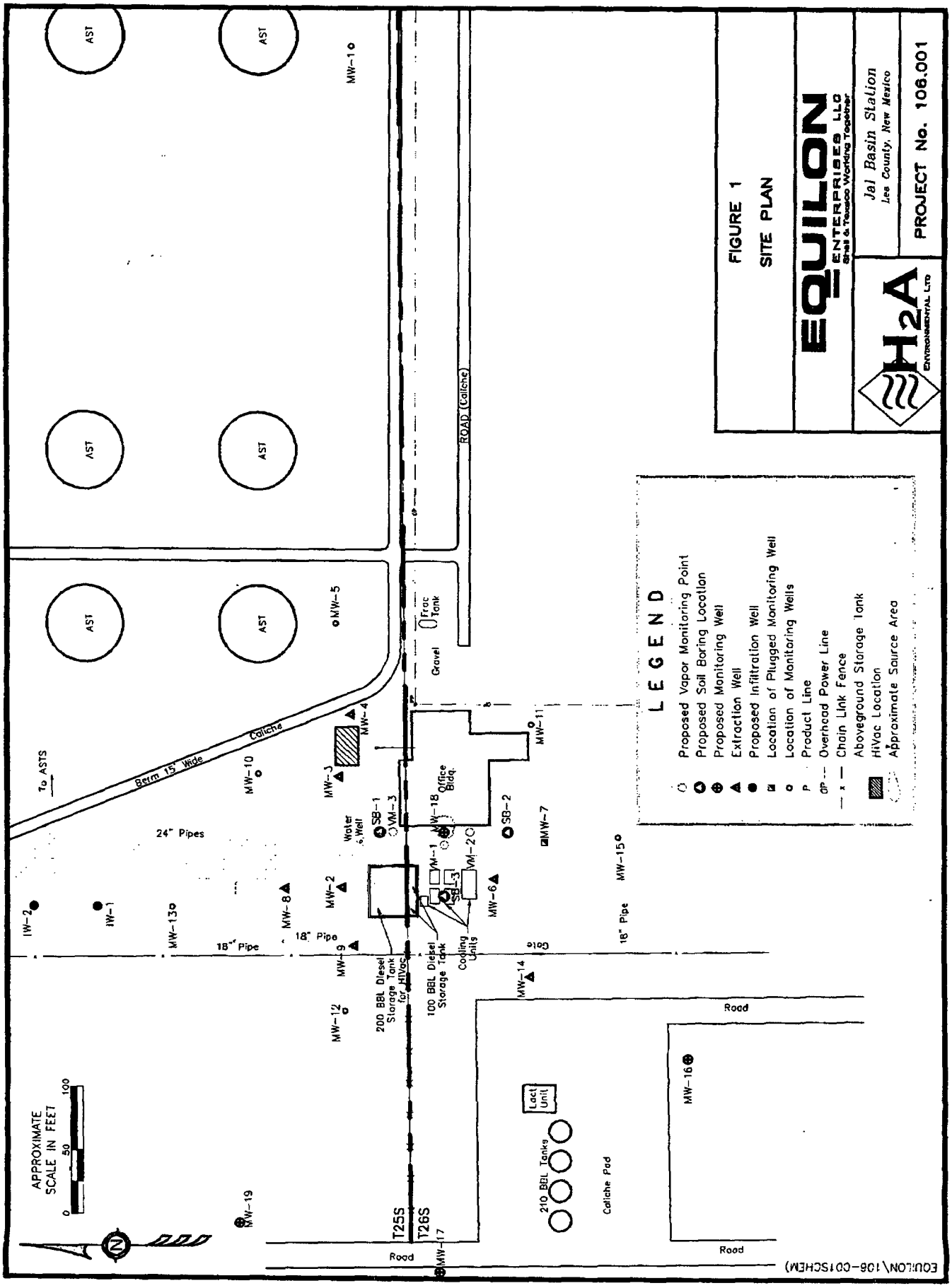
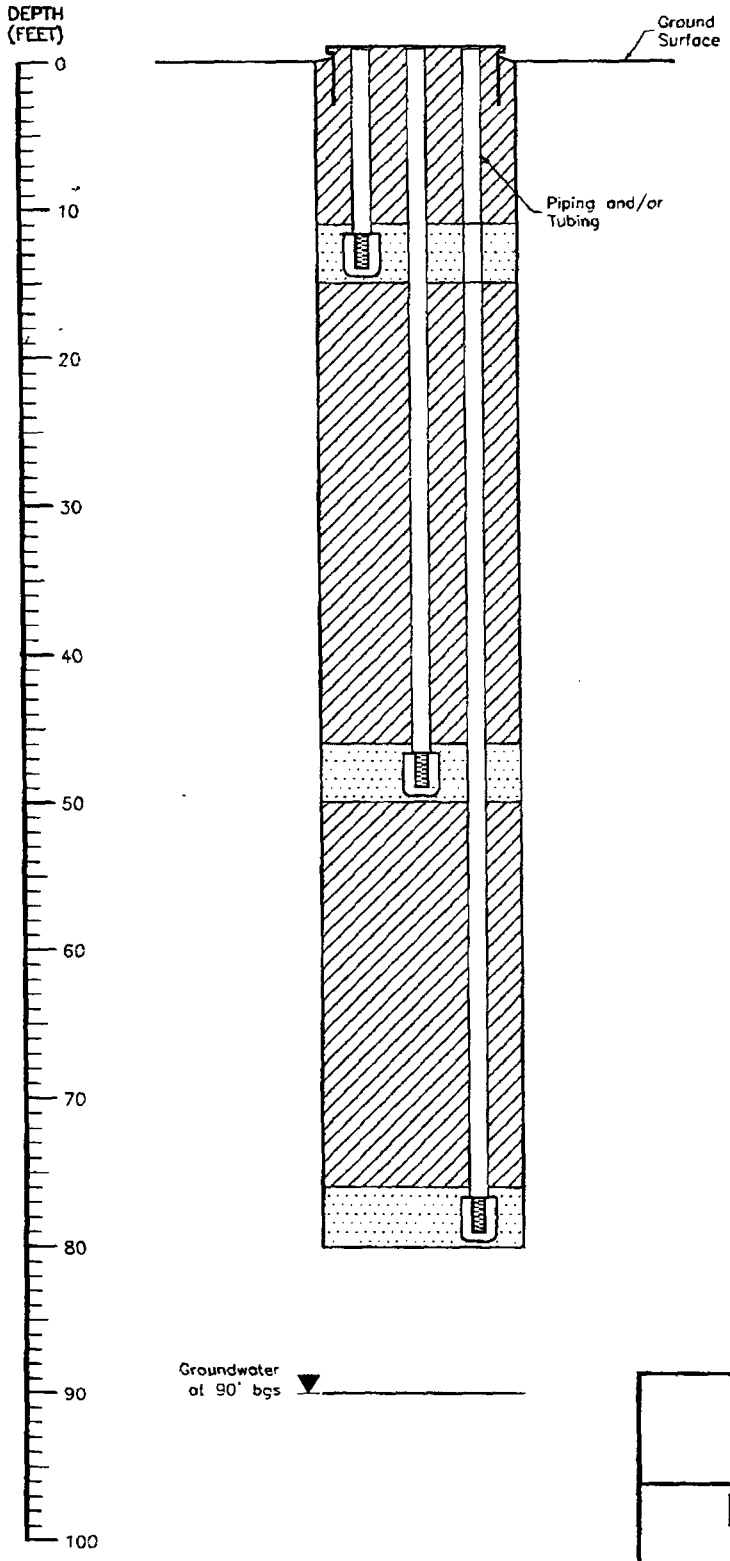


FIGURE 1
SITE PLAN
EQUILON
ENTERPRISES LLC
Shell & Texaco Working Together
Jal Basin Station
Lea County, New Mexico
H2A
ENVIRONMENTAL LTD
PROJECT No. 106.001
LEGEND
Proposed Vapor Monitoring Point
Proposed Soil Boring Location
Proposed Monitoring Well
Extraction Well
Proposed Infiltration Well
Location of Plugged Monitoring Well
Location of Monitoring Wells
Product Line
Overhead Power Line
Chain Link Fence
Aboveground Storage Tank
HiVac Location
Approximate Source Area
AST
MW-10
MW-5
Frac Tank
Gravel
ROAD (Caliche)
Berm 15' Wide
Caliche
To ASTS
MW-4
MW-3
MW-11
Office Bldg.
SB-1
VM-3
MW-18
SB-2
MW-7
24" Pipes
Water Well
MW-1
VM-2
SB-3
MW-6
MW-15
IW-2
IW-1
MW-13
MW-8
MW-2
18" Pipe
MW-9
200 BBL Diesel Storage Tank for HiVac
100 BBL Diesel Storage Tank
Cooling Units
MW-14
MW-12
Road
Lact Unit
210 BBL Tanks
Caliche Pad
MW-16
MW-19
MW-17
T25S
T26S
APPROXIMATE SCALE IN FEET
0
50
100
EQUILON\106-001SCHEM)

TYPICAL VAPOR MONITORING POINT



LEGEND

- Grout
- Sand Pack
- Pressure/Vacuum Monitor & Air Sampling Port

H2A\EQUILON\106.001SCHEM

FIGURE 2

TYPICAL VAPOR MONITORING POINT DETAIL

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A ENVIRONMENTAL LTD

Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

P.01

TRANSACTION REPORT

DEC-13-2001 THU 08:41 AM

FOR:

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DATE	START	SENDER	RX TIME	PAGES	TYPE	NOTE	M#	DP
DEC-13	08:37 AM	3617770971	3'52"	9	RECEIVE	OK		

EQUIVA SERVICES LLC

December 10, 2001

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 St. Francis Drive
Santa Fe, New Mexico 87505

Re: Stage 2 Abatement Plan (AP-4) Proposal
Jal Basin Station, Lea County, NM
Section 5, Township 26 South, Range 37 East
Section 32, Township 25 South, Range 37 East
H_2A Job No. 106.001

Dear Mr. Olson:

Enclosed is an addendum to the Stage II Abatement Plan for the referenced site. This addendum represents an agreed approach with Drs. Don Neeper and John Bartlit of the New Mexico Citizens for Clean Air and Water to facilitate approval of the Stage II Abatement Plan and allow full-scale implementation of site remediation plans.

Please review the enclosed addendum and provide approval or comments at your earliest convenience.

If you have any questions concerning this submittal, please contact me at (303) 663-2503 or Mike Hawthorne at (817) 371-8888 or Dr. Don Neeper at (505) 662-4592.

Respectfully,

Marc Oler

Marc C. Oler
Senior Environmental Engineer

Attachment

cc: Don Neeper, NMCCAW
Chris Williams, OCD Hobbs
Theresa Nix, H_2A Environmental, Ltd.
Ernest Richarte, Equilon

C:\Theresa\H2A\Jal - 106.001\Stage 2 Abatement Plan\Addendum 2\Stage 2 Addendum 3 Draft Coverletter.doc

STAGE II ABATEMENT PLAN
Jal – Basin Station, Jal, NM

The following plan is provided as an addendum to the previously submitted Stage II Abatement Plan dated July 26, 2000 and the previously submitted Stage II Abatement Plan Addendum dated May 16, 2001. This submittal augments the previous submittals, providing further technical detail in the areas identified. If any inconsistencies exist, this submittal should take precedence over the previous submittals.

Characterization of Contaminant Distribution in the Vadose Zone

Vadose zone characterization to be performed is limited to the apparent vadose zone source area near the western edge of the office / pump building. As noted in the May 16, 2001 Stage II Abatement Plan Addendum, one boring/well will be installed in the apparent source area to characterize this zone and to provide an extraction well in the apparent heart of the plume source. The two vadose zone monitoring points also identified in that addendum (VZ-1 and VZ-2) will not be installed. Instead, a minimum of three additional borings will be installed from the ground surface to the water table (see figure 1). The intent of these borings is to define within 25 feet the nature and extent of the source area plume in the vadose zone, particularly to locate within 25 feet the horizontal boundary of the vadose zone plume. Following evaluation of the sample results from these four borings, additional borings will be installed to meet the delineation criteria, if necessary.

Soil samples will be collected at 10 foot intervals for the upper 80 feet and then continuously sampled to groundwater utilizing split spoon samplers. These field samples will be screened by head-space analysis utilizing a calibrated photoionization detector (PID). Five soil samples from each boring will be selected for laboratory analysis. The samples to be selected will include the sample with the highest PID reading and the sample immediately above the water table, with the remaining samples selected based on most pronounced PID readings and vertical distribution in the borehole.

All soil samples submitted to the laboratory, at a minimum, will be analyzed for the following parameters:

- Benzene, toluene, ethyl benzene, and xylenes (BTEX) via EPA Method SW846-8021B
- Total petroleum hydrocarbons – diesel range organics (TPH-DRO) via Modified EPA Method 8015 M Diesel

The sample exhibiting the highest TPH-DRO concentration from all four borings will also be tested, at a minimum, for:

- SPLP volatile organic compounds (VOC) via EPA Method 1312/8260B
- SPLP semi-volatile organic compounds (SVOC) via EPA Method 1312/8270
- SPLP TPH concentrations via EPA Method 418.1
- PAH and SPLP PAH via EPA Method 8270, and
- TPH analysis via Texas Method 1006

One sample will be obtained from an undisturbed depth and analyzed for:

- Bulk density via ASTM D2850
- Porosity via calculation from dry bulk density and particle density
- Water content via ASTM D2216-92
- Grain size via ASTM D422-6
- pH via EPA Method 9040 or 9045

The boring to be advanced closest to the apparent release area will be converted into a source area extraction well (to be designated MW-18). This well will be installed as close to the day tank and associated underground lines as feasible since they appear to represent the source area for the release. Upon advancement to total depth and collection of soil samples, a 4-inch diameter monitoring well consisting of 20 feet of 0.010 inch slotted PVC screen extending into the water table and blank riser to the surface will be placed in the open hole. The well will be completed with an annular sand pack extending approximately 2 feet above the slotted screen interval, a 2-foot thick bentonite clay seal above the sand pack, an annular seal to the surface, and a 2-foot by 2-foot concrete surface pad with a locking steel stick-up cover.

Upon completion and development, MW-18 will be gauged for depth to water and LNAPL thickness (if present). If LNAPL is not present in MW-18, a groundwater sample will be obtained from the well and submitted for the following analyses:

- BTEX via EPA Method SW846-8021B;
- PAH via EPA Method 8270C;
- TPH-DRO via Modified EPA Method 8015 M Diesel;
- ICP total metals via EPA ICP Method 6020;
- Cations (bicarbonates, carbonates) via EPA Method 310.1;
- Anions (chlorides, sulfates) via EPA Method 300.0; and
- Total dissolved solids (TDS) via EPA Method 160.1.

The soil borings / monitoring well will be surveyed by a Professional Land Surveyor registered in the State of New Mexico.

The soil borings / monitoring well will be installed within 60 days of receipt of OCD approval, subject to physical access to the source-migration area. In the event that additional borings are required to satisfy the vadose zone source area delineation

criteria identified above, these borings will be installed prior to cessation of HiVac Remediation at the site.

Fate and Transport Characteristics for Vadose Zone Remedy Selection and Design

Vadose zone vapor flow and respirometry pilot tests will be performed to assess the potential for, or feasibility of, bioventing as a remedy for vadose zone impact at the site and to provide design criteria for any such system. Three dimensional, nested monitoring points will be installed in vadose zone wells VM-1, VM-2, and VM-3, and any additional wells that may be required for these tests. The locations of these points are illustrated on figure x. A typical construction diagram for these points is provided as figure y.

During installation of the nested monitoring points, soil samples will be collected at the depth of installation of each of the monitoring points. These samples will be analyzed for:

- Benzene, toluene, ethyl benzene, and xylenes (BTEX) via EPA Method SW846-8021B
- Total petroleum hydrocarbons – diesel range organics (TPH-DRO) via Modified EPA Method 8015 M Diesel
- Bulk density via ASTM D2850
- Porosity via calculation from dry bulk density and particle density
- Water content via ASTM D2216-92

The vapor flow test will consist of the extraction of soil gas from monitoring well MW-18 (screened immediately above the water table) and simultaneous monitoring of the vacuum response in the three nested monitoring points. This pressure and flow data will be evaluated utilizing one and two-dimensional vapor flow screening models to determine radial and vertical permeabilities and the radius of flow response at the site. This data will be utilized to design the well-spacing and screening interval requirements for the vadose zone bioventing system.

The respirometry test will be performed concurrently with the vapor flow test. VOC and oxygen depletion as well as carbon dioxide generation will be measured from the three nested monitoring points. This data will be utilized to determine a potential biodegradation rate, forming the basis for bioventing design.

If the pressure, oxygen, and carbon dioxide data are inconclusive in defining oxygenation of the vadose zone plume, then additional flow and respirometry testing will be conducted using a vapor well screened at a shallower depth.

The tests described in this section will be completed prior to the cessation of the HiVac Remediation (HVR) at the site.

ASSESSMENT OF ABATEMENT OPTIONS

With respect to the LNAPL plume on ground water, we have previously estimated a total LNAPL volume ranging from approximately 40,000 to 150,000 gallons. HVR has been selected as the most viable technology for this site. Extensive comparison studies performed primarily by the military have demonstrated that HVR provides the highest LNAPL removal rates of the technologies currently available. In seven months of operation, the current HVR system removed approximately 15,000 gallons of LNAPL from the site, and continues to operate at similar or higher extraction rates. This data supports the effectiveness of this technology at the site for the removal of LNAPL.

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JUSTIFICATION OF DESIGN

As noted above, the highly effective operation of the current HVR system demonstrates its appropriateness for the site. The information collected in the pilot tests will be utilized to justify the bioventing system or alternative remedy design.

SUPPLEMENTAL SYSTEM MONITORING

In addition to previously proposed monitoring activities, the following tasks will be performed during remediation:

- Annual monitoring of oxygen, carbon dioxide, and pressure from the three nested monitoring points
- Quarterly monitoring of off-gases for VOC, oxygen, and carbon dioxide utilizing SUMMA canisters, and
- Monthly monitoring of off-gases for VOC utilizing a field meter.

DURATION OF ABATEMENT ACTIVITIES

Based on

- An estimated full-scale recovery rate of 6 gph

- The estimated calculated in-place volume of approximately 100,000 gallons of LNAPL, and
- An assumed maximum recovery of 50% of the LNAPL, based on a report submitted to the American Petroleum Institute titled "Evaluating the Necessity of Hydrocarbon Removal from Source Zones: Tools to Assess Concentration Reduction" (1999),

The calculated timeframe to completion of LNAPL recovery is approximately 1 year. Due to anticipated reductions in LNAPL recovery rate and other unknown variables, a design uncertainty factor of 2 is applied to the estimate to yield a predicted timeframe of LNAPL recovery of approximately two (2) years from the date of initiation of full-scale recovery operations.

The vadose zone remediation schedule initiates at the conclusion of HVR operation. The duration of the vadose zone remediation will be based on the biovent pilot test results. However, consideration of results of this technology application at other sites suggests that the duration should not exceed ten years from the date of vadose zone remediation initiation.

System performance will be reviewed annually. Tailing and other pertinent site factors that may affect the remediation duration will be evaluated. The objective of this work is to complete remediation within ten years of plan approval. Closure is anticipated within twelve (12) years of OCD approval of the Stage II Abatement plan (ten years of operation and two years of monitoring). If the annual system performance evaluations indicate that this timeframe will not be met, the remediation strategy will be modified to accelerate remediation.

POST ABATEMENT ACTIVITIES

Post abatement activities for the site will include the following:

- Maintain all monitoring well risers and pads from deterioration
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- Obtain source area vadose zone confirmation soil samples from areas that previously exhibited hydrocarbon concentrations exceeding OCD cleanup standards for soil. A maximum of 15 confirmation samples will be obtained. A minimum of one sample will be obtained from within the capillary fringe.
- Plug and abandon all monitoring wells following attainment of closure standards for groundwater.

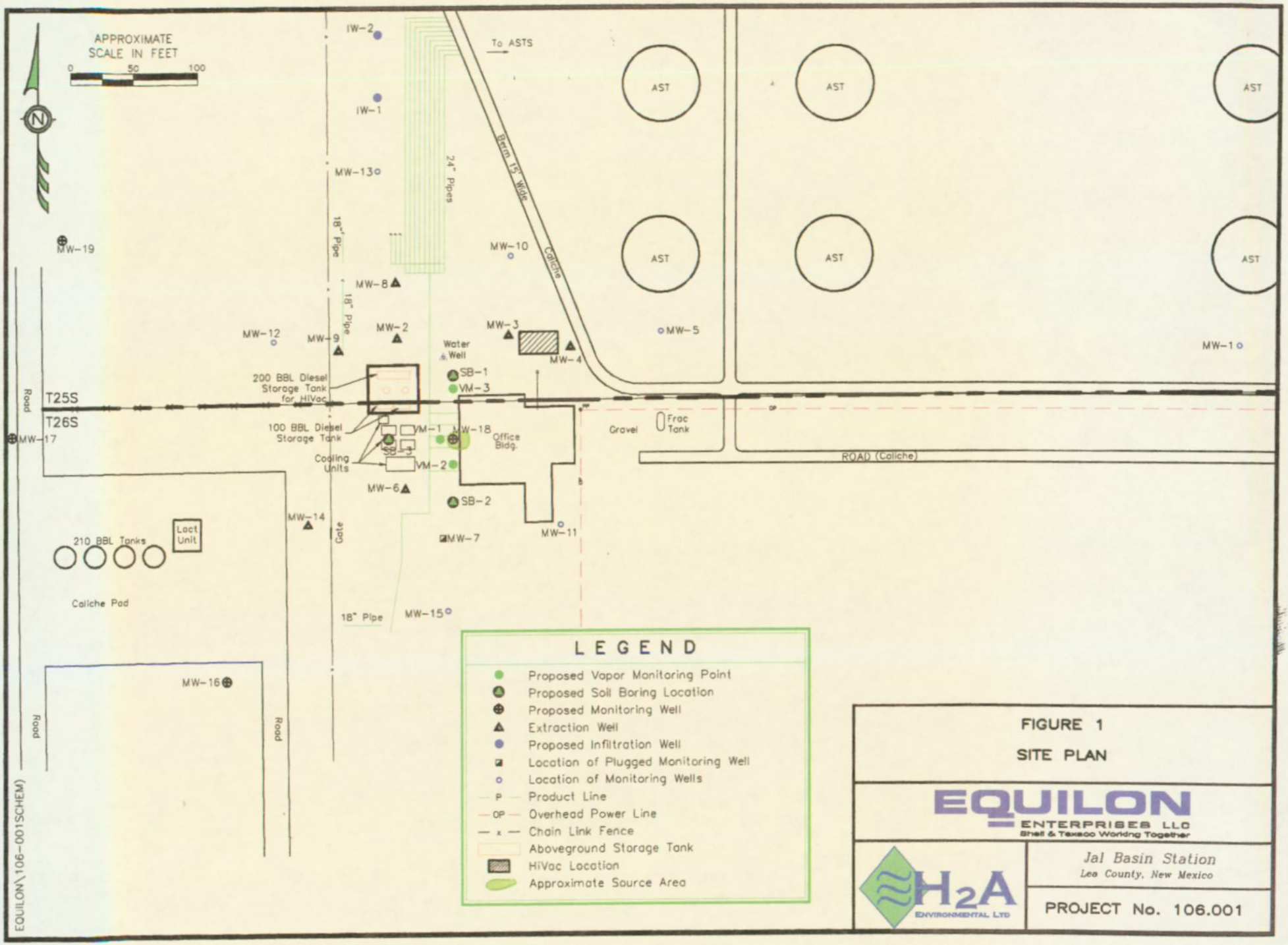


FIGURE 1

SITE PLAN

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

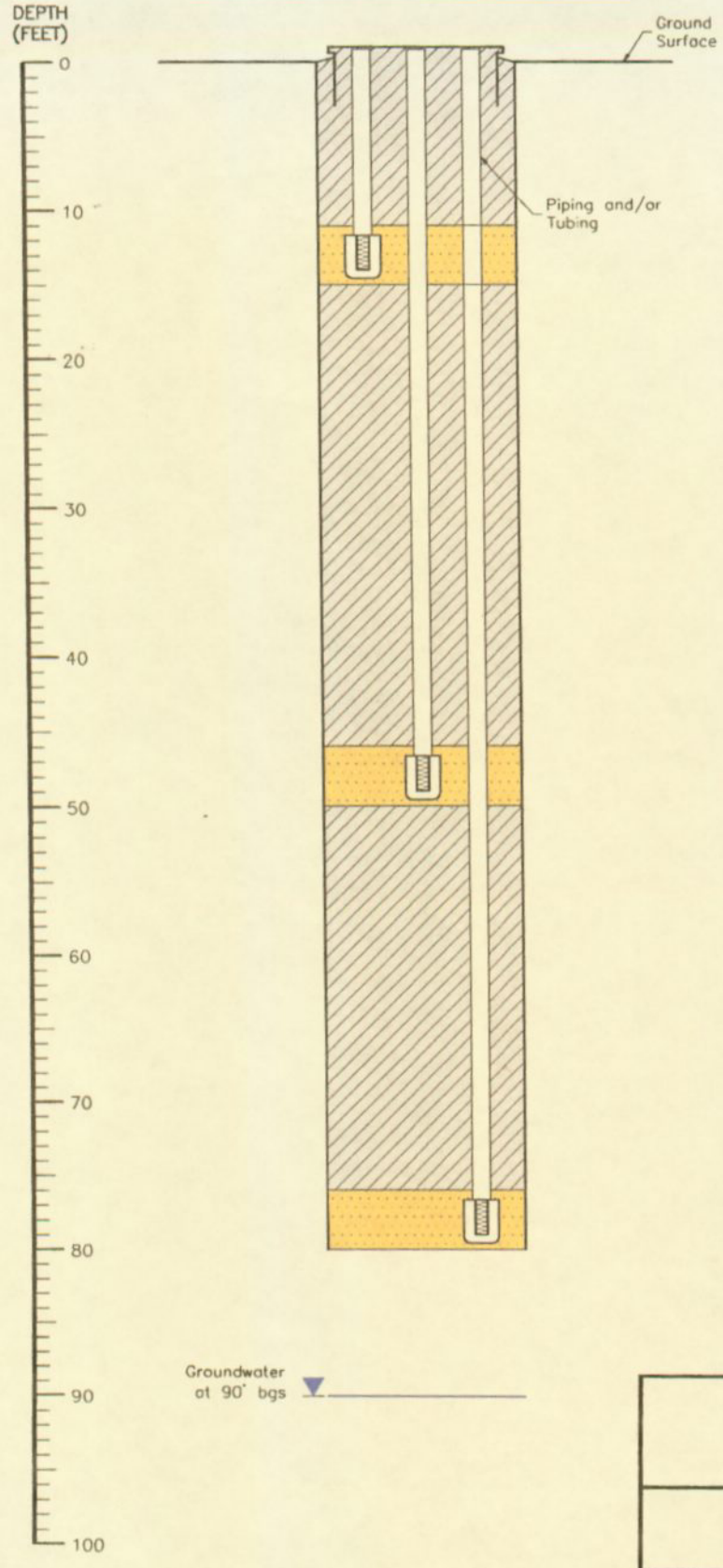
H2A ENVIRONMENTAL LTD

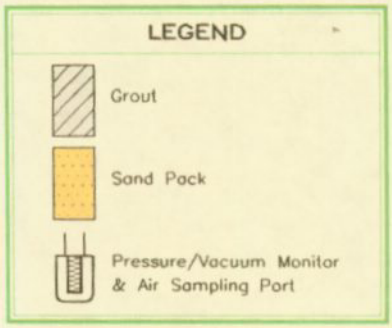
Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

EQUILON\106-001SCHEM

TYPICAL VAPOR MONITORING POINT





H2A\EQUILON\106.001SCHEM

FIGURE 2

TYPICAL VAPOR MONITORING POINT DETAIL

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A ENVIRONMENTAL LTD

Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

ValueFax

FAX COVERPAGE

To:	**Roger Anderson**
Company:	**OCD Environmental Bureau**
From:	**D. A. Neeper**
Company:	**Computer Solution**
Date:	**Dec 7, 2001**
Our Fax Number:	**(505) 662 4592 by appointment**
Our Phone Number:	**(505) 662 4592**
Transmitting a total of	**4 pages including this one.**

If you do not receive all the pages,
please contact us immediately.

Fax for Bill Olson from D. Neeper
One page plus this cover page.

2708 B. Walnut St.
Los Alamos, NM 87544
7 November 2001

Mr. William Olson
Environmental Bureau
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Re: **Stage 2 Abatement Plan**
Jal Basin Station

Dear Mr. Olson:

This letter reaffirms our request of 10 October 2000 and 3 April 2001 for a hearing on the Stage 2 Abatement Plan for the Jal Basin Station. Although some of our objections to the Plan have been addressed, technical inadequacies remain in the plan, as outlined below. These technical inadequacies were presented in more detail in our submissions of 10 October 2000, 3 April 2001, and 18 June 2001. If a hearing is granted, we will present technical testimony to document the consequences of these inadequacies and examples of better engineering practice.

SUMMARY

The Responsible Person (Equilon) has acknowledged that approximately 100,000 gallons of diesel accumulated at the top of the aquifer, approximately 90 feet below ground surface. Logic dictates that the volume released was sufficiently large to generate a saturated plume of diesel in the vadose zone. The Plan does not provide adequate investigation of the vadose zone, adequate investigation of geohydrologic parameters, expeditious remediation of the vadose zone, or sufficient post-abatement sampling and monitoring to assure that contamination remaining in the vadose zone cannot again contaminate the aquifer.

1. CHARACTERIZATION OF THE VADOSE ZONE

Rule 19E(3)b(i) requires that the initial investigation define "the vertical and horizontal extent and magnitude of vadose-zone and ground-water contamination ... ." The three-dimensional extent and magnitude of the vadose zone contamination has not been investigated. In its notice of 27 April 2001, OCD required that Equilon provide a "proposed soil remediation and monitoring plan for contaminated soils in the vadose zone ...." In response, Equilon proposed drilling three vertical boreholes in the source area, one of which would be completed as a vapor extraction well, with the remaining two wells each completed with a single pressure and vapor monitoring port. These particular three boreholes will not reveal the two- or three-dimensional extent of the plume in the vadose zone. The proposed sampling will not reveal the quantity and distribution of hydrocarbons. The two pressure monitoring points are inadequate to reveal the two- or three-dimensional distribution of subsurface air flow. Equilon has proposed no measurements of permeability or biological activity that would be necessary for engineering design of a vapor extraction and/or bioventing system in the vadose zone.

Equilon proposes to utilize these three wells for a respiration test, and subsequently to submit a soil remediation plan. This kind of work should have been completed during the Stage 1 investigation. The Stage 2 plan should present the soil remediation plan, not present a plan to conduct another inadequate Stage 1 investigation.

2. ASSESSMENT OF ABATEMENT OPTIONS

Rule 19E(4)(ii) states that the Stage 2 abatement plan must include "Development and assessment of abatement options." The Plan does not develop and assess abatement options for the vadose zone. The Plan logically assumes that vapor extraction will be a remedy, but data and analysis are not presented to support this assumption. Instead, the Plan proposes an inadequate investigation. Assessment requires knowing the lateral and vertical distribution of contamination, the variation of the vertical and horizontal air permeability, and the response of biological activity to oxygenation. Given the presence of caliche layers, application of vacuum near the aquifer would probably not generate the needed distribution of air flow. Because diesel contains some heavier hydrocarbons with relatively low vapor pressures, vapor extraction alone is unlikely to remove all of the contamination, and bioremediation is the logical next option. Although the Plan obviously relies on bioremediation, Equilon has not conducted tests of bioremediation and offers no evidence of its efficacy in this situation.

3. JUSTIFICATION OF DESIGN

Rule19E(4)(iii) requires "justification and design, if necessary, of preferred abatement option." In this case, the volume of release, the 90-foot depth of the vadose zone, and the stratigraphy combine to require careful engineering design of the abatement method. We acknowledge that a combination of vapor extraction and deliberate bioventing is the most promising method. However, we assert that the design must generate adequate air flow throughout the vadose zone plume, and that engineering design requires knowing the extent of contamination, the in-situ permeability, the anisotropy of the permeability, the diffusion limit to vapor extraction, and a measurement of relevant biological activity. The Plan provides neither a justified design, nor a commitment to conduct an adequate investigation on which a design could be justified. The Plan should not be approved until a justified design is presented.

4. DURATION OF ABATEMENT ACTIVITIES

Rule 19#(4)(vi) requires that the Plan include "a schedule for the duration of abatement activities." Although Equilon privately sent a schedule to the undersigned, that schedule is not based on engineering estimates of remediation progress. No schedule appears in the Plan. The purpose of a schedule is to assure that the expected rate of remediation is appropriate to the situation--namely, that abatement is likely to be completed in a number of months or years, not centuries. The Plan should provide a schedule based on rational engineering estimates, including the so-called "tailing" that occurs at many vapor extraction sites.

5. POST-ABATEMENT ACTIVITIES

Rule 19E(4)(iv) requires that the Plan designate "post-abatement-completion sampling stations and sampling frequencies ...." The purpose of vadose zone sampling is to assure that "contaminants in the vadose zone will not...contaminate ground water...through leaching, percolation, or other transport mechanisms, or as the water table elevation fluctuates" [Rule 19B(1)]. Any diesel remaining post-abatement in the

vadose zone will continue to percolate toward the aquifer. That is why it is necessary to discover the extent of the plume before designing the remediation system [Item 1 above], to justify the design [Item 3], and to sample not only the ground water, but also the vadose zone, after abatement. Furthermore, the proposed use of high-vacuum dual-phase extraction to remove liquid hydrocarbons alternately from various wells will elevate and depress the water table, probably trapping hydrocarbons beneath the water table and thereby providing a potential long-term source for dissolution into the ground water. We support the use of high-vacuum extraction, but it must be done carefully to minimize trapped NAPL. After abatement, soil samples from both the vadose zone and the saturated zone must be tested for TPH to assure that the threat to ground water no longer exists. The proposed post-abatement sampling of "up to three borings" -- possibly meaning one boring--is inadequate, given the unknown extent of the plume.

We reiterate our request for a hearing, based on the technical inadequacies of the plan enumerated above.

Sincerely,

Donald A. Neeper
New Mexico Citizens for Clean Air & Water, Inc.

cc
Marc Oler, Equilon

2708 B. Walnut St.
Los Alamos, NM 87544
6 December 2001

Mr. William Olson
Environmental Bureau
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Re: **Stage 2 Abatement Plan**
Jal Basin Station

Dear Mr. Olson:

Dr. John Bartlit and myself, representing New Mexico Citizens for Clean Air & Water, Inc. (NMCCA&W), met with Mike Hawthorne, Marc Oler, and Robbie Ettinger, representing Equilon and H2A Environmental. The group informally agreed on a revised Stage 2 abatement plan for the Jal Basin Station. Therefore, NMCCA&W requests that the hearing now scheduled for January 10, 2002, be postponed and that the announcement of the hearing not be published. We expect that a revised Stage 2 plan, acceptable to NMCCA&W, will be submitted to OCD by Equilon. When this revised plan is submitted, we expect to withdraw our request for a hearing.

Sincerely,

Donald A. Neeper,
New Mexico Citizens for Clean Air & Water, Inc.

cc
Marc Oler, Equilon

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

November 29, 2001

CERTIFIED MAIL
RETURN RECEIPT NO. 5357-8055

Mr. Donald A. Neeper
New Mexico Citizens for Clean Air & Water
2708 B Walnut St.
Los Alamos, NM 87544

RE: STAGE 2 ABATEMENT PLAN (AP-4)
JAL BASIN STATION

Dear Mr. Neeper:

The New Mexico Oil Conservation Division (OCD) is in receipt of your November 7, 2001 correspondence titled "STAGE 2 ABATEMENT PLAN, JAL BASIN STATION" which reaffirms your request for a hearing on Equilon Enterprises, LLC/Equiva Services, LLC (Equilon) Stage 2 Abatement Plan for the remediation of soil and ground water contamination at Equilon's Jal Basin Station site located in the SE/4, SE/4 and the SW/4, SE/4 of Section 32, Township 25 South, Range 37 East and in the NE/4, NE/4 and the NW/4, NE/4 of Section 5, Township 26 South, Range 37 East NMPM, Lea County, New Mexico.

This case has been scheduled for a hearing before an OCD hearing examiner on January 10, 2002. If you have any questions regarding the hearing, please contact Mr. David Brooks, OCD's attorney, at (505)476-3450.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/wco

cc w/attachment: Chris Williams, OCD Hobbs District Office
Marc C. Oler, Equiva Services, LLC
Theresa Nix, H2A Environmental, Ltd.

Olson, William

From: Olson, William
Sent: Wednesday, November 28, 2001 11:27 AM
To: Davidson, Florene
Cc: Anderson, Roger; Brooks, David K
Subject: Equilon Jal Basin Station Hearing

Attached is a draft hearing docket notice for Equilon's Jal Basin Station (Abatement Plan AP-4). Please set this for the January 10, 2002 hearing. Please send a copy of the docket to:

Applicant

Mr. Marc Oler
Equiva Services, LLC
308 Wilcox, No. 101
Castle Rock, CO 80104

Protestant

Mr.Donald A. Neeper
New Mexico Citizens for Clean Air & Water
2708B Walnut St.
Los Alamos, NM 87544

Sincerely,

William C. Olson

Hydrologist
New Mexico Oil Conservation Division
Environmental Bureau
1220 S. St. Francis Dr.
Santa Fe, New Mexico 87505
(505)476-3491

DOCKET.DOC

Application of Equilon Enterprises LLC to approve an abatement plan for the Jal Basin Crude Station site, Lea County, New Mexico. Applicant seeks approval of a Stage 2 Abatement Plan Proposal for remediation of petroleum contaminated soil and ground water at the Jal Basin Crude Station in accordance with OCD Rule 19. The Jal Basin Station is located in Unit P and Unit O of Section 32, Township 25 South, Range 37 East and in Unit A and Unit B of Section 5, Township 26 South, Range 37 East.

2708 B. Walnut St.
Los Alamos, NM 87544
7 November 2001

Mr. William Olson
Environmental Bureau
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Re: **Stage 2 Abatement Plan**
Jal Basin Station

Dear Mr. Olson:

This letter reaffirms our request of 10 October 2000 and 3 April 2001 for a hearing on the Stage 2 Abatement Plan for the Jal Basin Station. Although some of our objections to the Plan have been addressed, technical inadequacies remain in the plan, as outlined below. These technical inadequacies were presented in more detail in our submissions of 10 October 2000, 3 April 2001, and 18 June 2001. If a hearing is granted, we will present technical testimony to document the consequences of these inadequacies and examples of better engineering practice.

SUMMARY

The Responsible Person (Equilon) has acknowledged that approximately 100,000 gallons of diesel accumulated at the top of the aquifer, approximately 90 feet below ground surface. Logic dictates that the volume released was sufficiently large to generate a saturated plume of diesel in the vadose zone. The Plan does not provide adequate investigation of the vadose zone, adequate investigation of geohydrologic parameters, expeditious remediation of the vadose zone, or sufficient post-abatement sampling and monitoring to assure that contamination remaining in the vadose zone cannot again contaminate the aquifer.

1. CHARACTERIZATION OF THE VADOSE ZONE

Rule 19E(3)b(i) requires that the initial investigation define "the vertical and horizontal extent and magnitude of vadose-zone and ground-water contamination ... ." The three-dimensional extent and magnitude of the vadose zone contamination has not been investigated. In its notice of 27 April 2001, OCD required that Equilon provide a "proposed soil remediation and monitoring plan for contaminated soils in the vadose zone ...." In response, Equilon proposed drilling three vertical boreholes in the source area, one of which would be completed as a vapor extraction well, with the remaining two wells each completed with a single pressure and vapor monitoring port. These particular three boreholes will not reveal the two- or three-dimensional extent of the plume in the vadose zone. The proposed sampling will not reveal the quantity and distribution of hydrocarbons. The two pressure monitoring points are inadequate to reveal the two- or three-dimensional distribution of subsurface air flow. Equilon has proposed no measurements of permeability or biological activity that would be

necessary for engineering design of a vapor extraction and/or bioventing system in the vadose zone.

Equilon proposes to utilize these three wells for a respiration test, and subsequently to submit a soil remediation plan. This kind of work should have been completed during the Stage 1 investigation. The Stage 2 plan should present the soil remediation plan, not present a plan to conduct another inadequate Stage 1 investigation.

2. ASSESSMENT OF ABATEMENT OPTIONS

Rule 19E(4)(ii) states that the Stage 2 abatement plan must include "Development and assessment of abatement options." The Plan does not develop and assess abatement options for the vadose zone. The Plan logically assumes that vapor extraction will be a remedy, but data and analysis are not presented to support this assumption. Instead, the Plan proposes an inadequate investigation. Assessment requires knowing the lateral and vertical distribution of contamination, the variation of the vertical and horizontal air permeability, and the response of biological activity to oxygenation. Given the presence of caliche layers, application of vacuum near the aquifer would probably not generate the needed distribution of air flow. Because diesel contains some heavier hydrocarbons with relatively low vapor pressures, vapor extraction alone is unlikely to remove all of the contamination, and bioremediation is the logical next option. Although the Plan obviously relies on bioremediation, Equilon has not conducted tests of bioremediation and offers no evidence of its efficacy in this situation.

3. JUSTIFICATION OF DESIGN

Rule19E(4)(iii) requires "justification and design, if necessary, of preferred abatement option." In this case, the volume of release, the 90-foot depth of the vadose zone, and the stratigraphy combine to require careful engineering design of the abatement method. We acknowledge that a combination of vapor extraction and deliberate bioventing is the most promising method. However, we assert that the design must generate adequate air flow throughout the vadose zone plume, and that engineering design requires knowing the extent of contamination, the in-situ permeability, the anisotropy of the permeability, the diffusion limit to vapor extraction, and a measurement of relevant biological activity. The Plan provides neither a justified design, nor a commitment to conduct an adequate investigation on which a design could be justified. The Plan should not be approved until a justified design is presented.

4. DURATION OF ABATEMENT ACTIVITIES

Rule 19#(4)(vi) requires that the Plan include "a schedule for the duration of abatement activities." Although Equilon privately sent a schedule to the undersigned, that schedule is not based on engineering estimates of remediation progress. No schedule appears in the Plan. The purpose of a schedule is to assure that the expected rate of remediation is appropriate to the situation--namely, that abatement is likely to be completed in a number of months or years, not centuries. The Plan should provide a schedule based on rational engineering estimates, including the so-called "tailing" that occurs at many vapor extraction sites.

5. POST-ABATEMENT ACTIVITIES

Rule 19E(4)(iv) requires that the Plan designate "post-abatement-completion sampling stations and sampling frequencies ...." The purpose of vadose zone sampling is to

assure that "contaminants in the vadose zone will not...contaminate ground water...through leaching, percolation, or other transport mechanisms, or as the water table elevation fluctuates" [Rule 19B(1)]. Any diesel remaining post-abatement in the vadose zone will continue to percolate toward the aquifer. That is why it is necessary to discover the extent of the plume before designing the remediation system [Item 1 above], to justify the design [Item 3], and to sample not only the ground water, but also the vadose zone, after abatement. Furthermore, the proposed use of high-vacuum dual-phase extraction to remove liquid hydrocarbons alternately from various wells will elevate and depress the water table, probably trapping hydrocarbons beneath the water table and thereby providing a potential long-term source for dissolution into the ground water. We support the use of high-vacuum extraction, but it must be done carefully to minimize trapped NAPL. After abatement, soil samples from both the vadose zone and the saturated zone must be tested for TPH to assure that the threat to ground water no longer exists. The proposed post-abatement sampling of "up to three borings" -- possibly meaning one boring--is inadequate, given the unknown extent of the plume.

We reiterate our request for a hearing, based on the technical inadequacies of the plan enumerated above.

Sincerely,

Donald A. Neeper
New Mexico Citizens for Clean Air & Water, Inc.

cc
Marc Oler, Equilon

NEW MEXICO ENERGY, MINERALS and
NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

October 26, 2001

CERTIFIED MAIL
RETURN RECEIPT NO. 5357-8222

Mr. Donald A. Neeper
New Mexico Citizens for Clean Air & Water
2708 B Walnut St.
Los Alamos, NM 87544

RE: STAGE 2 ABATEMENT PLAN (AP-4)
JAL BASIN STATION

Dear Mr. Neeper:

The New Mexico Oil Conservation Division (OCD) has completed a review of Equilon Enterprises, LLC/Equiva Services, LLC (Equilon) Stage 2 Abatement Plan for the remediation of soil and ground water contamination at Equilon's Jal Basin Station site located in the SE/4, SE/4 and the SW/4, SE/4 of Section 32, Township 25 South, Range 37 East and in the NE/4, NE/4 and the NW/4, NE/4 of Section 5, Township 26 South, Range 37 East NMPM, Lea County, New Mexico. The abatement plan including all supplemental information is open for public inspection at the OCD Santa Fe and Hobbs District Offices. The OCD has determined that the abatement plan is in compliance with all Division rules and could be administratively approved. Attached is a draft approval letter containing a list of the documents which comprise the Stage 2 Abatement Plan and the proposed conditions of approval.

An objection to Equilon's Stage 2 Abatement Plan was filed by you. If your objections to the plan have not been addressed and you wish to have a hearing on the merits of the abatement plan, please submit a request for hearing by November 9, 2001. The request should include a concise statement of objections or concerns and a summary of the evidence you will present at hearing. If the Director determines there is significant public interest or that your request has technical merit, the matter will be set for hearing. At the hearing the applicant and intervenors will present technical testimony to an examiner. Based on the merits of the testimony, the examiner will make a recommended decision to the Director regarding the abatement plan. If no request for hearing is received by November 9, 2001, then the abatement plan will be administratively approved.

If you have any questions, please contact Bill Olson at (505) 476-3491.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/wco

attachment

cc w/attachment: Chris Williams, OCD Hobbs District Office
Marc C. Oler, Equiva Services, LLC
Theresa Nix, H2A Environmental, Ltd.

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

October 25, 2001

CERTIFIED MAIL
RETURN RECEIPT NO: 5357-7980

Mr. Marc Oler
Equiva Services, LLC
308 Wilcox, No. 101
Castle Rock, Colorado 80104

DRAFT

RE: STAGE 2 ABATEMENT PLAN (AP-4)
JAL BASIN STATION

Dear Mr. Oler:

The New Mexico Oil Conservation Division (OCD) has completed a review of the following Equilon Enterprises, LLC/Equiva Services, LLC (Equilon) documents:

- October 23, 2001 e-mail titled "EQUILON'S JAL BASIN STATION" which was submitted on behalf of Equilon by their consultant H2A Environmental, Ltd.

- May 16, 2001 "STAGE 2 ABATEMENT PLAN (AP-4) PROPOSAL, JAL BASIN STATION, LEA COUNTY, NM, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, SECTION 32, TOWNSHIP 25 SOUTH, RANGE 37 EAST, H2A JOB NO. 106.001".

- December 8, 2000 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001 which was submitted on behalf of Equilon by their consultant H2A Environmental, Ltd.

- October 3, 2000 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001" which was submitted on behalf of Equilon by their consultant H2A Environmental, Ltd.

- July 26, 2000 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001" which was submitted on behalf of Equilon by their consultant H2A Environmental, Ltd.

These documents contain Equilon's Stage 2 Abatement Plan Proposal and proof of public notice for remediation of soil and ground water contamination at Equilon's Jal Basin Station located in the SE/4, SE/4 and the SW/4, SE/4 of Section 32, Township 25 South, Range 37 East and in the NE/4, NE/4 and the NW/4, NE/4 of Section 5, Township 26 South, Range 37 East NMPM, Lea County, New Mexico.

The Stage 2 Abatement Plan for the Jal Basin Station, as contained in the above-referenced documents, is approved with the following conditions:

1. Equilon shall operate the ground water treatment and reinjection system in accordance with OCD's October 23, 2001 discharge plan modification approval for the Jal Basin Station.

2. Equilon shall install an additional monitor well to monitor containment of the plume at the location designated on the attached figure #1.

3. All soil and ground water samples shall be obtained and analyzed using EPA approved methods and quality assurance/quality control procedures.

4. Ground water from all site monitor wells that do not contain free phase products shall be sampled and analyzed on a quarterly basis for concentrations of benzene, toluene, ethylbenzene and xylene (BTEX). Ground water from all monitor wells shall also be sampled and analyzed on an annual basis for concentrations of polycyclic aromatic hydrocarbons (PAH) and Water Quality Control Commission metals.

5. All wastes generated shall be disposed of at an OCD approved facility.

6. Equilon shall submit the results of all remediation and monitoring activities in an annual report. The report shall be submitted to the OCD Santa Fe Office by April 1 of each year with a copy provided to the OCD Hobbs District Office. The report shall contain:

    a. A description of all soil and ground water remediation and monitoring activities which occurred during the previous calendar year.

    b. Geologic logs and well construction logs for any soil borings, monitor wells and vapor extraction or monitoring wells constructed during the previous calendar year.

    c. Quarterly water table potentiometric maps showing the location of pipelines, excavations, spills, monitor wells, recovery wells, vapor extraction or monitoring wells, and any other pertinent site features, as well as, the direction and magnitude of the hydraulic gradient.

    d. Quarterly isopleth maps for contaminants of concern.

e. Summary tables of all past and present soil and ground water quality monitoring results and effluent sampling including copies of all recent laboratory analytical data sheets and associated QA/QC data.

f. Summary tables of the monthly amount of product recovered from each recovery well and the total volume recovered to date.

g. Summary tables of the monthly volume of effluent injected in each injection well and the total volume injected in each well to date.

h. The disposition of all wastes generated.

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

Please be advised that OCD approval does not relieve Equilon of responsibility if the abatement plan fails to adequately remediate or monitor contamination related to Equilon's facility. In addition, OCD approval does not relieve Equilon of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please contact Bill Olson at (505) 476-3491.

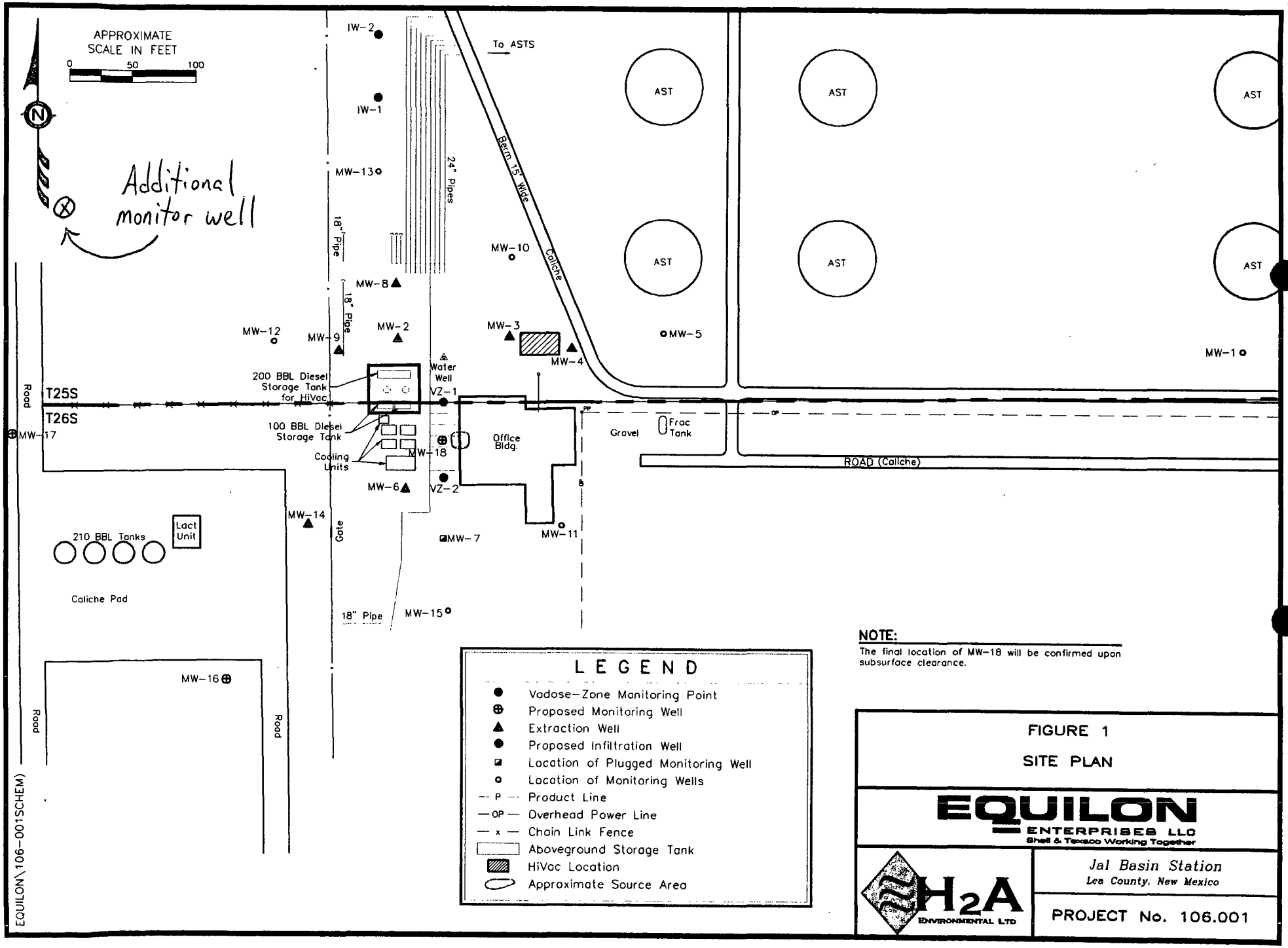
Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/wco

attachment

cc w/attachment: Chris Williams, OCD Hobbs District Supervisor
Theresa Nix, H2A Environmental, Ltd.
Donald A. Neeper



LEGEND

- Vadose-Zone Monitoring Point
- Proposed Monitoring Well
- Extraction Well
- Proposed Infiltration Well
- Location of Plugged Monitoring Well
- Location of Monitoring Wells
- — P — Product Line
- — OP — Overhead Power Line
- — x — Chain Link Fence
- Aboveground Storage Tank
- HiVac Location
- Approximate Source Area

NOTE:
The final location of MW-18 will be confirmed upon subsurface clearance.

FIGURE 1

SITE PLAN

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A ENVIRONMENTAL LTD

Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

EQUILON\106-001SCHEM)

Olson, William

From: Theresa Nix [tnix@h2altd.com]
Sent: Tuesday, October 23, 2001 3:46 PM
To: Bill Olson
Cc: Marc C. Oler; J. Michael Hawthorne
Subject: Equilon's Jal Basin Station
Importance: High

Mr. Olson,

Per our telephone conversation this morning, below are some clarifications to Equilon's May 16, 2001 Stage 2 Abatement Plan response.

1. How will MW-18 be completed?

   MW-18 will be completed as other on-site monitoring wells have been completed. MW-18 will have 10' of slotted screen within the groundwater and 10' of slotted screen above the groundwater zone.

2. How will the decision be made on how VZ-1 and VZ-2 will be completed and how much screen will be installed?

   PID readings and observations (visual and olfactory) made in the field will be used to determine how VZ-1 and VZ-2 will be completed. Generally, the slotted screen will be installed across the zone with appreciable hydrocarbon impact. However, the intent is to focus these wells towards the upper half of the unsaturated zone (0 - 50 feet), if impact is present. Visual and olfactory observations will be made during installation and compared to the PID readings. The intent is to install shallow wells that will facilitate pilot testing of any potentially impacted shallow soils in the apparent source area. Final construction details are highly dependent upon the soil profile encountered and upon the nature and extent of impact observed. Consequently, the construction decision will be made in the field following emplacement of the borings.

Please let me know if you have any further comments. I appreciate your immediate attention to this Stage 2 Abatement Plan.

Theresa Nix
H2A Environmental, Ltd.
(361) 777-0860
(361) 777-0971 fax

H2A ENVIRONMENTAL, LTD.

ASSESSMENT ◦ REMEDIATION ◦ RISK ASSESSMENT ◦ COMPLIANCE ◦ LITIGATION / ENFORCEMENT SUPPORT

OIL CONSERVATION DIV.

01 JUL 16 PM 1:39

July 11, 2001

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Annual Groundwater Monitoring Report – Year 2000
Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H_2A Job No. 106.001

Dear Mr. Olson:

Transmitted with this letter is the Groundwater Monitoring Report for the year of 2000 conducted at the Jal Basin Station located near Jal, New Mexico.

If you have any questions concerning this information please feel free to contact me at (361) 777-0860 or email tnix@h2altd.com.

Respectfully,

Theresa Nix

Theresa Nix
Project Manager

Attachment

cc: Mr. Marc Oler, Equiva Services Co. LLC
Chris Williams, OCD Hobbs
Ernest Richarte, Equilon
Jimmy Sheppard, Equilon

C:\Theresa\H2A\Jal - 106.001\GW Reports\Annual 2000 Report.doc

418 SAN SABA
PORTLAND, TX 78374

(361) 777-0860
FAX (361) 777-0971

2708 B Walnut St.
Los Alamos, NM 87544
18 June 01

Mr. William Olson
Environmental Bureau
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Re: Addendum-Stage II Abatement/Discharge Plan,
Equilon Pipeline Company, LLC,
Jal Basin Station

Dear Mr. Olson:

This letter comprises our comments on the addendum submitted by Equiva Services under cover letter dated May 16, 2001. I appreciate Equiva's willingness to discuss this matter with me privately. This letter addresses topics in the order by which they are presented in the addendum.

1. Additional Monitoring Wells.
The locations of proposed monitoring wells MW-16 and MW-17, as indicated on Figure 1 of the addendum, appear appropriate for investigating the downgradient limits of the floating plume. The thickness of LNAPL in a monitoring well does not provide an accurate estimate of the quantity of LNAPL in the capillary zone. In some cases, the capillary zone may contain LNAPL, although no floating product appears in the monitoring well. Furthermore, air rotary drilling can disturb the water/LNAPL mix in the formation adjacent to the drill. Therefore, we suggest coring through the capillary zone is needed to obtain an accurate estimate of the presence of LNAPL in the formation, particularly at the edges of the floating plume.

2. Origin, History and Volume of the Release.
We appreciate the description of the underground fuel lines presented in the addendum, and the replacement of those lines with above-ground lines.

The addendum provides two estimates of the volume of LNAPL present on the aquifer: 40,000 gallons and 150,000 gallons. These order-of-magnitude estimates roughly agree with our estimates. We agree that it is not possible to obtain a more accurate estimate from the thickness of LNAPL in monitoring wells. However, this order-of-magnitude estimate, when combined with the records of extracted vapor and liquid hydrocarbons, will enable an estimate of the amount of LNAPL in the capillary zone that must be remediated by biological action. We suggest that a measure of the bioremediation can be obtained by periodic monitoring of the CO_2 and oxygen content of the gas extracted by the HiVac equipment.

3. Investigation of the Source Area.
The addendum proposes drilling of three boreholes in the source area. One will be completed as an extraction well; the other two will be completed for vapor monitoring.

3.1 Sampling.
The addendum proposes to screen soils with a PID during drilling, and to obtain at least two, and possibly four, soil samples from each boring for laboratory analysis. We note that, particularly in soil that has been ventilated, PID screening may not indicate the quantity of TPH present. We therefore suggest that TPH-DRO should be determined from soil samples at approximately 10-foot intervals in the vadose zone, and more frequently in the capillary zone.

3.2 Location of the Plume in the Vadose Zone.
The addendum proposes three vertical boreholes. It is possible that all three holes will enter the plume near ground surface, and thereby not reveal the horizontal extent of the plume. It is apparent that Equilon intends to treat the plume in the vadose zone with vapor extraction and aerobic bioremediation. Proper design of air flow in the vadose zone requires some knowledge of the plume boundaries. For example, a single vertical borehole may not ventilate all of the plume. As depth increases, the plume may gradually expand in area and descend with fingering, eventually expanding abruptly in a large "foot" immediately above the aquifer (Fig. 1). We have consistently maintained that investigation should determine the extent of the plume in the vadose zone. Although the extent might be determined by multiple vertical boreholes, we note that a borehole drilled at an off-vertical angle offers the opportunity to reveal the horizontal extent of the plume at two or three depths, as depicted in Fig. 1.

3.3 Well Completion and Venting of the Vadose Zone.
The addendum proposes to complete the first boring as an extraction well, with 20 feet of slotted screen. The location of the screened interval is not specified, but we presume it is intended to start at or below the top of the aquifer. This 20-foot interval may or may not result in air flow throughout the entire plume. Extensive literature has been devoted to the engineering of air flow in the vadose zone. In addition to knowledge of the plume distribution, it is also necessary to know the vertical and horizontal values of the air permeability. The needed information can be obtained from in-situ measurements during the investigation, and we suggest that this be done.

We agree that three boreholes may be adequate in an initial investigation. However, as suggested above, the holes should be configured to reveal the boundaries of the plume. The addendum proposes to complete two of the boreholes as monitoring points. We suggest that more than one extraction well and more than two vapor monitoring locations may be needed. Monitoring of vapors and vacuum throughout the two-dimensional extent of the plume is needed. Although we would accept any adequate technique for monitoring, we point out that a single borehole may be completed with multiple screened intervals for vapor extraction, air injection, and/or vapor monitoring, thereby serving multiple purposes. If the soil is sufficiently competent to maintain an open borehole, employment of a retractable liner can provide multiple sampling points in an uncased hole, leaving the hole useful for extraction when the liner is removed. Thus, the investigation might possibly be completed with as few as three boreholes, but it necessary to discover the nature and

extent of the plume--which the proposed three vertical holes cannot do. We have no objection if investigation of the vadose zone begins after substantial remediation has progressed with the HiVac equipment, so that the investigation can assist in verifying remediation by the HiVac system. We argue for a plan for a complete investigation. We do not seek immediate remediation of the vadose zone.

4. **Post-Abatement Activities.**
The HiVac equipment may recover approximately half of the liquid product from the capillary zone and will probably not remediate all of the vadose zone. Therefore, it wll be necessary to confirm by sampling that the capillary zone and the vadose zone are both remediated sufficiently that no future threat to groundwater remains. Obtaining clean groundwater for 8 quarters assures that the water is clean, but does not, by itself, assure that no future threat remains. It is necessary to sample both the vadose zone and the capillary zone at the termination of abatement. Depending on the extent of the plume, two borings or more may be needed to confirm the remediation of the non-volatile hydrocarbons in the vadose zone, where the stratigraphy may inhibit uniform air flow, resulting in irregular remediation. The current lateral extent of the plume in the capillary zone is such that at least three borings will be needed to confirm remediation there, one of which might also be a confirmatory boring for the vadose zone. The addendum commits to drill no more than three, and possibly only one, confirmatory hole for the entire remediation. This is inadequate. Furthermore, we suggest that not all monitor wells be plugged upon achieving 8 quarters of clean ground water. We suggest that abandonment of monitoring and remediation facilities should be done only after it is confirmed that the vadose zone and the capillary zone are adequately remediated. This may require minimal monitoring for several years.

5. **Summary.**
The addendum presents a major improvement to an inadequate abatement plan. We do not maintain that the investigation must be done immediately, and we believe that an investigation is best done in careful stages. Therefore, we agree in principle with the proposal for conducting a respiration test upon completion of the first extraction well and monitoring points, whether or not they are configured as we suggest. What concerns us is absence of commitment to the entire investigation needed to design the operation and confirm the success of the remediation systems. The proposal says that a detailed soil remediation and monitoring plan will be submitted after testing at the first borehole, and that additional borings will be addressed in that subsequent plan. The proposed borings and sampling will not reveal the nature and extent of contamination in the vadose zone; therefore, a subsequent plan can only propose more investigation. We suggest that a detailed plan be submitted now, and that it be carried out in stages as the groundwater remediation proceeds. We fail to see why the addendum should be approved, pending subsequent submission of yet another plan.

Donald A. Neeper
New Mexico Citizens for Clean Air & Water, Inc.

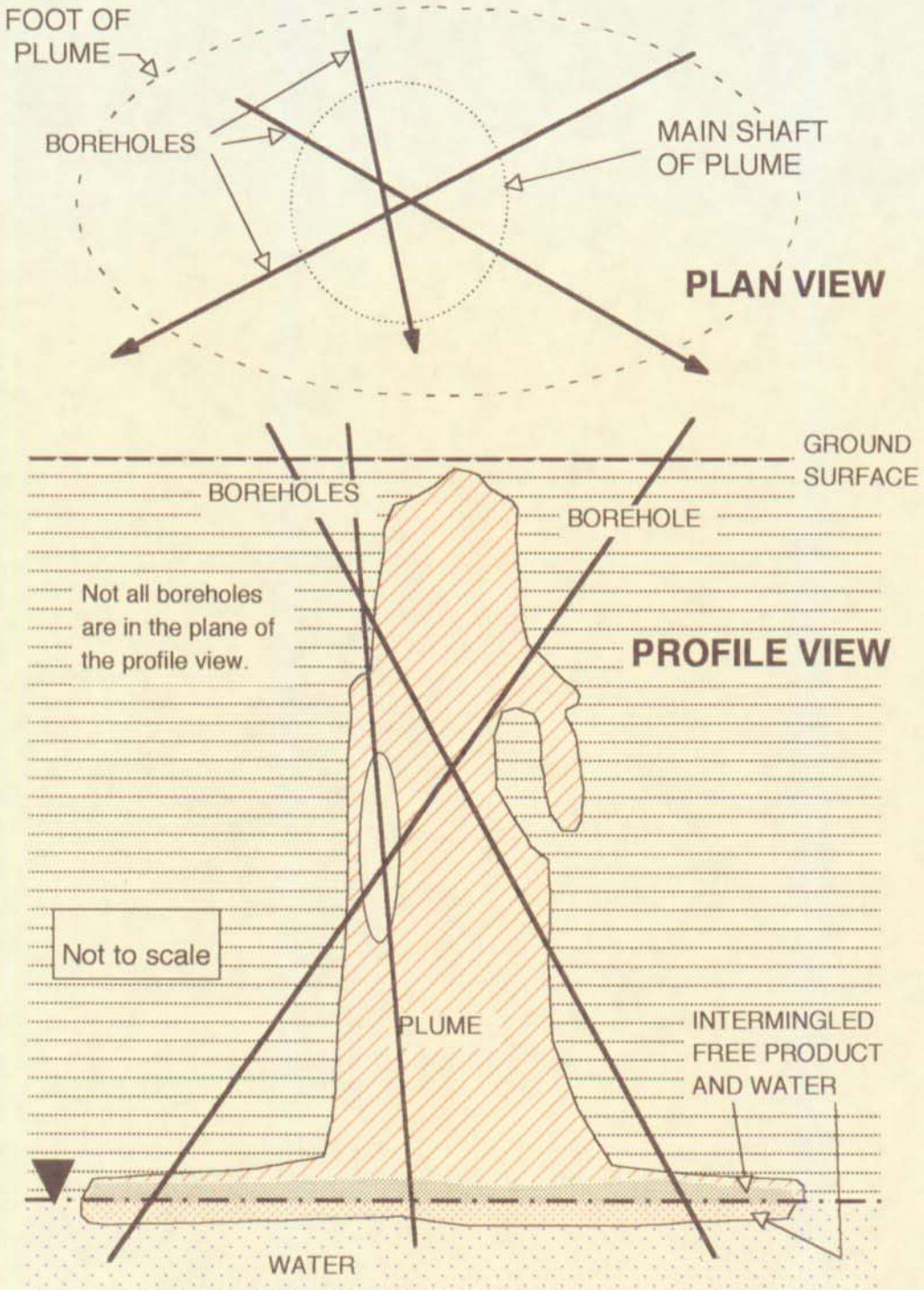


Fig. 1. Hydrocarbon plume and boreholes.

H2A ENVIRONMENTAL, LTD.

ASSESSMENT • REMEDIATION • RISK ASSESSMENT • COMPLIANCE • LITIGATION / ENFORCEMENT SUPPORT

June 4, 2001

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Apparent Groundwater Impact Notice (MW-10)
Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H_2A Job No. 106.001

Dear Mr. Olson:

I previously informed you on May 28, 2001, that phase-separated hydrocarbons (PSH) was noted in monitoring well MW-10 at the above referenced site, during groundwater monitoring and sampling activities. The groundwater event was conducted on May 23, 2001. At that time, approximately 0.50 feet of PSH was measured in monitoring well MW-10. This is the first measurable PSH noted in MW-10.

Please feel free to contact me at (361) 777-0860 or email at tnix@h2altd.com if you have any questions or need additional information.

Sincerely,

Theresa Nix

Theresa Nix
Project Manager

cc: Marc Oler, Equiva
OCD Hobbs Office

418 SAN SABA
PORTLAND, TX 78374

(361) 777-0860
FAX (361) 777-0971

Olson, William
From: Theresa Nix [SMTP:tnix@h2altd.com]
Sent: Monday, May 28, 2001 3:11 PM
To: William C Olson
Subject: Equilon's Jal Basin Station

Mr. Olson,

I just wanted to inform you that during a groundwater event conducted at the above referenced site on May 23, 2001, PSH was noted in monitoring well MW-10. This is the first time PSH has been observed in this monitoring well. Please call me if you have any questions.

Thanks!
Theresa Nix
H2A Environmental, Ltd.
(361) 777-0860
(361) 777-0971 fax

Olson, William
From: Theresa Nix [SMTP:tnix@h2altd.com]
Sent: Tuesday, May 22, 2001 1:14 PM
To: William C Olson
Subject: Jal Groundwater Event Schedule

Mr. Olson,

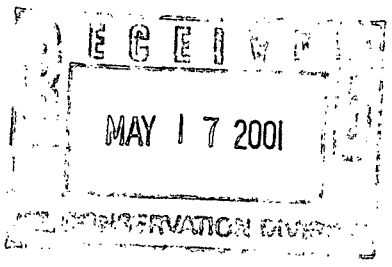
I just want to let you know that a groundwater monitoring and sampling event will be conducted at Equilon's Jal Basin Station tomorrow, May 23, 2001. Please call me if you have any questions.

Theresa Nix
H2A Environmental, Ltd.
(361) 777-0860
(361) 777-0971 fax

EQUIVA
SERVICES LLC
Shell, Texaco & Saudi Aramco Working Together

May 16, 2001

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 St. Francis Drive
Santa Fe, New Mexico 87505



Re: Stage 2 Abatement Plan (AP-4) Proposal
Jal Basin Station, Lea County, NM
Section 5, Township 26 South, Range 37 East
Section 32, Township 25 South, Range 37 East
H_2A Job No. 106.001

Dear Mr. Olson:

Transmitted as an attachment to this letter is the information requested in OCD's letter dated April 17, 2001 regarding the above referenced site. The attached plan represents an addendum to our proposed Stage II Abatement / Discharge Plan.

Equilon submitted this addendum in draft form to Mr. Neeper of New Mexico Citizens for Clean Air and Water to solicit his input and resolve his related technical concerns prior to its submittal to OCD. Equilon appreciates Mr. Neeper's input and has attempted to incorporate his comments. However, some of his issues cannot be completely addressed until the vadose zone soil investigation proposed in the addendum has been completed.

With this submittal, Equilon believes that it has satisfactorily completed the requirements of the Stage I and II Abatement Plan regulations and that no further delay in implementation of site remediation is warranted. Accordingly, the remediation system has been installed at the site and is ready for full-scale operation. Equilon respectfully requests an immediate approval of the Stage II Abatement / Discharge Plan.

Equilon reserves all of its rights and defenses associated with this site. Please feel free to contact me at (303) 663-2503 if you have any questions or need additional information.

Sincerely,

Marc Oler

Marc C. Oler
Senior Project Manager

Attachment

cc: Chris Williams, OCD Hobbs
Theresa Nix, H_2A Environmental, Ltd.
Ernest Richarte, Equilon

C:\Theresa\H2A\Jal - 106.001\Stage 2 Abatement Plan\Addendum 2\Stage 2 Addendum 2 Coverletter rev.doc

The following plan addendum is formatted as a response to the OCD letter dated April17, 2001, concerning the Jal Basin Station site operated by Equilon Pipeline Company, LLC. The two directives specified in the OCD letter are in bold. Equilon's plan to satisfy these directives follows each.

First OCD Directive

While the plan contains a proposal to install additional monitoring wells to determine the downgradient extent of ground water contamination, there are no proposed monitoring wells directly downgradient of monitor wells MW-12 and MW-14, the easternmost wells which contain free phase hydrocarbon products. Please submit such a plan.

Currently both referenced downgradient wells (MW-12 and MW-14) exhibit Light Non-Aqueous Phase Liquid (LNAPL). The Stage 2 Abatement / Discharge Plan proposed additional downgradient monitoring wells MW-16 and MW-17. Due to a subsequent shift in the gradient direction, the previous location of proposed well MW-17 has been relocated and will be installed directly downgradient of MW-12 and MW-14 (FIG. 1).

The following protocols will be followed during installation of MW-16 and MW-17:

- Soil samples will be obtained at selected intervals
- Soils will be classified in the field
- All soil samples will be obtained and field screened on ten foot centers in the vadose zone using a photo-ionization detector (PID),
- Soil samples within the approximate ten foot zone above the anticipated groundwater elevation will be obtained and screened at an increased frequency to maximize data recovery in the event LNAPL is present, and
- Selected samples will be prepared and shipped to the laboratory for chemical analysis

A minimum of three samples, obtained at the intervals specified above, will be selected and submitted to the laboratory from the well boring based on the following criteria:

- The soil sample with the highest PID headspace reading
- A sample obtained between ground surface and 20 feet bgs
- A minimum of one sample obtained between 50 and 80 feet bgs
- The sample directly above and/or near the groundwater level observed at the time of drilling

All soil samples submitted to the laboratory will be analyzed for the following parameters:

- Benzene, toluene, ethylbenzene, and xylenes (BTEX) via EPA Method SW846-8021B
- Total petroleum hydrocarbons – diesel range organics (TPH-DRO) via Modified EPA Method 8015 M Diesel

Upon advancement to total depth and collection of soil samples, a 4-inch diameter monitoring well consisting of 20 feet of 0.010-inch slotted PVC screen and blank riser will be placed in the open hole of MW-18. The well will be completed with an annular sand pack extending approximately 2 feet above the slotted screen interval, a 2 foot thick bentonite clay seal above the sand pack, an annular seal to the surface, and a 2 foot by 2 foot concrete surface pad with a locking steel stick-up cover.

If LNAPL is not present in MW-16 or MW-17, a groundwater sample will be obtained from each well and submitted for the following analyses:

- BTEX via EPA Method SW846-8021B
- PAH via EPA Method 8270C
- TPH-DRO via Modified EPA Method 8015 M Diesel
- ICP total metals via EPA ICP Method 6020
- Cations (bicarbonates, carbonates) via EPA Method 310.1
- Anions (chlorides, sulfates) via EPA Method 300.0
- Total dissolved solids (TDS) via EPA Method 160.1

The monitoring well locations will be surveyed by a Professional Land Surveyor registered in the State of New Mexico.

Second OCD Directive

The OCD disagrees with Equilon's assertion that it is premature to focus on vadose zone issues. Equilon's proposed extraction wells will result in some bioventing in the vadose zone; however, the wells are not specifically designed for bioventing purposes. The monitor wells have a small length of well screen (approximately 5 feet) exposed to the vadose zone just above the surface of the water table and therefore will not effectively biovent the majority of the contaminated soils that occur in the remaining 80 feet of the vadose zone between the surface and the top of the well screen. An effective removal of hydrocarbon products from the water table cannot occur if the vadose zone soils continue to act as a source of free phase hydrocarbons. Therefore, the OCD requires that Equilon provide a proposed soil remediation and monitoring plan for contaminated soils in the vadose zone of the source area. The plan shall include detailed information on the location, origin, estimated volume and history of the release.

With respect to the location, origin, and history of the release, the following information is provided:

The facility operates three engines, which pump crude oil from the aboveground storage tanks (ASTs) to the pipelines leaving the facility. The engines are located in the building noted on FIG. 1. The diesel fuel supply lines for the engines historically ran underground from the diesel storage tanks, into a day tank, and then to the engines. This system was apparently installed during original facility construction (approximately 1950's). The diesel storage tanks are

approximately 100 bbls each and are noted on FIG. 1. The day tank is located along the west side of the building in the area identified as the approximate source area on FIG. 1.

The system was ultimately automated and the underground fuel lines were pressurized. After approximately two years (fall of 1996) the underground fuel lines failed a maintenance pressure test. Consequently, the underground lines were abandoned in-place and replaced with aboveground lines. Subsequently, two monitoring wells (MW-1 and MW-2) were installed in January of 1997 to investigate hydrocarbon impact to soil and groundwater. The nature and origin of the release that caused hydrocarbon impact to soil and groundwater appears to be the diesel fuel delivery system (underground fuel lines and day tank), which apparently leaked for an unknown amount of time.

The cause of the release has been remedied by the replacement of these lines. The only sources of diesel at this site are either in aboveground tanks in containment areas or in aboveground diesel lines that are visually inspected to confirm that no further releases are occurring.

With respect to the volume of the release, the following information is provided:

Insufficient data exists to effectively determine the exact volume of diesel released. Calculation methods may be used to estimate the volume of LNAPL present at the site based on soil concentration measurements or free product thickness measurements in monitoring wells. However, there is significant uncertainty in the results of these volume estimation methods due to the:

- Necessity to interpolate point measurements throughout the hydrocarbon plume
- Difference in product thickness in monitoring wells compared to the product thickness in the formation due to capillary phenomena and fluid distribution in porous media [for cases where the monitoring well product thickness measurements are used to generate the LNAPL volume estimates]
- Variation in soil concentration measurements due to sampling and laboratory analysis variability [for cases where the soil concentration measurements are used to generate LNAPL volume estimates]

Consequently, the LNAPL volume estimates presented here are order of magnitude estimates for response action decision making only and are not to be used in evaluating the completion of the corrective action.

Two methods have been used to generate the LNAPL volume estimate for the Jal Basin Station. Both of these estimates are based on the free product thicknesses measured in the groundwater monitoring wells during the November 2000 gauging event. The first method uses commercially available software, OilVol. The second method uses the CONCAWE rule of thumb estimate to predict the product thickness in the formation from the measured product thickness in the monitoring wells and then uses Surfer to estimate the total product volume. Details are available in the attachments. The estimated LNAPL volume estimates range from:

OilVol:	40,000 gallons
CONCAWE/Surfer:	150,000 gallons

These order of magnitude estimates are in reasonable agreement suggesting approximately 10^5 gallons of LNAPL are present. Again, because these estimates are based on numerous default assumptions and are order of magnitude calculations at best, the volumes provided should not be misinterpreted to definitively show release volumes, or evaluate completion of the corrective action. The calculations are based solely on the monitoring well data obtained to date and do not include a volume estimate for the vadose zone. The vadose zone hydrocarbon volume estimate will be presented as part of the design of the soil remediation and monitoring plan outlined below.

With respect to OCD's directive to address the isolated source-migration area, Equilon will accelerate its previously intended investigation of this area, as follows:

Three soil borings / wells will be installed in the isolated source-migration area to determine a baseline for soil conditions in this area and to determine the influence of the active remediation system on the isolated source-migration area (FIG 1.). Access to this area is limited due to the presence of the Pump Building and associated equipment, lines, and tanks. Consequently, final boring locations will be selected in the field following consultation with Equilon operating personnel and subsurface and above grade utility clearance.

The following protocols will be followed during installation of the three borings / wells:

- Soil samples will be obtained and field screened at selected intervals
- Soils will be classified in the field
- Soil borings will be sampled for field screening and potential laboratory analysis at five to ten foot centers. This sampling frequency will be increased in the approximate ten foot zone above the anticipated groundwater elevation.
- All samples will be field screened using a photo-ionization detector (PID), and
- Selected samples will be prepared and shipped to the laboratory for chemical analysis

A minimum of two samples, and up to four samples, obtained at the intervals specified above, will be selected and submitted to the laboratory from each boring based on the following criteria (where appropriate):

- The soil sample with the highest PID headspace reading
- A sample obtained between ground surface and 20 feet bgs
- A minimum of one sample obtained between 50 and 80 feet bgs
- The sample directly above and/or near the groundwater level observed at the time of drilling (for borings terminating at or below the groundwater level)

All soil samples submitted to the laboratory, at a minimum, will be analyzed for the following parameters:

- Benzene, toluene, ethyl benzene, and xylenes (BTEX) via EPA Method SW846-8021B
- Total petroleum hydrocarbons – diesel range organics (TPH-DRO) via Modified EPA Method 8015 M Diesel

The sample exhibiting the highest TPH-DRO concentration from all three borings/wells will also be tested, at a minimum, for:

- SPLP volatile organic compounds (VOC) via EPA Method 1312/8260B
- SPLP semi-volatile organic compounds (SVOC) via EPA Method 1312/82
- SPLP TPH concentrations via EPA Method 418.1
- PAH and SPLP PAH via EPA Method 8270, and
- TPH fingerprint analysis via Texas Method 1006.

One sample will be obtained from an undisturbed depth and analyzed for:

- Bulk density via ASTM D2850
- Porosity via calculation from dry bulk density and particle density
- Water content via ASTM D2216-92
- Grain size via ASTM D422-6
- pH via EPA Method 9040 or 9045

The first boring to be advanced will be converted into a source area extraction well (to be designated MW-18). This well will be installed as close to the day tank and associated underground lines as feasible since they appear to represent the source area for the release. Upon advancement to total depth and collection of soil samples, a 4-inch diameter monitoring well consisting of 20 feet of 0.010-inch slotted PVC screen and blank riser will be placed in the open hole of MW-18. The well will be completed with an annular sand pack extending approximately 2 feet above the slotted screen interval, a 2 foot thick bentonite clay seal above the sand pack, an annular seal to the surface, and a 2 foot by 2 foot concrete surface pad with a locking steel stick-up cover.

If LNAPL is not present in MW-18, a groundwater sample will be obtained from the well and submitted for the following analyses:

- BTEX via EPA Method SW846-8021B;
- PAH via EPA Method 8270C;
- TPH-DRO via Modified EPA Method 8015 M Diesel;
- ICP total metals via EPA ICP Method 6020;
- Cations (bicarbonates, carbonates) via EPA Method 310.1;
- Anions (chlorides, sulfates) via EPA Method 300.0; and
- Total dissolved solids (TDS) via EPA Method 160.1.

The two remaining borings will be designated as vadose zone monitoring points, VZ-1 and VZ-2. Upon advancement to total depth and collection of soil samples, a 4-inch diameter monitoring point consisting of 0.010-inch slotted PVC screen and 10 to 15 feet of blank riser will be placed in the open hole of each boring. Final construction depth of these monitoring points will be determined in the field based upon the soil conditions encountered. The monitoring points will be completed with an annular sand pack extending approximately 2 feet above the slotted screen interval, a 2 foot thick bentonite clay seal above the sand pack, an annular seal to the surface, and a 2 foot by 2 foot concrete surface pad with a locking steel stick-up cover.

Upon installation of each monitoring well / point, the depth to groundwater will be measured and recorded. Where observed, the depth to LNAPL will be measured to determine the apparent thickness in each monitoring well / point.

Following installation of the vadose zone monitoring points, a respiration test will be conducted to evaluate bioventing parameters. The test will be performed in general conformance with technical Bioslurping / Bioventing protocols developed for the federal government. Results of this test will be utilized to design the vadose zone remediation system.

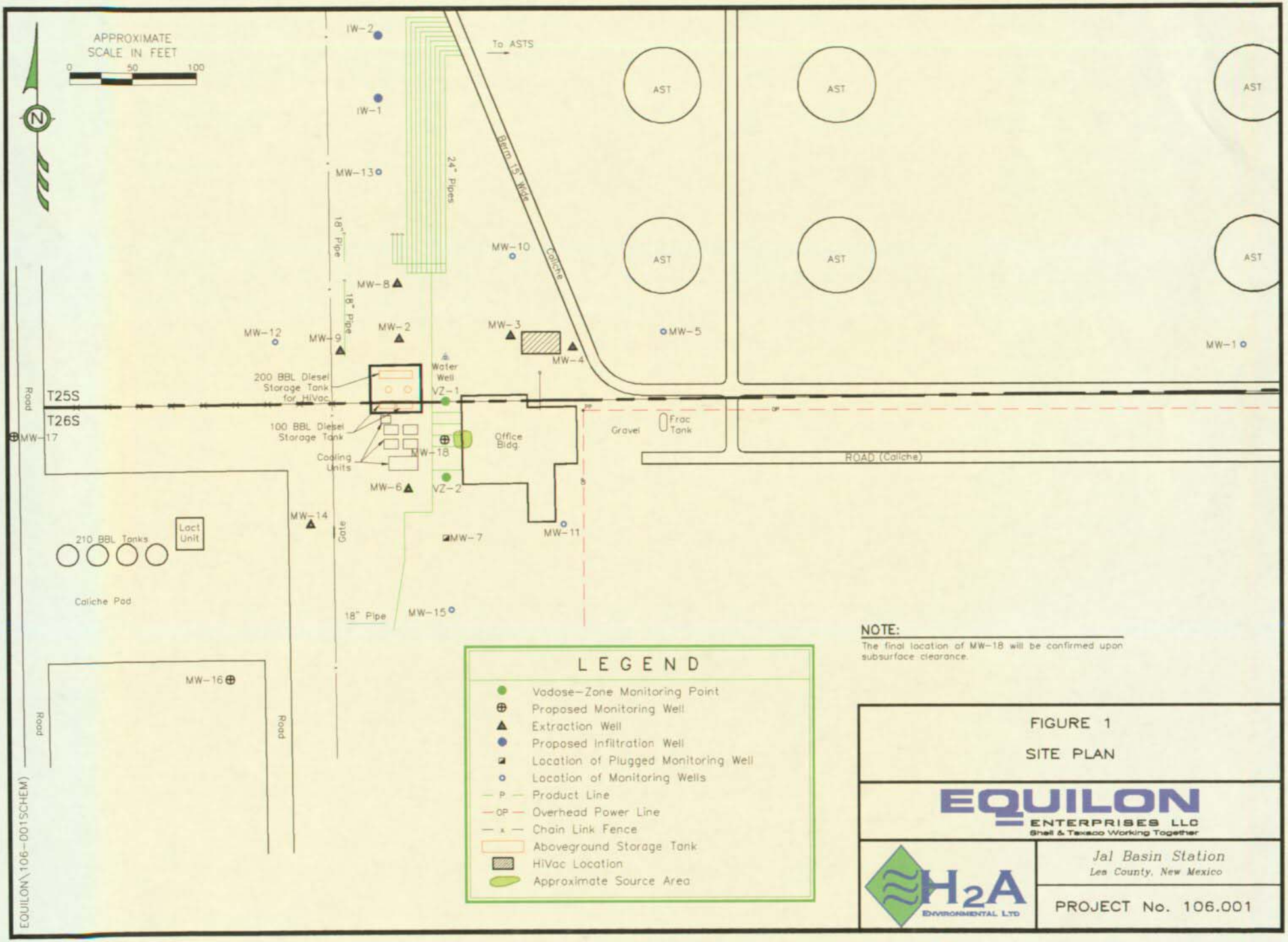
The monitoring well / point locations will be surveyed by a Professional Land Surveyor registered in the State of New Mexico.

The well / monitoring points will be installed within 60 days of receipt of OCD approval, subject to physical access to the source-migration area. A detailed soil remediation and monitoring plan will be submitted to OCD within 120 days of completion of installation and testing. The soil remediation and monitoring plan will address the source area soils. Installation of additional borings / wells in the vadose, source, and / or saturated zones as required, will be addressed in the plan. If additional pilot testing is required, it will also be included in the soil remediation and monitoring plan.

Additional Information:

Site maintenance activities to be performed at the site after termination of abatement activities, including completion of natural attenuation monitoring, will include the following.

- Maintain all monitoring well risers and pads from deterioration.
- Continue quarterly groundwater monitoring and sampling of on-site monitoring wells for eight consecutive quarters. The groundwater will be sampled quarterly for BTEX concentrations via EPA Method SW846-8020. Annually, the groundwater will be analyzed for PAH and metals concentrations via EPA Method 8100 and 6010, respectively.
- Plug and abandon all monitoring wells upon achieving eight consecutive quarters of groundwater concentrations below the WQCC water quality standards.
- Up to three confirmatory soil borings will be installed in the source area and between the HiVac extraction wells and the plume edge to confirm attainment of site cleanup standards for soil.



NOTE:
The final location of MW-18 will be confirmed upon subsurface clearance.

FIGURE 1

SITE PLAN

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A ENVIRONMENTAL LTD

Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

EQUILON\106-001SCHEM)

NEW MEXICO ENERGY, MINERALS and
NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

April 17, 2001

CERTIFIED MAIL
RETURN RECEIPT NO: 5051-4317

Mr. Marc Oler
Equiva Services, LLC
308 Wilcox, No. 101
Castle Rock, Colorado 80104

RE: STAGE 2 ABATEMENT PLAN (AP-4) PROPOSAL
JAL BASIN STATION

Dear Mr. Oler:

The New Mexico Oil Conservation Division (OCD) has reviewed Equilon Enterprises, LLC/Equiva Services, LLC (Equilon) December 8, 2000 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001 which was submitted on behalf of Equilon by their consultant H2A Environmental, Ltd. This document contains additional information in response to OCD's November 14, 2000 correspondence regarding Equilon's Stage 2 Abatement Plan Proposal for remediation of soil and ground water contamination at Equilon's Jal Basin Station located in the SE/4, SE/4 and the SW/4, SE/4 of Section 32, Township 25 South, Range 37 East and in the NE/4, NE/4 and the NW/4, NE/4 of Section 5, Township 26 South, Range 37 East NMPM, Lea County, New Mexico.

The OCD has the following comments and requests for information regarding the above-referenced document:

1. While the plan contains a proposal to install additional monitoring wells to determine the downgradient extent of ground water contamination, there are no proposed monitoring wells directly downgradient of monitor wells MW-12 and MW-14, the easternmost wells which contain free phase hydrocarbon products. Please submit such a plan.

2. The OCD disagrees with Equilon's assertion that it is premature to focus on vadose zone issues. Equilon's proposed extraction wells will result in some bioventing in the vadose zone, however, the wells are not specifically designed for bioventing purposes. The monitor wells have a small length of well screen (approximately 5 feet) exposed to the

vadose zone just above the surface of the water table and therefore will not effectively biovent the majority of the contaminated soils that occur in the remaining 80 feet of the vadose zone between the surface and the top of the well screen. An effective removal of hydrocarbon products from the water table cannot occur if the vadose zone soils continue to act as a source of free phase hydrocarbons. Therefore, the OCD requires that Equilon provide a proposed soil remediation and monitoring plan for contaminated soils in the vadose zone of the source area. The plan shall include detailed information on the location, origin, estimated volume and history of the release.

Please submit the above information to the OCD Santa Fe Office by May 17, 2000 with a copy provided to the OCD Hobbs District Office. Submission of this information will allow the OCD to continue a review of Equilon's Stage 2 Abatement Plan Proposal

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

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Supervisor
Theresa Nix, H2A Environmental, Ltd.
Donald A. Neeper

NEW MEXICO ENERGY, MINERALS and
NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

April 17, 2001

CERTIFIED MAIL
RETURN RECEIPT NO: 5051-4300

Mr. William K. Keenan
Equilon Pipeline Company
8023 East 63rd Place
Tulsa, Oklahoma 74133

RE: DISCHARGE PLAN (GW-326) MODIFICATION
JAL BASIN STATION
JAL, NEW MEXICO

Dear Mr. Keenan:

The New Mexico Oil Conservation Division (OCD) has reviewed Equilon Pipeline Company's April 3, 2001 "TEMPORARY AUTHORIZATION FOR DISCHARGE, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001" and March 1, 2001 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001" which were submitted on behalf of Equilon by their consultant H2A Environmental, Ltd. These documents contain Equilon's proposed modification to discharge plan GW-326 for treatment and reinjection of contaminated ground water at Equilon's Jal Basin Station located in the SE/4, SE/4 and the SW/4, SE/4 of Section 32, Township 25 South, Range 37 East and in the NE/4, NE/4 and the NW/4, NE/4 of Section 5, Township 26 South, Range 37 East NMPM, Lea County, New Mexico.

The OCD has the following comments and requests for information regarding the above-referenced documents:

1. While the two proposed injection wells are located upgradient of the contaminated ground water plume, these wells are in close proximity to the free phase hydrocarbon portion of the contaminated ground water. The OCD is concerned that water reinjected in these areas could potentially push free phase hydrocarbons into previously uncontaminated areas. Please provide technical information on the proposed effects of the reinjection system on the existing ground water contamination plume.

2. Does Equilon plan on using below grade lines for the conveyance of either contaminated or treated ground water? If below grade lines are proposed to be used, please provide a commitment to pressure test the lines to a minimum of 3 psi above operating pressure prior to operation and upon discharge plan renewal.

Please provide the above information to the OCD Santa Fe Office by May 17, 2001 with a copy provided to the OCD Hobbs District Office. Submission of this information will allow the OCD to continue with a review of Equilon's proposed discharge plan modification.

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

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Supervisor
Marc Oler, Equiva Services
Theresa Nix, H2A Environmental, Ltd.

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 Water Quality Control Commission (WQCC) Regulations, the following discharge plan modification application(s) have been submitted to the Director of the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(GW-326) - Equilon Pipeline Company LLC, William K. Keenan, (918) 461-2598, 8023 East 63rd Place, Tulsa, OK 74133, has submitted a discharge plan modification application for the Jal Basin Tank Farm located in the SE/4 of Section 32, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico. The proposed discharge plan modification involves treatment of contaminated ground water to New Mexico Water Quality Control Commission ground water standards, reinjection of the treated ground water and monitoring of the treatment system. All other treatment wastes are proposed to be trucked off site and disposed of in an OCD approved disposal facility. Ground water most likely to be affected from the discharge ranges from a depth of approximately 85 to 95 feet. Ground water at this site is currently under a remediation plan to remove liquid hydrocarbons and dissolved hydrocarbons in concentrations above WQCC ground water standards. The discharge plan addresses how the treatment system will be managed and how spills, leaks, and other accidental discharges to the surface will be managed.

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 discharge plan modification application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan modification application, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan(s) based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan(s) based on the information in the discharge plan modification application(s) and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 17th day of April, 2001.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

for LORI WROTENBERY, Director

SEAL

H_2A ENVIRONMENTAL, LTD.

ASSESSMENT • REMEDIATION • RISK ASSESSMENT • COMPLIANCE • LITIGATION / ENFORCEMENT SUPPORT

FAX TRANSMITTAL

TO: Bill Olson
OCD

FAX: 505-476-3462

FROM: Theresa Nix

PHONE: 361-777-0860

DATE: 04/17/01

RE: Revised infiltration well locations

H_2A Job No. 106.001

Total No. of Pages (including cover sheet): 2

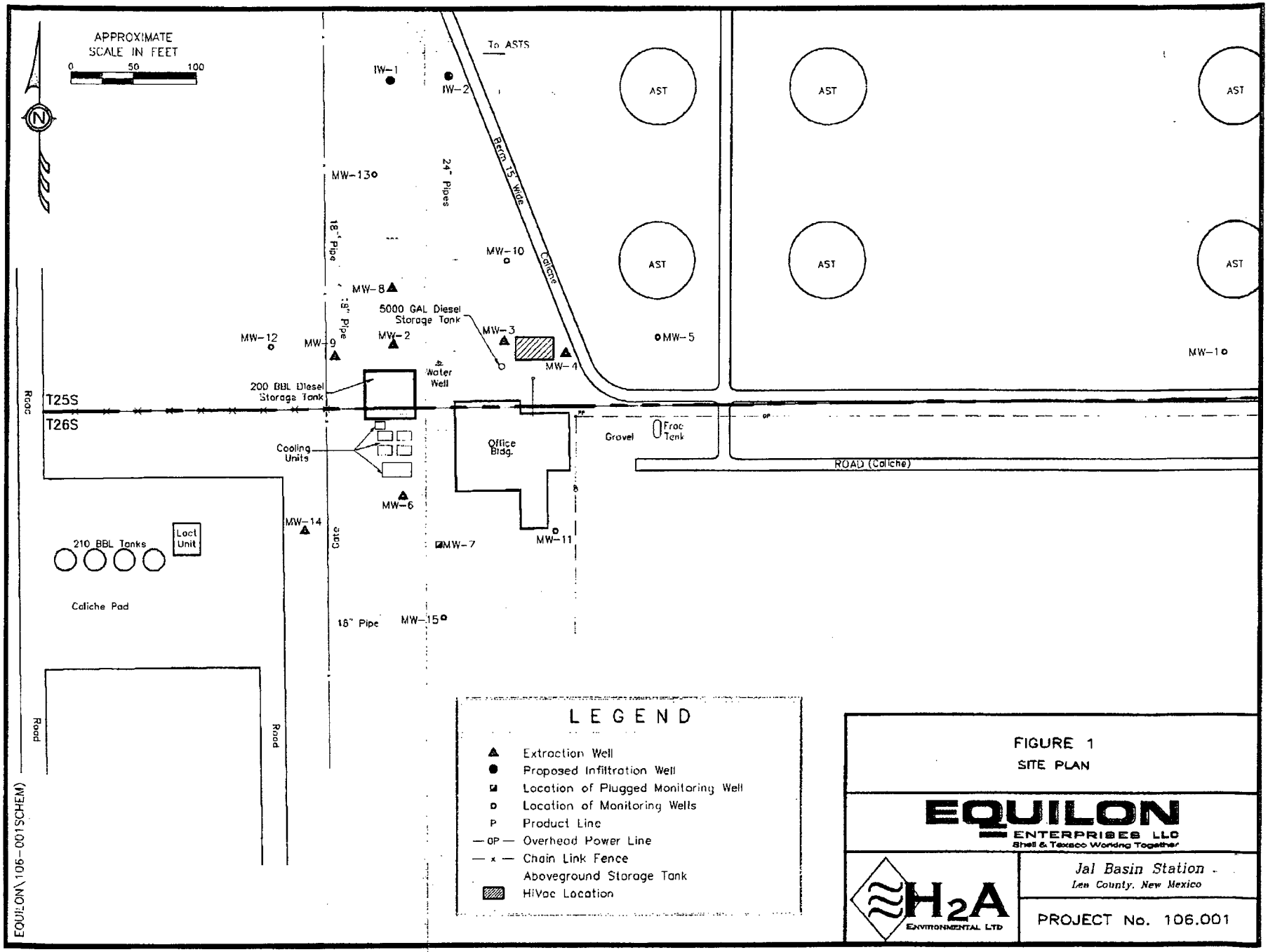
Mr. Olson,

I have attached a revised infiltration well location map for Equilon's Jal Basin Station. To ease concerns with mounding, I moved the infiltration wells further north. The nearest well containing LNAPL is approximately 150' from either infiltration well.

Please call me if you have any questions about the relocation of the wells.

418 SAN SABA
PORTLAND, TX 78374

(361) 777-0860
FAX (361) 777-0971



LEGEND

- ▲ Extraction Well
- ● Proposed Infiltration Well
- ◪ Location of Plugged Monitoring Well
- ○ Location of Monitoring Wells
- P Product Line
- —OP— Overhead Power Line
- — x — Chain Link Fence
- Aboveground Storage Tank
- ▨ HiVac Location

FIGURE 1
SITE PLAN

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A ENVIRONMENTAL LTD

Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

Olson, William

From: Theresa Nix [tnix@h2altd.com]
Sent: Tuesday, April 17, 2001 5:46 PM
To: Olson, William
Subject: Re: Jal Basin Station

Bill,
Here is Marc Oler's new address:

308 Wilcox, No. 101
Castle Rock, CO 80104
303-663-2503
303-663-2505 fax

----- Original Message -----
From: "Olson, William" <WOLSON@state.nm.us>
To: "'Theresa Nix'" <tnix@h2altd.com>
Sent: Tuesday, April 17, 2001 2:21 PM
Subject: Jal Basin Station

> Attached is a copy of the recent letter on the injection well locations.
>
>
> <<INF1.DOC>>
>

H_2A ENVIRONMENTAL, LTD.

ASSESSMENT • REMEDIATION • RISK ASSESSMENT • COMPLIANCE • LITIGATION / ENFORCEMENT SUPPORT

FAX TRANSMITTAL

TO: Bill Olson
OCD

FAX: 505-476-3462

FROM: Theresa Nix

PHONE: 361-777-0860

DATE: 4/06/01

RE: New Mexico Citizens for Clean Air & Water

H_2A Job No. 106.001.02

Total No. of Pages (including cover sheet): 5

Mr. Olson,

Here is the "Pollutants In Groundwater: A Citizen's View" paper I mentioned to you the other day on the telephone. Please call me if you have any questions.

Thanks!

418 SAN SABA
PORTLAND, TX 78374

(361) 777-0860
FAX (361) 777-0971

"POLLUTANTS IN GROUNDWATER: A CITIZEN'S VIEW"

by
John Bartlit, Ph.D.
New Mexico Citizens for Clean Air & Water

for the
13th Annual UST/LUST National Conference

Albuquerque, NM
March 20, 2001

The work of our organization is well described by its name: New Mexico Citizens for Clean Air & Water. We began in 1969, with work that was instrumental in bringing new cleanup technologies to the stacks of New Mexico's big coal-fired power plants. We have worked similarly for high-quality control of pollution at copper smelters, molybdenum mines, and gravel mines in rivers, to name a few. The tools we use range from air dispersion modeling and economic analysis to lawsuits. The result of this work has been cleaner air and water, and jobs for many new workers in the new business of environmental cleanup.

In this talk, I give some facts, as we find them, about leaks, spills, cleanup, and contamination in New Mexico's precious underground water resources. We gathered the information from the files of various New Mexico agencies. If our facts are wrong, please tell us. If our facts are right, let's work together to change things. We have some ideas as to how.

The Contamination Trends Are Not Good

Our message in chief has three parts: First, the known leaks and spills of pollutants in our aquifers, in some stage of study or cleanup, add up to thousands--perhaps 2000-3000. What is more, the rate at which new leaks and spills add more contamination looks to be far higher than the rate of cleanup of the known problems.

These statements are neither precise nor crystal clear, as should be the case. We find the requisite backup data are uncompiled, poorly defined, and scattered among bureaus. Further, we see this lack as a major contributor to our groundwater problems.

As we go about gathering leak data from state sources, the data are found in the files of four different agencies and bureaus. For petroleum alone, the Oil Conservation Division (OCD) at the New Mexico Energy, Minerals and Natural Resources Department has over 500 active leak cases, the Underground Storage Tanks Bureau at the New Mexico Environment Department

(NMED) lists about 700 active cases of leaks to groundwater, the Ground Water Quality Bureau at the NMED lists about 140 cases, and the Drinking Water Bureau at the NMED tracks the outcome--that is, the water wells lost to pollution.

Compartmentalized Thinking Adds to the Problem

Next, we see that a large contributor to the poor outcome is the fragmentation of legal authorities for the problems. The authorities fall to this bureau or that one according to many arbitrary criteria: Examples include whether the oil leaks on its way to the refinery or its way out, and whether the leak comes from an underground tank or some other source.

Further, the methods of the bureaus look to be equally fragmented, whether one looks at the handling of data or the authority exercised to say what is cleaned up, how the plans are laid out, and what cleanup schedule is set, if any. In particular, the treatment of pollution in the vital vadose zone lies in a legal no-man's-land.

We know the history of the legislative fights that create such artificial barriers. Yet, we fail as clean water advocates if we accept the harm and inefficiency, simply because we know the tangled reasons for them.

We did not find any single place in government that could tell us the total number or volume of known leaks to our aquifers. This simple fact itself alters judgments on the size of the problem. The compartmentalized thinking serves only to lower the urgency given to remedies and cleanup. This point is central to our message.

The shortcomings we find in just one case at the OCD are described in a recent newspaper column by our group's water person (see handout: "Petroleum spills harm groundwater," by Don Neeper, Los Alamos Monitor, February 4, 2001).

Modern Business Methods Offer Much Help

Any problem can be seen from many sides and it will look different from various angles. Yet, all of us also have views in common--for one, a focus on good management. A maxim used in business and industry is, "What gets measured, gets done." To promote such thinking is the aim of modern programs that continue to raise the quality of U.S. business management. I refer to the national Malcolm Baldrige Quality Awards; our state version, Quality New Mexico; and our state environmental version, Green Zia. The new business methods are useful for industry, agencies, and citizens alike.

As is proper for a citizens group, we look for high-level measures of progress in water cleanup. At the top of our list are the trends in the data over time. Key trends include: Is the total contamination in aquifers increasing or decreasing with time? Do the number of leaks occurring and the rate of new leaks reported go up or down with time? Is the number of water wells that are lost to the spread of contamination going up or down? We believe these trends do not look good.

Yes, we know divided boxes have to be used in large organizations, and the divisions are spread further by legislation. Yet, the 21st century brings us powerful new tools to help overcome the ills of compartmentalizing. The tools are the computer, up-to-date software, and the Internet. These tools make databases and information now transportable across space, interest groups, and bureaucratic and agency divides.

The tools can transport data, and can do much more. They can analyze data, summarize data, display data and their trends, and compile the totals. The tools have power to sort data by key factors: Useful factors for sorting and applying leak data may include the aquifer affected, its general area, the size or extent of the leak, the cause, the company name, the cleanup method used, and milestones in the required cleanup schedule.

It takes time, skill and, thus, money to make these changes and see the benefits. But the gains for the environment are worth it, and far more. In the end, the gains will save taxpayer money and raise industry profits. It is the future, available now.

Summary

This brief talk will serve well if its three main points add in a small way to the insights, ideas, and progress in the protection of groundwater. To sum up, the principal views we offer are:

- The trends in groundwater pollution tell a worsening story.
- Compartmentalized thinking contributes to the poor outcome.
- The tools of modern business management can improve regulatory efficiency, to benefit industry operations, the agencies, the citizens, and the environment.

Thank you for inviting me to speak here and for considering our views and information.

John Bartlit, Ph.D., Chairman,
New Mexico Citizens for Clean Air & Water
113 Monte Rey N., Los Alamos, NM 87544
phone: 505-672-9792; fax: 505-672-0831

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FAX TRANSMITTAL

TO: Bill Olson
OCD

FAX: 505-476-3462

FROM: Theresa Nix

PHONE: 361-777-0860

DATE: 04/03/01

RE: Don Neeper's Article

H_2A Job No. 106.001

Total No. of Pages (including cover sheet): 2

418 SAN SABA
PORTLAND, TX 78374

(361) 777-0860
FAX (361) 777-0971

Petroleum spills harm groundwater

By DON NEEPER

Ninety percent of New Mexico's drinking water comes from groundwater (aquifers). Contaminated groundwater has affected more than 2000 public and private wells in the state. More than 1,200 affected wells are due to petroleum products — fuels and oils. Santa Fe, Española, and Albuquerque have each lost wells due to petroleum contamination. It's time somebody took notice.

New Mexico Citizens for Clean Air and Water (that's us) recently took issue with a cleanup plan for diesel fuel floating on the aquifer near Jal, in southeastern New Mexico. We filed a request for a public hearing. To explain why we're interested in this one case, we must describe how the regulatory process works, and why a cleanup plan may not receive the scrutiny it needs.

In the cleanup process, the Responsible Party (RP, the polluter) must file two plans with either the New Mexico Environment Department or the Oil Conservation Division, depending on the nature of the spill.

New Mexico Citizens for Clean Air & Water

The first plan ("Stage 1") describes how the RP will investigate the nature and extent of contamination. A subsequent plan ("Stage 2") is filed later, to propose the intended method of cleanup based on the information acquired during the Stage 1 investigation.

In the Jal case, diesel fuel leaked from somewhere — perhaps a fuel tank — at a pipeline pumping station. The diesel migrated downward to accumulate as a floating mound on the aquifer about 90 feet below the ground surface. Several monitoring wells were drilled during the Stage 1 investigation. The presence of floating diesel in the monitoring wells suggests that the mound of diesel is now about 9 feet deep at the middle, and tapers to zero thickness at a diameter of 300 feet.

Not much more useful information was produced during the Stage 1 investigation. The RP apparently did not core the soil during the drilling, which would have produced accurate measurements of the thickness of the floating diesel. The RP did not identify the leak, did not estimate the total quantity of diesel in the soil, and did not investigate the vertical plume of diesel that must exist between the leaking equipment at ground surface and the aquifer.

The RP produced no engineering specification of the capacity, size, or design of the unique vacuum cleanup technology proposed for use, and no estimate of cleanup time. The state regulator says time doesn't matter. We disagree, arguing that the cleanup method should be designed according to the size of the problem. Is the cleanup method intended to work in months? Years? Centuries? We say if you propose to empty a swimming pool with a teaspoon, you are just stalling.

Why do we focus on this one spill composed of (our estimate) about 180,000 gallons of fuel when the state has more than 1,000 petroleum spills into the groundwater? We focus on this case because, by bringing attention to one inadequate plan, we may encourage better investigations and better cleanup in the future. Inadequate investigations produce inadequate plans, which in turn lead to inaction and delay while the pollution spreads and more groundwater is lost.

The state's regulatory hydrologist in charge of this case tells us he has 500 similar cases. How much attention can he give to one spill? We're supplying some extra attention.

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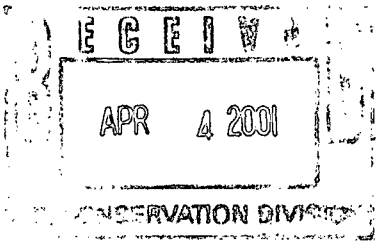
April 3, 2001



Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 St. Francis Drive
Santa Fe, New Mexico 87505

Re: Temporary Authorization for Discharge
Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H_2A Job No. 106.001

Dear Mr. Olson:

A discharge plan application for modification to Discharge Plan GW-326 for Equilon Pipeline Company LLC was submitted to your office on March 1, 2001. As per the New Mexico Water Quality Control Commission Title 20 Section 3106.B, Equilon requests temporary authorization to discharge without an approved plan modification for a period not to exceed 120 days, while the OCD reviews the modification.

The purpose of this request is to eliminate any further delays in remediating the impacted groundwater aquifer. The impacted groundwater is migrating off-site and in order to control and capture the plume, remediation must continue unabated. The extracted groundwater will be treated prior to re-infiltration into the subsurface.

Please feel free to contact me at (361) 777-0860 or email at tnix@h2altd.com if you have any questions or need additional information.

Sincerely,

Theresa Nix

Theresa Nix
Project Manager

cc: Marc Oler, Equiva
OCD Hobbs Office

418 SAN SABA
PORTLAND, TX 78374

(361) 777-0860
FAX (361) 777-0971

2708 B Walnut St.
Los Alamos, NM 87544
3 April 01

Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Dear Mr. Anderson:

Enclosed please find a 7-page document of my updated comments on the Jal Station Stage 2 abatement plan. This document was also transmitted to you by fax today at 476-3462.

Sincerely,

Donald A. Neeper

New Mexico Citizens for
Clean Air & Water, Inc.

ADDITIONAL COMMENTS ON

STAGE 2 ABATEMENT PLAN PROPOSAL JAL BASIN STATION

D. A. Neeper
New Mexico Citizens for Clean Air & Water, Inc.
2708 B Walnut St.
Los Alamos NM 87544
dneeper@aol.com 505-662-4592
April 3, 2001

SUMMARY

This paper updates our comments of October 10, 2000, on the Stage 2 abatement plan for the Jal Station. In the October 10 statement, we requested a public hearing on the Plan, but stated that we expected to withdraw the request if the inadequacies of the Plan were addressed. Our concerns with water consumption and with locating the southwestern boundary of the plume have been addressed. However, other inadequacies have not been addressed, and we therefore affirm our request for a hearing. The Plan does not address a) the history of the release; b) the volume of petroleum product in the formation; c) investigation and remediation of the vadose zone; d) a schedule for remediation; e) justification and engineering design for the selected remedies; and f) a description of post-abatement site maintenance. Rule 19 requires that these issues be addressed by the Plan.

The purpose of New Mexico Citizens for Clean Air & Water in this case is to encourage planning and execution of remediation that are appropriate to the size and nature of the contamination. Such an approach will be in accordance with the rules, and consistent with today's standards in the technical discipline. For reasons we will show, the investigation and documentation provided to date by the Responsible Person fall short of these standards.

1. INTRODUCTION

On October 10, 2000, NMCCA&W submitted comments in which we found the Jal Station Stage 2 abatement plan (the Plan) to be inadequate. In particular, we argued that the Stage 2 plan failed to investigate or establish remediation of the vadose zone, did not completely address the extent of contamination, and provided no engineering design for the preferred remedy in relation to the size of the problem. On November 14, 2000, the Oil Conservation Division (OCD) responded to the Stage 2 plan and prior documents submitted by the Responsible Person (RP). Among other items in its response, the OCD requested a soil remediation and monitoring plan. On December 8, 2000, the Responsible Person responded to the OCD with arguments to the effect that soil remediation does not need to be addressed at this time.

This polite denial of the regulator's instructions accents our concern that, if actions are not specified in the Plan, they will not get done. If the Stage 2 plan is approved despite its deficiencies, the RP may be under no obligation to perform remediation beyond the currently proposed removal of free product and achievement of water quality standards for eight calendar quarters. We therefore present technical explanations of why investigation of soil contamination and plans for its remediation are necessary. The major problem is not the free product in monitor wells, although that is the most obvious symptom of the release. We believe the largest challenge is to remediate the hydrocarbons that will remain in the formation after the free product is removed from the top of the water table. If left in place, this residual contamination will present an enduring threat to the groundwater.

An inadequate proposal for remediation of soil is not the only deficiency in the Plan. The Plan also fails to address the history of the release; the volume of LNAPL (light non-aqueous petroleum liquid) in the formation; a schedule for remediation; justification and engineering design for the selected remedies; and a description of post-abatement site maintenance. We therefore affirm our request for a hearing as provided by Rule 19.G(3).

2. TECHNICAL BACKGROUND

To assist in our subsequent statement of concerns with the Stage 2 plan, this section briefly reviews the interaction of LNAPL with groundwater, as documented in the technical literature.

Since 1990, several investigators have developed a quantitative theory of the behavior of LNAPL suspended above an aquifer. As a result of subsequent extensive comparison of observations with the theory, it is known that the thickness of the LNAPL observed in monitoring wells is not always a direct indication of the location or quantity of LNAPL in the formation. The following behavior is observed at many LNAPL sites. [1]

a) Monitoring wells may contain no LNAPL, even though soil sampling indicates LNAPL is in the adjacent formation above and/or below the water table.

b) LNAPL may abruptly appear or disappear in a monitoring well.

c) LNAPL thickness in a monitoring well increases when the water table falls and decreases when the water table rises.

d) If the water table drops below its previous range of movement, LNAPL may disappear from a monitoring well.

This seemingly strange behavior is explained by mathematical analysis of the capillary pressures of water and LNAPL acting together in the formation. When LNAPL is in hydraulic equilibrium with a static water table, the LNAPL penetrates the capillary fringe of the aquifer. The LNAPL saturation in the formation peaks at the depth corresponding to the air-oil surface in the adjacent monitoring well, and decreases to zero at the water table, as indicated in Fig. 1. (Here, "saturation" of either water or LNAPL means the ratio of the volume of that liquid to the volume of the porosity, which is sometimes called "relative saturation" or "Θ/Θ_S".) Depending on their drainage characteristics, some soils can retain LNAPL in a fashion analogous to the retention of water in a sponge. If the capillary pressure is less than atmospheric pressure, the liquid will not emerge into a monitoring well. Furthermore, if the water table is not static but moves up and down, water and LNAPL will be forced into and out of the pore spaces irreversibly, which can result in abrupt changes of LNAPL thickness in a monitoring well. If the water table is not static, absence of LNAPL in a monitoring well could also be caused by entrapment of LNAPL into an immobile phase.

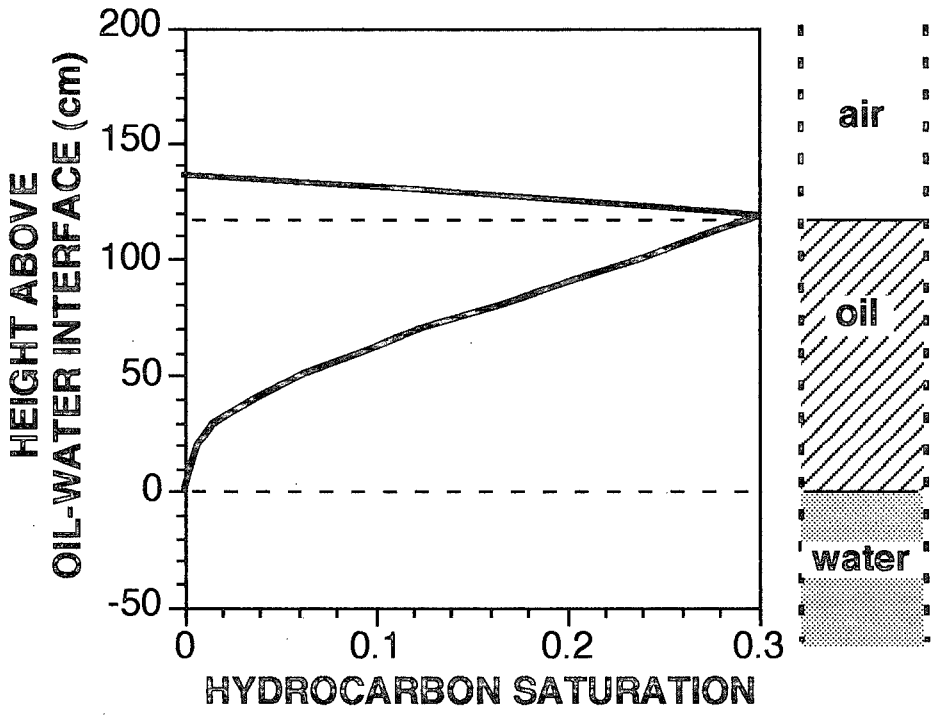


Fig. 1 Hydrocarbon saturation profile for a fine- to medium-grained sand and 116 cm of product in the monitoring well.

(Adapted from [3].)

For a given thickness of LNAPL in a monitoring well, the important parameters defining the amount of LNAPL in the formation are the soil characteristics (as exemplified by the van Genuchten relations) and the previous history of water table fluctuations. Observations have demonstrated that, given detailed measurements of soil properties every few centimeters of depth, the theory can quantitatively predict the amount of

LNAPL in the formation.[2,3] However, measurement of drainage characteristics on such a fine scale would be impractical for most remediation projects. Consequently, **to estimate the quantity of LNAPL present, the remediation investigator should measure the LNAPL profile in cores obtained during the Stage 1 investigation** and not rely on the observation of LNAPL thickness in monitor wells.

3. NATURE AND EXTENT OF CONTAMINATION

A. Plume boundaries.
The northern, eastern, and southern boundaries of the plume as it existed in 1999 were established by the soil sampling documented in the report from the RP dated January 6, 2000. In our comments of October 10, we requested that the RP delineate the southwestern boundary of the plume. We are satisfied that the southwestern boundary will be revealed by the additional monitoring wells proposed in the December 8, 2000 letter from the RP to OCD, **provided that soil sampling for TPH** (total petroleum hydrocarbons) **is conducted through the capillary fringe to the water table**. The soil, in addition to the water, must be sampled for TPH because LNAPL can be present in the formation without free product being present in the monitoring well. We suggest continuous coring while drilling within 10 feet of the water table.

B. History and nature of the release.
As in our statement of October 10, we note that neither the Stage 1 nor Stage 2 plans provide a description of the location, origin, and history of the release. If the origin of the release is not documented, there is little assurance that the cause of the release has been corrected. Rule 19.E states that the Stage 1 plan must include "site history including the nature of the release..." Furthermore, Rule 19.G(2) says the public notice of an abatement plan shall include "a description of the source extent, and estimated volume of the release ...". Therefore, Rule 19 clearly intends that the RP identify the source of the release. Such identification provides documentation that the origin of the contamination is known, and has been corrected. We paraphrase and rebut the RP's argument:

> *It is known with certainty that the release has ceased.*
> We suggest that it is known that the release has ceased only if the origin of the release is known, or if the contamination has been traced to a release location where no potential source currently exists. We suggest that, if it is known that the release has ceased, enough knowledge exists to describe the location and nature of the release. What assurance does the State have that the same situation will not cause another release in the future?

C. Quantity of hydrocarbons.
As in our statement of October 10, we again note that the Stage 2 plan contains no estimate of the quantity of hydrocarbons present either on the aquifer or in the vadose zone, and offers no engineering design to show that the proposed remedy is appropriate to the size of the problem. According to Rule 19.E, the site investigation work plan must define "the vertical and horizontal extent and magnitude of vadose-zone and ground-water contamination, ...". Therefore, the Stage 1 investigation

should have determined the quantity of hydrocarbons on the aquifer, and in the vertical plume that must exist between the water table and the point of release.

Rule 19.E specifically requires that the Stage 2 plan include a schedule for the duration of abatement activities. A rational schedule is not possible unless the remedy is scaled to the magnitude of the contamination. Therefore, it is necessary to estimate or to measure the quantity and distribution of hydrocarbons in the ground. If not remediated adequately, both the vertical plume and the residual LNAPL in the capillary fringe may gradually seep into the aquifer long after the required water monitoring has been completed.

By Rule 19.E, the Stage 1 investigation is supposed to gather the information "needed to select and implement an expeditious abatement option." We assert that **determination of the nature and size of the problem is essential in the design of an expeditious remedy**. Various arguments have been made in opposition to this assertion. We paraphrase and rebut those arguments here.

If the remediation proceeds slowly, that is of no consequence to the State because the only effect of slow remediation is to cost the RP more money.

If the remediation is not scaled to the problem, the remediation may proceed so slowly that it is never complete, establishing an appearance of technical unfeasibility. Meanwhile, the contamination continues to spread and to contaminate more water.

It is premature to focus on the vadose zone issues that will be addressed during the remediation effort anyway.

These issues were not addressed in the Stage 1 investigation, as required by Rule 19. These issues were not addressed in the Stage 2 plan for remediation as required by Rule 19. There is therefore little assurance that the RP will ever be required to address these issues, although he may do so voluntarily. If the Stage 2 plan is approved without documenting the extent of vadose zone contamination and presenting information to support the preferred remedy, the RP may in the future argue, with some legitimacy, that he has acted with good faith according to an approved plan and he therefore should not be required to perform investigations and remedies that are not in the Plan. An adequate plan establishes the commitment to apply the remedy. At present, the vadose zone has not been investigated and the adequacy of vapor extraction coincidental with "HiVac" extraction of LNAPL is not supported by site-specific data or engineering assessments in the Plan.

In the October 10 statement of NMCCA&W, the calculation you present dramatically overestimates the true volume of LNAPL likely to be present in the subsurface.

The accuracy of our estimate is not the issue. The issue is the RP's neglect to investigate the volume of LNAPL both on the water table and in the vertical plume to ground surface, and to justify remedies according to good engineering practice.

Although it is impossible to estimate accurately the quantity of LNAPL in the formation at Jal from the measured LNAPL thickness in monitoring wells, our statement attempted to demonstrate the order-of-magnitude of the contamination

despite the absence of measurements. In our estimate, we simply guessed that the porosity of the sandy formation might be 0.4, and that the LNAPL might occupy one-fourth of the porosity on the average. In response to the concern that we have exaggerated the problem, we recently made a somewhat more sophisticated estimate as follows. Based on the established mathematical theory, Marinelli and Durnford [1] presented a graph showing the quantity of diesel in a generic sandy formation as a function of the LNAPL thickness in a monitoring well. Integrating that graph with the assumed distribution of LNAPL thickness, we calculate that approximately 67,000 gallons of diesel reside on top of the aquifer. It therefore appears that 10^4 to 10^5 gallons of LNAPL are in the formation, including the vertical plume. We would be pleased to see a better estimate. Although our later estimate is more sophisticated, it is not any more reliable than our first estimate because it is not based on characteristics of the formation measured throughout the contaminated region. Therefore, the quantity of LNAPL in the formation should be determined from measurements on cores acquired through the contaminated regions, both in the capillary fringe and in the vertical plume.

Subsurface utilities and the presence of structures above the apparent vertical plume make it difficult to investigate the vertical plume.

We suggest directional drilling, as has been used in other environmental investigations. The vertical plume, and the possibility of remediating it by vapor extraction, cannot be investigated from the existing monitoring wells. If vapor extraction (with coincident bioremediation) is the proposed remedy, the vertical plume will probably need to be ventilated from one or more boreholes within that plume itself. Evaluation of this option will require measurements of the distribution of air permeability and air flow in the affected region, as is commonly done at sites employing vapor extraction.

4. ABATEMENT OPTIONS AND OPERATIONS

A. The "HiVac" system. In our statement of October 10, we expressed concern that the Stage 2 plan offers no evaluation of the elevation or depression of the water table by the "HiVac" extraction system. The system is being operated on different wells alternately. If the extraction process cyclically depresses and elevates the water table, it is likely that LNAPL will be trapped both above and beneath the water table, providing an immobile source for long-term dissolution into the aquifer. We support use of the "HiVac" system, but we assert that the effects of operations should be evaluated and presented in the Stage 2 plan.

B. Reinjection of water. We support the RP's current efforts to obtain approval for treating extracted water and returning clean water to the aquifer. We suggest that the reinjection point should be sufficiently far from the plume as to avoid locally raising the water table into the LNAPL, with consequent entrapment that immobilizes the LNAPL.

C. Vapor extraction. The RP expects that the vadose zone will be remedied by vapor extraction in air drawn through the "HiVac" system, and by coincident bioremediation. This might happen, but it is more likely that the air flow will not occur in many locations where it is needed. Vapor extraction requires deliberate design, including

measurement of the air permeability and measurement of the pressure distribution during test operation. Bioremediation, even with indigenous species, often requires application of nutrients. It would be technically advantageous, but it is not necessary to conduct the vadose zone remediation now. However, in the Stage 2 plan it is necessary to commit to the required investigations and to acknowledge that the design of the vadose zone remediation remains subject to future approval or disapproval.

D. Post-remediation maintenance. Most of the LNAPL on the aquifer will probably remain in place after the liquid extraction by the "HiVac" system becomes nonproductive. This residual LNAPL will probably not appear in monitoring wells, but it may provide a long-term source of contamination for the aquifer even if water samples meet standards for eight quarters after remediation ceases. Post-remediation site maintenance therefore will be needed. Investigation of the residual LNAPL and continuing site maintenance are not addressed in the Stage 2 plan. Rule 19.E requires that the Stage 2 plan address post-abatement site maintenance.

REFERENCES

[1] F. Marinelli and D. S. Durnford, "LNAPL Thickness in Monitoring Wells Considering Hysteresis and Entrapment," Ground Water 34, 405-414, (1996).

[2] D. Huntley, R. N. Hawk,, and H. P. Corley, "Nonaqueous Phase Hydrocarbon in a Fine-Grained Sandstone: 1. Comparison Between Measured and Predicted Saturations and Mobility," Ground Water 32, 626-634, (1994).

[3] D. Huntley, J. W. Wallace, and R. N. Hawk, "Nonaqueous Phase Hydrocarbon in a Fine-Grained Sandstone: 2. Effect of Local Sediment Variability on the Estimation of Hydrocarbon Volumes," Ground Water 32, 778-783, (1994).

Olson, William
From: Theresa Nix [SMTP:tnix@h2altd.com]
Sent: Friday, March 30, 2001 2:54 PM
To: Bill Olson
Subject: Equilon's Jal Basin Station

Mr. Olson,

I just wanted to let you know that Mr. Neeper does not have any concerns with treating and re-injecting the water at Jal. I have received additional "draft" comments from Mr. Neeper concerning other issues with the Stage 2 abatement plan. I will be submitting a response to his draft comments by early next week. I am trying to answer all of his concerns so a public hearing will not be required.

Please call me if you have any questions. Will Equilon be able to get a temporary authorization to discharge and if so, when might we receive it? Please let me know.

Thanks!
Theresa Nix
H2A Environmental, Ltd.
361.777.0860 (Phone)
361.777.0971 (Fax)
tnix@h2altd.com

Olson, William
From: Dneeper@aol.com [SMTP:Dneeper@aol.com]
Sent: Friday, March 23, 2001 12:22 PM
To: tnix@h2altd.com
Cc: wolson@state.nm.us
Subject: Re: Equilon Jal Basin Station

In a message dated 3/14/01 12:45:59 PM, tnix@h2altd.com writes:

> I am forwarding a file which shows the product recovery the high vacuum extraction system has achieved since startup on January 4, 2001.

Thanks for the good news on the recovered diesel. Is the recovered product still about 7% of the total extracted liquid volume, as in the pilot test? Sorry, I couldn't open the file you mentioned in the quote above. The file name was "Update Graph.xls." It is apparently an excel file. Because your other files have been Windows (not Macintosh), I tried to open this file with Excel 7.0 under Window 95, which rejected the file as having improper format. Please try sending it again, or instructing me if I incorrectly guessed the file's origin. I also have Excel 4 and 5 available on the Mac, if that's required.

I also wanted to let you know that I have submitted a groundwater discharge plan >application to the New Mexico Oil Conservation Division for this site.

Regarding the water: if the processed effluent is clean, I regard injection as generally preferable to infiltration from the surface. The map accompanying your letter of December 8 to Olson suggests the injection wells would be located upgradient of the extraction wells but still possibly within the region of floating NAPL—that is, the proposed location of IW1 is closer to the plume center than MW10, which defines the known current northeast limit of the plume. I would think you would want the injection wells to be some distance from the plume, so as to avoid raising the surface of the groundwater into the NAPL.

Sorry, also, that I've been slow in responding to your 2/12 inquiry as to whether I have continuing questions. I've been trying to catch up with business after 3 weeks out for surgery during February, and only today have I returned to reviewing the Jal release. I still have concern with the fact that vadose zone investigation is not addressed in the Stage 2 plan. Also, I feel it is reasonable to make a best estimate of the magnitude and extent of the release, and to engineer the remediation with an estimated schedule. That doesn't mean the schedule can necessarily be followed in practice, but the plan should at least establish an order-of-magnitude engineering relationship between the selected remedy and the size of the problem as revealed by the Stage 1 investigation. I will prepare a more detailed statement of my continuing concern, and let you review it as a draft.

Thanks for your invitation to visit the Jal station. I will try to arrange a trip to southern NM, but I will communicate with you first to arrange a date when you will be on site for other purposes anyway.

Don Neeper

Olson, William

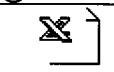
From: Theresa Nix [SMTP:tnix@h2altd.com]
Sent: Wednesday, March 14, 2001 2:54 PM
To: Dneeper@aol.com
Cc: Bill Olson; J. Michael Hawthorne; Marc Oler
Subject: Equilon Jal Basin Station

Mr. Neeper,

I am forwarding a file which shows the product recovery the high vacuum extraction system has achieved since startup on January 4, 2001. I also wanted to let you know that I have submitted a groundwater discharge plan application to the New Mexico Oil Conservation Division for this site. The purpose of the groundwater discharge plan is to allow Equilon to reinject the treated groundwater extracted from the subsurface via the high vacuum extraction system to recharge the aquifer. The groundwater will be reinjected back into the aquifer it was extracted from. Prior to reinjected, the groundwater will be treated to New Mexico Water Quality Control Commission standards. OCD requires a series of effluent sampling to monitor compliance with the discharge permit, once the groundwater discharge permit has been approved.

Please let me know if you have any outstanding concerns with the soil and groundwater remediation efforts at this facility. You are welcome to come by and visit the site. If you interested, you may contact John Savoie at 505-631-1278 or myself at 361-77-0860.

Theresa Nix
H2A Environmental, Ltd.
361.777.0860 (Phone)
361.777.0971 (Fax)
tnix@h2altd.com



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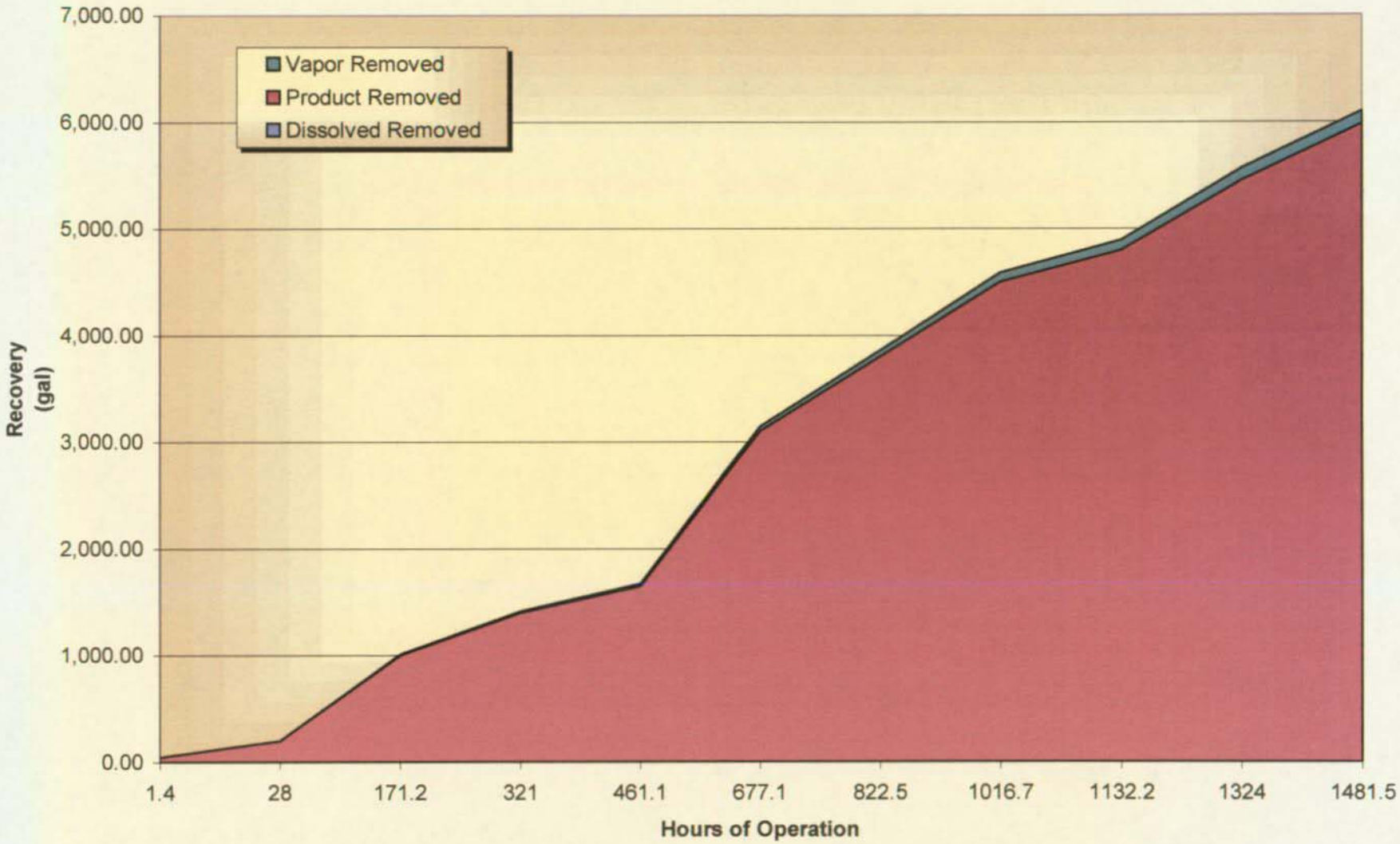
HIVAC SYSTEM RECOVERY



H_2A ENVIRONMENTAL, LTD.

ASSESSMENT ◦ REMEDIATION ◦ RISK ASSESSMENT ◦ COMPLIANCE ◦ LITIGATION / ENFORCEMENT SUPPORT

March 1, 2001

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 St. Francis Drive
Santa Fe, New Mexico 87505

Re: Stage 2 Abatement/Discharge Plan
Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H_2A Job No. 106.001

Dear Mr. Olson:

Transmitted with this letter is the discharge plan application for modification to Discharge Plan GW-326 for Equilon Pipeline Company LLC. This modification includes information for the existing HiVac groundwater and soil remediation system installed at the facility. Currently, the groundwater recovered from the system is stored in an on-site frac tank prior to off-site disposal. Equilon is requesting approval to install two infiltration wells for re-infiltration of treated groundwater into the subsurface upgradient of the hydrocarbon impact.

Please call me at (361) 777-0860 if you have any questions or need additional information. I appreciate your immediate attention to this matter.

Sincerely,

Theresa Nix

Theresa Nix
Project Manager

cc: Marc Oler, Equiva
OCD Hobbs Office

418 SAN SABA
PORTLAND, TX 78374

(361) 777-0860
FAX (361) 777-0971

Olson, William

From: Theresa Nix [SMTP:tnix@h2altd.com]
Sent: Monday, February 12, 2001 11:22 AM
To: Bill Olson
Subject: Equilon Jal Basin Station

Mr. Olson,

I just want to let you know that a contractor damaged monitoring well MW-5 at Equilon's Jal Basin Station. We are in the process of finding out if the well can be repaired. I will let you know what happens.

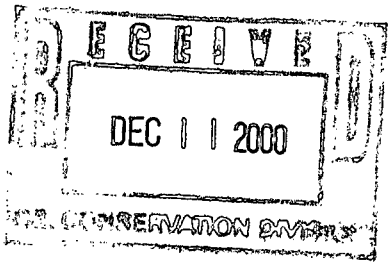
Please call me if you have any questions.

Theresa Nix
H2A Environmental, Ltd.
361.777.0860 (Phone)
361.777.0971 (Fax)
tnix@h2altd.com

H2A ENVIRONMENTAL, LTD.

ASSESSMENT ◦ REMEDIATION ◦ RISK ASSESSMENT ◦ COMPLIANCE ◦ LITIGATION / ENFORCEMENT SUPPORT

December 8, 2000



Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Stage 2 Abatement/Discharge Plan
Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H_2A Job No. 106.001

Dear Mr. Olson:

Transmitted with this letter is the information requested in your letter dated November 14, 2000, addressed to Mr. Marc Oler with Equiva Services, LLC, regarding the above referenced site.

1. The plan does not contain a proposal to install additional monitoring wells to determine the downgradient extent of ground water contamination in excess of the standards of Rule 19.B. Please submit such a plan.

   Additional monitoring wells will be installed to determine the downgradient extent of groundwater impact in excess of the standards of Rule 19.B. Proposed monitoring well locations are presented on FIG. 1. Two additional wells are proposed, however, additional monitoring wells may be installed if field and laboratory data indicate such wells are required to complete delineation.

2. The proposal for installation of infiltration gallery/injection wells does not contain the proposed location of the system nor information on how the system will be constructed and operated. Please provide this information. In addition, it is not clear whether Equilon is still proposing to discharge to the surface as an option for disposal of the treatment system effluent. Please clarify if this is still a proposed disposal method, and if so, the exact location of the proposed land application, as well as, how the system will be constructed and operated.

   At this time we still are evaluating the feasibility of long-term surface discharge in conjunction with the State Land Office and Quail Unlimited. If implemented, the surface discharge will be designed to enhance wildlife habitat in the area on State Land. We wish to preserve the options of either surface discharge or subsurface infiltration, if possible.

500 N. CARROLL AVE., SUITE 120
SOUTHLAKE, TX 76092

(817) 251-9466
FAX (817) 251-9224

At a minimum, Equilon proposes to surface discharge on a temporary basis until the injection wells have been installed. The proposed surface discharge area is presented on FIG. 1. Equilon is currently coordinating with the New Mexico State Land Office on the details of the proposed discharge. It is likely that a small surface impoundment will be constructed to contain the cleaned discharge water. The system effluent will be piped over to the discharge area.

The proposed infiltration well locations are presented on FIG. 1. Two 4-inch wells will be installed to depths of approximately 100 feet below ground surface. The wells will be screened from approximately 20 feet below ground surface to total well depth. Both wells will be located upgradient of the ground water recovery area. The treated effluent will be pumped through an underground line into the infiltration wells.

3. The plan does not contain a proposed soil remediation and monitoring plan for contaminated soils in the source area. Please provide such a plan.

Although not specifically discussed in the Stage II Abatement Plan, High Vacuum Multiphase Extraction (MPE) is designed to remediate subsurface LNAPL regardless of whether it exists as a separate phase at the water table or as residual saturation in the vadose zone. MPE achieves this remediation via three primary actions: pumping of groundwater and LNAPL, volatilization and extraction of LNAPL in the vapor phase, and bioventing of the vadose zone through oxidation of that zone. Operation of the HiVac MPE system essentially establishes both liquid and vapor vacuum gradients that can effectively remediate both the vadose zone and the groundwater / capillary zone areas. The system is designed to pull air from the surface through the source area.

At this time we believe it to be premature to focus on the vadose zone issues that will be addressed during the remediation effort anyway. We would request that we be allowed to operate the system to recover the LNAPL on groundwater, and at such time as the LNAPL on the groundwater has been reasonably removed, to evaluate any required soil remediation efforts. We agree that the soil needs to be remediated at the site, but do not believe it is necessary to address that issue at this time. One option to be considered will be to install some shallow monitoring points in the soil source area. These points may be monitored for respiration data to determine whether the soils are being addressed.

Complicating this process at the referenced site is the presence of an office/engine room/fuel storage area above the apparent primary vertical migration zone of the diesel. Because of the presence of surface and subsurface utilities and lines as well as surface equipment, it is difficult, and potentially dangerous, to drill in that area. Consequently, we propose to utilize the existing monitoring / extraction wells, which surround that area, to evaluate the effectiveness of remediation by monitoring the groundwater and soil gas concentrations.

4. The plan states that various monitoring wells that exhibit hydrocarbon impact will be utilized as ground water extraction points for the HiVac system. Please provide information on what wells will be utilized as extraction wells.

Monitoring well Nos. 2, 3, 4, 6, 8, 9, and 14 will be utilized as extraction wells. Any future wells that are installed and that exhibit LNAPL may also be utilized as extraction wells. Wells will be alternated as needed to enhance system performance. The well locations are presented on FIG. 1.

5. In order to demonstrate that the treatment system is achieving the standards of Rule 19.B., the OCD requires that the treatment system effluent be tested daily for the first 7 days, weekly for the next 4 weeks and then monthly. Please provide a commitment to conduct this sampling.

The system effluent sampling schedule is outlined in the attached table.

SAMPLING SCHEDULE – Hi-VAC SYSTEM

CONTAMINANT	SAMPLING FREQUENCY*	EPA METHOD	CLOSURE CONCENTRATION (mg/l)
Arsenic	Day 1, Annually	6010	0.1
Barium	Day 1, Annually	6010	1.0
Cadmium	Day 1, Annually	6010	0.01
Chromium	Day 1, Annually	6010	0.05
Cyanide	Day 1, Every 3 years	335.2	0.2
Fluoride	Day 1, Every 3 years	300	1.6
Lead	Day 1, Annually	6010	0.05
Total Mercury	Day 1, Annually	7470	0.002
Nitrate (NO_3 as N)	Day 1, Annually	353.2	10.0
Selenium	Day 1, Annually	6010	0.05
Silver	Day 1, Annually	6010	0.05
Benzene	Days 1-7, weekly for 4 weeks, then Monthly	8020	0.01
Toluene	Days 1-7, weekly for 4 weeks, then Monthly	8020	0.75
Carbon Tetrachloride	Day 1, Annually	8260	0.01
1,2-Dichloroethane	Day 1, Annually	8260	0.01
1,1-Dichloroethylene	Day 1, Annually	8260	0.005
1,1,2,2-Tetrachloroethylene	Day 1, Annually	8260	0.02
1,1,2-Trichloroethylene	Day 1, Annually	8260	0.1
Ethylbenzene	Days 1-7, weekly for 4 weeks, then Monthly	8020	0.75
Total Xylenes	Days 1-7, weekly for 4 weeks, then Monthly	8020	0.62
Methylene Chloride	Day 1, Annually	8260	0.1
Chloroform	Day 1, Annually	8260	0.1
1,1-Dichloroethane	Day 1, Annually	8260	0.025
Ethylene Dibromide	Day 1, Annually	8260	0.0001
1,1,1-Trichloroethane	Day 1, Annually	8260	0.06
1,1,2-Trichloroethane	Day 1, Annually	8260	0.01
1,1,2,2-Tetrachloroethane	Day 1, Annually	8260	0.01
Vinyl Chloride	Day 1, Annually	8260	0.001

SAMPLING SCHEDULE – Hi-VAC SYSTEM (continued)

CONTAMINANT	SAMPLING FREQUENCY*	EPA METHOD	CLOSURE CONCENTRATION (mg/l)
PAHs: Total Naphthalene plus monomethylnaphthalenes	Day 1, Annually	8270	0.03
Benzo-a-pyrene	Day 1, Annually	8270	0.0007
Chloride	Day 1, Annually	300	250.0
Copper	Day 1, Annually	6010	1.0
Iron	Day 1, Annually	6010	1.0
Manganese	Day 1, Annually	6010	0.2
Phenols	Day 1, Every 3 years	8270	0.005
Sulfate	Day 1, Annually	300.0	600.0
Total Dissolved Solids (TDS)	Day 1, Annually	160.1	1000.0
Zinc	Day 1, Annually	6010	10.0
pH	Day 1, Annually	150.1	between 6 and 9
Aluminum	Day 1, Annually	6010	5.0
Boron	Day 1, Annually	6010	0.75
Cobalt	Day 1, Annually	6010	0.05
Molybdenum	Day 1, Annually	6010	1.0
Nickel	Day 1, Annually	6010	0.2

Please call me at (361) 777-0860 or email tnix@h2altd.com if you have any questions or need additional information.

Sincerely,

Theresa Nix

Theresa Nix
Project Manager

cc: Chris Williams, OCD Hobbs
Marc Oler, Equiva Services LLC

C:\Theresa\H2A\Jal - 106.001\Stage 2-Discharge Pln\stage2 attach.doc

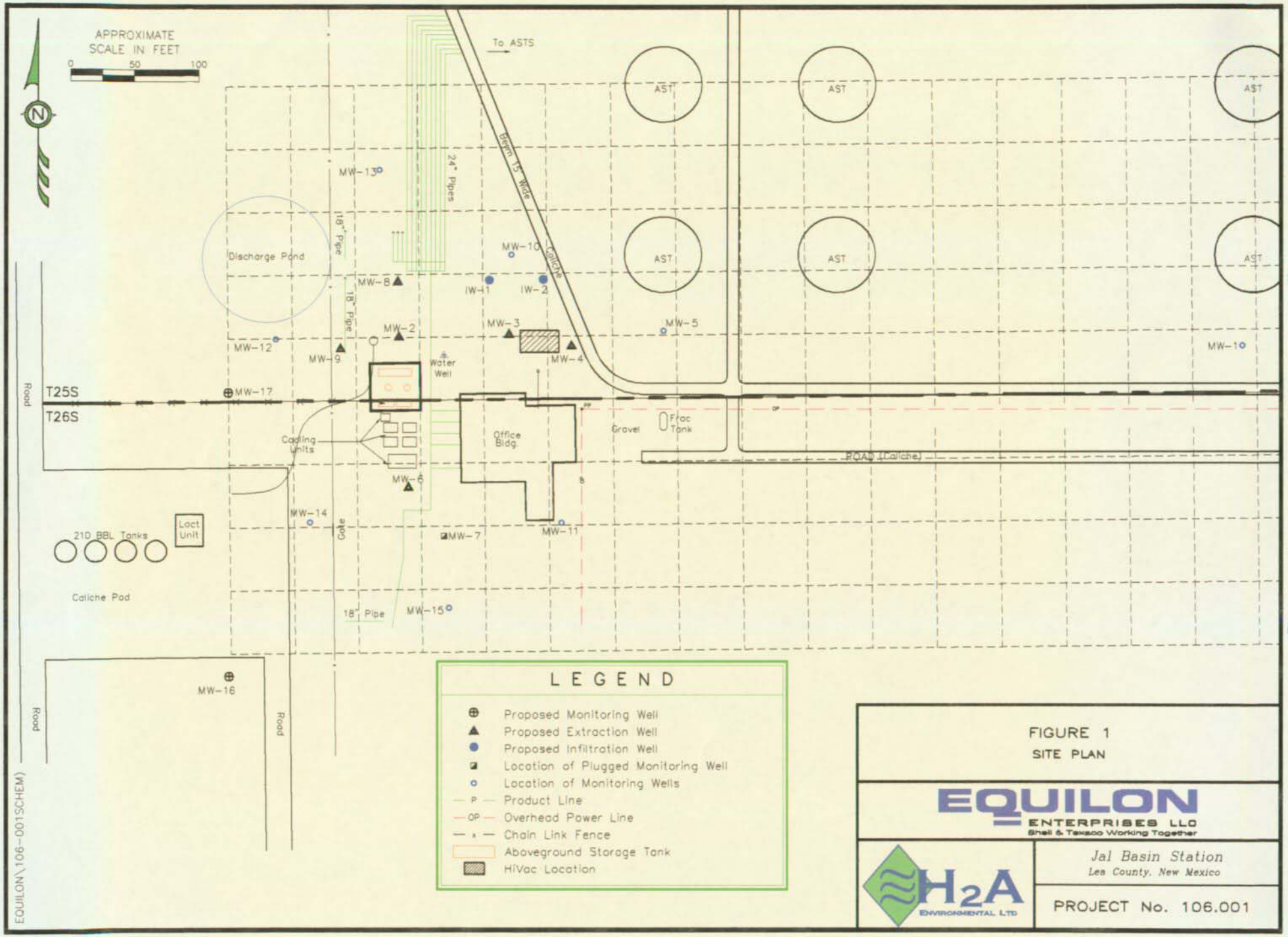


FIGURE 1
SITE PLAN

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A ENVIRONMENTAL LTD

Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

EQUILON\106-001SCHEM)

son, William
m: Olson, William
Sent: Thursday, November 30, 2000 10:43 AM
To: 'Theresa Nix'
Subject: RE: Equilon's Jal Basin Station

The effluent sampling requirements apply to either surface discharge or subsurface reinjection. The sampling is not required for disposal at an OCD permitted facility. However, please be aware the disposal facility will require an analysis that shows that the fluids are RCRA non-hazardous since they are not generated from a RCRA exempt facility. In addition, because they are RCRA non-exempt the fluids cannot go to a Class II injection well facility for disposal.

If you have any questions, please call me.

From: Theresa Nix [SMTP:tnix@h2altd.com]
Sent: Tuesday, November 28, 2000 2:22 PM
To: Bill Olson
Subject: Equilon's Jal Basin Station

Bill,
Hello and how are things in New Mexico? I have a question about your letter dated 11/14/00. Item 5 outlines the system effluent sampling requirements. Is this sampling to begin immediately when the system starts up or after we receive approval to either surface discharge or re-inject the treated effluent? In other words, do we do this sampling during the interim of using the frac tank?

Please let me know so we can stay in compliance. I appreciate your assistance.
Theresa Nix
H2A Environmental, Ltd.
361.777.0860 (Phone)
361.777.0971 (Fax)
tnix@h2altd.com

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

November 14, 2000

CERTIFIED MAIL
RETURN RECEIPT NO: 5051-3839

Mr. Marc Oler
Equiva Services, LLC
1670 Broadway, Suite 2600
Denver, Colorado 80202-4838

RE: STAGE 2 ABATEMENT PLAN (AP-4) PROPOSAL
JAL BASIN STATION

Dear Mr. Oler:

The New Mexico Oil Conservation Division (OCD) has reviewed the following Equilon Enterprises, LLC/Equiva Services, LLC (Equilon) documents which were submitted on behalf of Equilon by their consultant H2A Environmental, Ltd.:

- October 24, 2000 "STAGE 2 ABATEMENT/DISCHARGE PLAN FOR JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001".

- October 16, 2000 "STAGE 2 ABATEMENT/DISCHARGE PLAN FOR JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001".

- October 3, 2000 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001".

- August 7, 2000 email titled "EQUILON JAL BASIN STATION".

- July 26, 2000 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001".

These documents contain Equilon's Stage 2 Abatement Plan Proposal for remediation of soil and ground water contamination at Equilon's Jal Basin Station located in the SE/4, SE/4 and the SW/4, SE/4 of Section 32, Township 25 South, Range 37 East and in the NE/4, NE/4 and the NW/4, NE/4 of Section 5, Township 26 South, Range 37 East NMPM, Lea County, New Mexico. The documents also contain notice of the discovery of free phase product on the ground water in monitor well MW-14 and a request to begin interim pumping of free phase product into tanks for disposal while abatement plan approval is pending.

The OCD has also received public comment on Equilon's Stage 2 Abatement Plan Proposal from Mr. Donald A. Neeper in a letter dated October 10, 2000. Attached is a copy of Mr. Neeper's letter.

Due to the need to contain the migration of free phase products, the OCD approves Equilon's request to begin interim pumping of free phase product into tanks for off-site disposal pending abatement plan approval on the condition that all wastes be disposed of at an OCD approved facility.

The OCD has the following comments and requests for information regarding the Stage 2 Abatement Plan Proposal:

1. The plan does not contain a proposal to install additional monitoring wells to determine the downgradient extent of ground water contamination in excess of the standards of Rule 19.B. Please submit such a plan.

2. The proposal for installation of infiltration gallery/injection wells does not contain the proposed location of the system nor information on how the system will be constructed and operated. Please provide this information. In addition, it is not clear whether Equilon is still proposing to discharge to the surface as an option for disposal of the treatment system effluent. Please clarify if this is still a proposed disposal method, and if so, the exact location of the proposed land application, as well as, how the system will be constructed and operated.

3. The plan does not contain a proposed soil remediation and monitoring plan for contaminated soils in the source area. Please provide such a plan.

4. The plan states that various monitoring wells that exhibit hydrocarbon impact will be utilized as ground water extraction points for the HiVac System. Please provide information on what wells will be utilized as extraction wells.

5. In order to demonstrate that the treatment system is achieving the standards of Rule 19.B., the OCD requires that the treatment system effluent be tested daily for the first 7 days, weekly for the next 4 weeks and then monthly. Please provide a commitment to conduct this sampling.

Please submit the above information to the OCD Santa Fe Office by December 14, 2000 with a copy provided to the OCD Hobbs District Office. Submission of this information will allow the OCD to continue a review of Equilon's Stage 2 Abatement Plan Proposal

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

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

attachment

xc w/attachment: Chris Williams, OCD Hobbs District Supervisor
J. Michael Hawthorne, H2A Environmental, Ltd.
Donald A. Neeper

NEW MEXICO ENERGY, MINERALS and
NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

October 27, 2000

CERTIFIED MAIL
RETURN RECEIPT NO. 5051-3686

Mr. Donald A. Neeper
New Mexico Citizens for Clean Air & Water, Inc.
2708 B Walnut St.
Los Alamos, New Mexico 87544

RE: STAGE 2 ABATEMENT PLAN PROPOSAL
EQUILON JAL BASIN STATION
GROUND WATER ABATEMENT PLAN (AP-4)

Dear Mr. Neeper:

The Oil Conservation Division (OCD) received your October 10, 2000 letter commenting on and objecting to Equilon Enterprises, LLC/Equiva Services, LLC's (Equilon) July 26, 2000 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001".

The OCD has included your name as an intervenor in this case and you will receive copies of all OCD correspondence concerning the abatement plan. The OCD will continue to process the abatement plan and comments received until the plan is determined to be administratively approvable or denied. If the abatement plan is administratively denied, the applicant will be notified and it will be its responsibility to request a hearing appealing the denial. If the abatement plan is determined to be administratively approvable, the OCD will notify the applicant and all intervenors of the conditions under which the plan would be approved. All intervenors will be allowed fifteen (15) days from receipt of the determination to submit final comments on the conditions or request a public hearing in lieu of administrative approval. A request for a public hearing must be in writing and must include the reasons why a hearing should be held.

The OCD appreciates your input on all environmental and public health issues relating to the abatement plan.

If you have any questions or comments, please do not hesitate to contact me at (505) 827-7152 or Bill Olson of my staff at (505) 827-7154.

Sincerely:

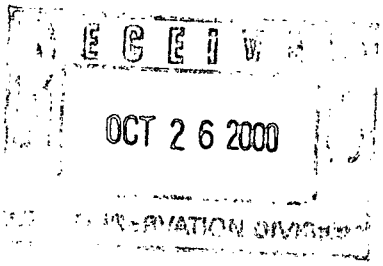
Roger C. Anderson, Chief
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Supervisor
Marc Oler, Equiva Services, LLC
J. Michael Hawthorne, H2A Environmental, Ltd.

H2A ENVIRONMENTAL, LTD.

ASSESSMENT ◦ REMEDIATION ◦ RISK ASSESSMENT ◦ COMPLIANCE ◦ LITIGATION / ENFORCEMENT SUPPORT

October 24, 2000



Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Stage 2 Abatement/Discharge Plan for Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H_2A Job No. 106.001

Dear Mr. Olson:

On behalf of Equilon Pipeline LLC, we would like to propose the use of storage tanks for storage of fluids removed from the subsurface via the remediation system. The tanks would be used on an interim basis to allow time for installation of an infiltration gallery, installation of injection wells, and/or obtaining permission for surface discharge. Removed fluids will either be disposed of off-site by an OCD approved disposal facility or will be routed through the remediation system and discharged upon approval of the discharge plan. This request will allow remediation to begin without further delays.

Please contact me at (361) 777-0860 or email at tnix@h2altd.com if you have any questions or need additional information.

Respectfully,

Theresa Nix

Theresa Nix
Project Manager

cc: Marc Oler, Equiva Services LLC
OCD Hobbs Office

C:\Theresa\H2A\Jal - 106.001\Stage 2-Discharge Pln\interim disposal ltr.doc

500 N. CARROLL AVE., SUITE 120
SOUTHLAKE, TX 76092

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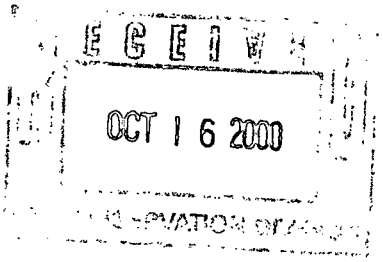
H2A ENVIRONMENTAL, LTD.
ASSESSMENT ◦ REMEDIATION ◦ RISK ASSESSMENT ◦ COMPLIANCE ◦ LITIGATION / ENFORCEMENT SUPPORT

October 16, 2000



Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Stage 2 Abatement/Discharge Plan for Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H_2A Job No. 106.001

Dear Mr. Olson:

On behalf of Equilon Pipeline LLC, we would like to propose the addition of an infiltration gallery or injection wells at the above referenced site for the remediation system. Currently, the Stage 2 Abatement / Discharge Plan states remediated groundwater will be surface discharged. We would like to add the following options for remediated groundwater management.

1. Install an infiltration gallery approximately 50 feet in width. The actual design would be developed after conducting an infiltration test.

2. Install two 4-inch wells approximately 100 feet deep for re-injection of the treated groundwater.

3. Install four 4-inch wells approximately 50 feet deep for re-injection of the treated groundwater.

4. Store pumped groundwater on-site with the option of off-site disposal. This is requested on a temporary basis to allow time for installation of an infiltration gallery, installation of injection wells, and/or obtaining permission for surface discharge.

Please contact me at (361) 777-0860 or email at tnix@h2altd.com if you have any questions or need additional information.

Respectfully,

Theresa Nix

Theresa Nix
Project Manager

cc: Marc Oler, Equiva Services LLC
OCD Hobbs Office

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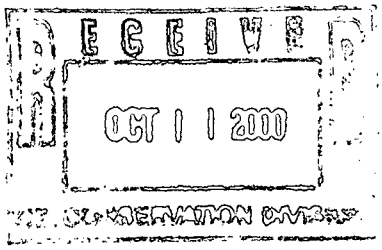


2708 B Walnut St.
Los Alamos, NM 87544
10 October 00

Mr. Roger Anderson
Environmental Bureau
Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Dear Mr. Anderson:

Enclosed please find a 5-page document of my comments on the Jal Station Stage 2 abatement plan. This document was also transmitted to you by fax today.

Sincerely,

Donald A. Neeper

Donald A. Neeper

New Mexico Citizens for
Clean Air & Water, Inc.

COMMENTS ON

STAGE 2 ABATEMENT PLAN PROPOSAL
JAL BASIN STATION

D. A. Neeper
New Mexico Citizens for Clean Air & Water, Inc.
2708 B Walnut St.
Los Alamos NM 87544
dneeper@aol.com 505-662-4592
October 10, 2000

SUMMARY

For reasons outlined below, the Stage 2 Plan Proposal (the Plan) is inadequate. It does not provide assurance that a reasonable approach to remediation will be taken. We therefore request a public hearing on the Plan. We expect to withdraw our request if the inadequacies of the Plan are addressed. We do not seek perfection of paperwork and we do not suggest that a completely new Plan document must be prepared. Rather, we suggest that the inadequacies of the Plan can be addressed by the submission of supplementary appendices containing the needed information, together with assurances of planned investigation and remediation. We appreciate the cooperative discussions we have had with the Oil Conservation Division and with the consultant.

1. NATURE AND EXTENT OF CONTAMINATION

Neither the Stage 1 nor Stage 2 plans provide a description of the history and nature of the release. Although the consultant states in private correspondence that the release has ceased, the absence of specific history or source investigation in the plans lodes not provide assurance that the release has been either identified or has ceased.

The southwestern boundary of the floating NAPL has not been located. A letter submitted subsequent to the Plan says "one or two" additional monitor wells will be drilled. The Responsible Person should commit to drilling a sufficient number of wells, even if that is more than two, to delineate the extent of the floating NAPL.

The Plan contains no estimate of the quantity of hydrocarbons present on the aquifer or in the vadose zone. Work under the Stage 1 plan should define the magnitude of contamination. In the absence of a quantitative estimate by the Responsible Person, we provide a simplistic example in Fig. 1, which presents the thickness of floating NAPL as a function of radius from the center of the 20k Diesel Tank. Although neither the Stage 1 nor the Stage 2 plans identify a source, that tank appears to be a possible source near the center of the floating plume. The data are as reported for October 26, 1999 in the Plan, updated with the thickness at Monitor Well 14 reported for August, 2000. As an approximate model, we assume that the area-averaged thickness of NAPL is indicated by the dashed straight line in the graph. In this model, the NAPL forms a cone 9 ft high, with a base on the aquifer 160 ft in diameter.

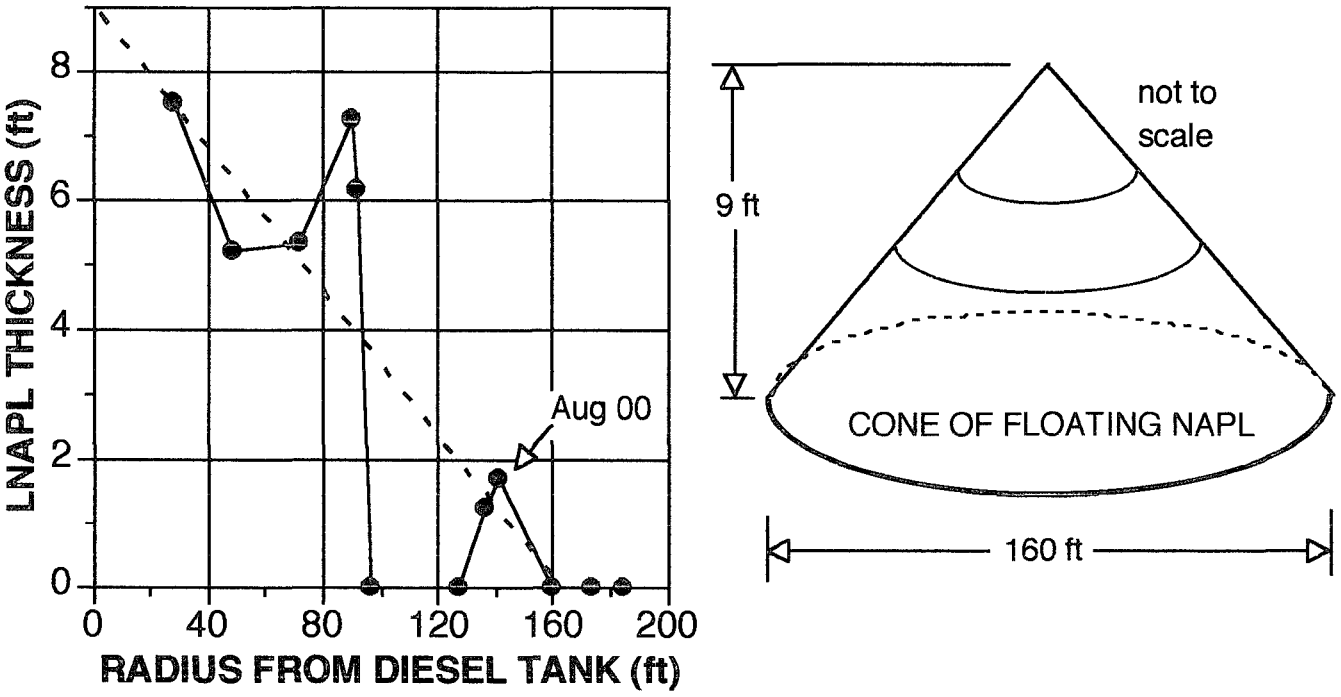


Fig. 1. Cone model of floating NAPL.

In the absence of data that would be developed during investigation of the site hydrogeology, we assume that the porosity occupied by floating NAPL is 10%. In that case, the volume of floating NAPL would be approximately 180,000 gallons.

The Plan contains no report of an investigation of the vadose zone *beneath the apparent release*. In particular, the Plan contains no information on the vertical plume of NAPL and vapor that must exist between the release point and the aquifer. As a simplistic example, in the absence of information, we assume that the vertical plume is a cone 82 ft high with a base diameter of 50 ft, occupying 10% of the gross soil volume. In that case, the total volume of NAPL in the vadose zone plume would be approximately 40,000 gallons.

The above estimates suggest that the total volume of the release is in the neighborhood of 220,000 gallons. Even if the release were of one-tenth that magnitude, both the aquifer and the vadose zone merit serious remediation. The magnitude of the contamination should be determined and the location of the release should be found. The extent of contamination in the vadose zone beneath the release merits investigation as might be conducted, for example, by slant drilling with coring under the source.

2. ABATEMENT OPTIONS

a. Remediation of liquids. The Stage 2 Plan addresses one option: pump, treat, and discharge liquid, with coincidental venting of the vadose zone induced by the "HiVac" pumping equipment. The proposed system has similarities with "pump-and-treat" systems because extracted water will be processed by an air stripper with subsequent sorption as needed. We have no objection to using the "HiVac" system. Rather, we are concerned with the absence of a schedule of remediation activities, description of the intended pattern of depression (if any) generated by multiple wells, estimates of quantity of water or NAPL to be removed, and estimate of the duration of extraction. We realize that the effects of subsurface pumping cannot be predicted exactly, nor is it justified to expend more effort in site characterization than in remediation. However, the remediation process merits a thoughtful plan based on reasonable estimates, even if the procedures must be altered as remediation progresses. Is the remediation expected to require one, ten, or one hundred years?

We recognize that the field installation may not be similar to the pilot test. However, in the absence of design information in the Plan, we are reduced to making our own estimate based on the pilot test. In the pilot test, liquid was extracted at 6 gallons per minute with slightly less than 7% NAPL fraction. In the absence of other information in the Plan, we assume that the tailing commonly experienced in extraction will cause the time-average NAPL fraction to be 3.5% of the extracted liquid volume. If the total volume of extracted liquid NAPL is 180,000 gallons, then approximately 16 acre-feet of water would be withdrawn. Such a quantity may require water rights if not injected back into the aquifer, because remediation might not be interpreted as a permitted use under the domestic well statute. The Plan offers no discussion of expected water fraction or pumping rates. The Plan states that the extracted water would be

discharged to State lands after treatment, but acknowledges that permission for the discharge has not been obtained. We believe the State Engineer will not permit a transfer of rights for a purpose that could be declared a waste. Therefore, the Plan is based on tenuous assumptions about the legal availability of water and permission to discharge. This is particularly true if the air stripping process should extend into the indefinite future, as it does in many pump-and-treat cases where the approach to water quality standards is asymptotic. If the Plan were approved in its current form, the Responsible Person might subsequently claim, with some legitimacy, that remediation was prevented by legal obstacles beyond his control. In other words, the current Plan has obvious obstacles that invite protracted delay. We believe these obstacles can be overcome by submission of descriptions of the Responsible Person's quantitative designs and contingency plans. As an example contingency, we suggest that remediated water can be injected into the aquifer or even piped off site to an owner/user.

b. Remediation of the vadose zone. The Plan offers no evaluation of air flow in the vadose zone. If the vacuum is applied near the surface of the floating NAPL, it is probable that little air flow will occur within the vertical plume beneath the presumed source. The Plan does not provide estimated flow rates, intended flow pattern, schedule of remediation, or evidence for remediation by native biota. The Plan simply suggests, without evidence, that the "HiVac" apparatus will remedy the vadose zone.

3. FUTURE ACTIVITY

The Plan offers no indication of continued investigation of the vadose zone. We do not maintain that any additional investigation of the vadose zone or floating NAPL must be done before remediation can be initiated. A more complete description of the release, a schedule of remediation, and a plan for investigation and remediation of the vadose zone can be submitted while initial remediation of the aquifer is in process. However, because this activity is not outlined in the current Plan, approval of the Plan could lead the Responsible Person to conclude that such activity will not be required.

For reasonable design of a bioventing system, the Responsible Person must determine whether native biota will perform adequately, or whether seeding of particular microbes and/or nutrients will be necessary. This is sometimes done during actual vapor extraction. However, unless the concentration of NAPL or rate of CO_2 production is monitored in the vertical column beneath the release point, there will be little assurance of the hoped-for bioremediation. If air flow can provide sufficient oxygen without the injection of peroxide or similar oxygenates, then assurances of air flow in the contaminated column between the aquifer and the release point will be needed. Such assurances are usually developed at design stage with measurements of the air permeability and intentional placement of vacuum extraction intervals. For long-term polish of the vadose zone, passive venting may be a low-cost option requiring no maintenance or additional capital construction. However, neither passive nor active venting can be evaluated without reasonable estimates of air permeability, particularly at horizons of caliche.

4. CONCLUSIONS

We suggest that extraction of floating NAPL be initiated as soon as possible, at larger rates than provided by pumps now in place. Action should not be delayed while waiting for the permission to discharge on State lands or improbable transfer of water rights. We suggest that the Plan can be made adequate by addendum containing:

1) the nature and location of the release with relevant site history;
2) the conceptual design and intended operating parameters of the aquifer remediation system;
3) contingency options for the possible legal obstacles to water use and discharge; and
4) assurance that the extent of the vadose zone plume will be investigated, leading to designed remediation options and a schedule.

If the Responsible Person provides the addendum described above, or a schedule for submission of the addendum containing those items, the Plan can then be conditionally approved pending acceptance of the addendum. This approval would encourage immediate action to remedy the floating NAPL. The inadequacies of the Plan can be addressed while remediation proceeds. We do not want the remediation to be postponed because the Plan is inadequate.

ValueFax

FAX COVERPAGE

To:	Bill Olson or Wayne Price
Company:	Oil Conservation Division,
From:	D. A. Neeper
Company:	Computer Solution
Date:	Oct 10, 2000
Our Fax Number:	(505) 662 4592 by appointment
Our Phone Number:	(505) 662 4592
Transmitting a total of	6 pages including this one.

If you do not receive all the pages,
please contact us immediately.

Comments on Jal Station Stage 2 plan from D. Neeper, New Mexico Citizens for Clean Air & Water, Inc. 5 pages plus this cover page.

You can leave voice messages for Neeper at 662-1357.

COMMENTS ON

STAGE 2 ABATEMENT PLAN PROPOSAL
JAL BASIN STATION

D. A. Neeper
New Mexico Citizens for Clean Air & Water, Inc.
2708 B Walnut St.
Los Alamos NM 87544
dneeper@aol.com 505-662-4592
October 10, 2000

SUMMARY

For reasons outlined below, the Stage 2 Plan Proposal (the Plan) is inadequate. It

H2A ENVIRONMENTAL, LTD.
ASSESSMENT • REMEDIATION • RISK ASSESSMENT • COMPLIANCE • LITIGATION / ENFORCEMENT SUPPORT

October 3, 2000

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Stage 2 Abatement/Discharge Plan
Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H2A Job No. 106.001

Dear Mr. Olson:

Transmitted with this letter are Affidavits of Publication from the *Albuquerque Journal*, *Hobbs News-Sun*, and *The Lovington Daily Leader* for publication of the public notice required for the Stage 2 Abatement / Discharge Plan for the above referenced site. Also attached is a list of notices submitted via U.S. Postal Service and their status, as required per your letter dated August 30, 2000.

Please contact me at (361) 777-0860 or email at tnix@h2altd.com if you have any questions or need additional information.

Respectfully,

Theresa Nix

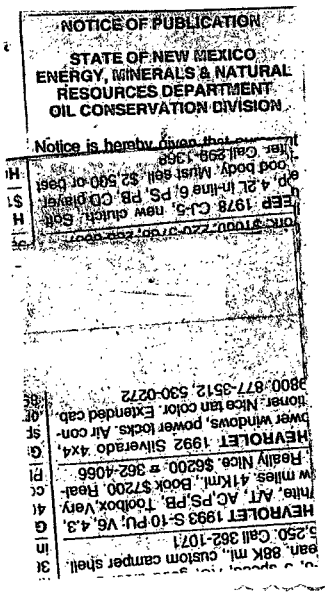
Theresa Nix
Project Manager

Enclosure

cc: Marc Oler, Equiva Services LLC
Chris Williams, OCD Hobbs Office

C:\Theresa\H2A\Jal - 106.001\Stage 2-Discharge Pln\Public Notice Proof Ltr 09-00.doc

500 N. CARROLL AVE., SUITE 120
SOUTHLAKE, TX 76092
(817) 251-9466
FAX (817) 251-9224


NOTICE OF PUBLICATION

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

Notice is hereby given that

STATE OF NEW MEXICO
County of Bernalillo SS

Bill Tafoya, being duly sworn, declares and says that he is Classified Advertising Manager of **The Albuquerque Journal**, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made of assessed as court cost; that the notice, copy of which is hereto attached, was published in said paper in the regular daily edition, for 1 times, the first publication being on the 13 day of Sept., 2000, and the subsequent consecutive publications on _____, 2000.

Bill Tafoya

Sworn and subscribed to before me, a Notary Public, in and for the County of Bernalillo and State of New Mexico this 13 day Sept. of 2000.

OFFICIAL SEAL
Corina Duncan
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 8/23

Corina Duncan

PRICE 34.92

Statement to come at end of month.

ACCOUNT NUMBER CB4015

CLA-22-A (R-1/93)

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, KATHI BEARDEN

Publisher

of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period.

of 1

weeks.

Beginning with the issue dated

September 13 2000

and ending with the issue dated

September 13 2000

Kathi Bearden

Publisher

Sworn and subscribed to before me this 13th day of

September 2000

Jodi Henson

Notary Public.

My Commission expires
October 18, 2000
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE
September 13, 2000
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 2 Abatement Plan Proposal has been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

Equilon Enterprises, LLC/Equiva Services, LLC, Marc Oler, Project Manager, Telephone (303) 860-3457, 1670 Broadway, Suite 2600, Denver, Colorado 80202-4838, has submitted a Stage 2 Abatement Plan Proposal for the Jal Basin Station, located south of Jal, New Mexico in the Southeast 1/4 of the Southeast 1/4 of Section 32, Township 25 South, Range 37 East and the Northeast 1/4 of the Northeast 1/4 and the Northwest 1/4 of the Northeast 1/4 of Section 5, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico. Equilon Enterprises, LLC/Equiva Services operates a crude oil tank battery at the site. Phase-separated hydrocarbons have been observed on the ground water. The Stage 2 Abatement Plan Proposals presents Equilon Enterprises, LLC/Equiva Services' proposed methods for remediation of the site including remediation of contaminated soils; remediation of contaminated ground water; site maintenance activities; a monitoring and sampling plan for soils and ground water; preparation of regular remediation reports; and, a schedule for implementation of all remediation and monitoring activities.

Any interested person may obtain further information from the Oil Conservation Division and may submit to the Director of the Oil Conservation Division, at the address given above, written comments or a written request for a public hearing that include reasons why a hearing should be held. The Stage 2 Abatement Plan Proposal may be viewed at the above address at the Oil Conservation Division Hobbs District Office, 1625 N. French Drive, Hobbs, New Mexico 88240. Telephone (505) 393-6161 between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed Stage 2 Abatement Plan Proposal, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which written comments or a written request for a hearing may be submitted.
#17608

01105601000 01543436

H2A Environment, Ltd.
418 San Saba
PORTLAND, TX 78374

Affidavit of Publication

STATE OF NEW MEXICO)
) ss.
COUNTY OF LEA)

Joyce Clemens being first duly sworn on oath deposes and says that she is Advertisting Director of **THE LOVINGTON DAILY LEADER**, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next *prior to the first publication of the notice* hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled

Legal Notice

was published in a regular and entire issue of **THE LOVINGTON DAILY LEADER** and not in any supplement thereof, for one (1) day, beginning with the issue of September 13, 2000 and ending with the issue of September 13, 2000.

And that the cost of publishing said notice is the sum of $54.16 which sum has been (Paid) as Court Costs.

Joyce Clemens

Subscribed and sworn to before me this 22nd day of September 2000

Debbie Schilling

Debbie Schilling
Notary Public, Lea County, New Mexico
My Commission Expires June 22, 2002

LEGAL NOTICE
NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
SANTA FE, NEW MEXICO

Notice is hereby given that pursuant to New Mexico Oil Conservation Division Regulations, the following Stage 2 Abatement Plan Proposal has been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

Equilon Enterprises, LLC/Equiva Services, LLC, Marc Oler, Project Manager, Telephone (303) 860-3457, 1670 Broadway, Suite 2600, Denver, Colorado 80202-4838, has submitted a Stage 2 Abatement Plan Proposal for the Jal Basin Station, located south of Jal, New Mexico in the Southeast 1/4, of the Southeast 1/4 of Section 32, Township 25 South, Range 37 East and the Northeast 1/4 of the Northeast 1/4 and the Northwest 1/4 of the Northeast 1/4 of Section 5, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico. Equilon Enterprises, LLC/Equiva Services operates a crude oil tank battery at the site. Phase-separated hydrocarbons have been observed on the ground water. The Stage 2 Abatement Plan Proposal presents Equilon Enterprises, LLC/Equiva Services' proposed methods for remediation of the site including remediation of contaminated soils; remediation of contaminated ground water; site maintenance activities; a monitoring and sampling plan for soils and ground water; preparation of regular remediation reports; and, a schedule for implementation of all remediation and monitoring activities.

Any interested person may obtain further information from the Conservation Division and may submit to the Director of the Oil Conservation Division, at the address given above, written comments or a written request for a public hearing which include reasons why a hearing should be held. The Stage 2 Abatement Plan Proposal may be viewed at the above address or at the Conservation Division Hobbs District Office, 1625 N. French Drive, Hobbs, New Mexico 88240, Telephone (505) 393-6161 between 8:00 a.m. and 4:00 p.m. Monday through Friday. Prior to ruling on any proposed Stage 2 Abatement Plan Proposal, the Director of the Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which written comments or a written request for a hearing may be submitted.

Published in the Lovington Daily Leader September 13, 2000.

The following addresses are located within one mile of Jal Basin Station. These representatives were notified via US Postal Service certified mail, return receipt requested. The status of the delivery is presented below.

Name and Address	Delivered / Returned
Fred Cooper RR #1, Box 141 Blossom, TX 75416	Delivered
Texas New Mexico Railroad (Austin & Northwestern RR Co.) 9005 Mountain Ridge Drive Bowie Bldg Ste 110 Austin, TX 78759	Returned
Rodrigo Navarette P.O. Box 12 Jal, NM 88252	Delivered
City Clerk P.O. Box 340 Jal, NM 88252	Delivered
Joyce Marie Willis P.O. Box 307 Jal, NM 88252	Delivered
George Willis P.O. Box 307 Jal, NM 88252	Delivered

The following list represents others notified per OCD requirements.

Name and Address	Status of Delivery
State Land Office Hobbs District 3830 North Grimes Suite C Hobbs, NM 88240	Delivered
Chris Shuey Southwest Research & Information Center P. O. Box 4524 Albuquerque, NM 87106	Delivered
Director State Parks & Recreation Villagra Building Santa Fe, NM 87503	Delivered
Marcia Simmons KOAT-RV 3801 Carlisle NE Albuquerque, N.M. 87108	Delivered

Name and Address	Status of Delivery
Dr. Jay Sorenson 2800 Charleston NE Albuquerque, N.M. 87110	Delivered
Bob Steele Land & Mineral Resources P. O. Box 194 Laguna, N.M. 87026	Delivered
Westinghouse Electric Corp. Manager - Uranium Resources Div. P. O. Box 355 Pittsburg, P.A. 15230	Delivered
George Vlahos Sierra Club 212 Tulane SE Albuquerque, N.M. 87106	Returned - Unclaimed
Lee Wilson & Associates P. O. Box 931 Santa Fe, N.M. 87501	Delivered
Secretary New Mexico Environment Department P. O. Box 26110 Santa Fe, NM 87504	Delivered
Thomas Kellahin Kellahin & Kellahin P. O. Box 2265 Santa Fe, NM 87501	No response as of 10/02/00
Director Department of Game & Fish Villagra Building Santa Fe, NM 87503	Delivered
Jackie Jennings Core Laboratories, Inc. 10703 E. Bethany Drive Aurora, CO 80014	Delivered
Olson Plunk Southwestern Public Service P. O. Box 1261 Amarillo, TX 79170	No response as of 10/02/00
Soil and Water Conservation Bureau New Mexico Department of Agriculture Agriculture Programs and Resources Division Box 30005/APR Las Cruces, New Mexico 88003-8005	Delivered

Name and Address	Status of Delivery
Environmental Affairs Public Service Company of New Mexico P. O. Box 2267 Albuquerque, NM 87103	Delivered
Governor Pueblo of Laguna P. O. Box 194 Laguna, NM 87026	Delivered
State Engineer Water Resources Division Bataan Building Santa Fe, NM 87503	Delivered
State Director Bureau of Land Management P. O. Box 27115 Santa Fe, NM 87502-0115	Delivered
NM Citizens Clean Air & Water John Bartlit, Chairman 113 Monte Ray Dr., North Los Alamos, NM 87544	Delivered
William F. Carr Campbell & Black P. O. Box 2208 Santa Fe, NM 87501	Delivered
NM Municipal League P. O. Box 846 1229 Paseo De Peralta Santa Fe, NM 87501	Delivered
Jay Lazarus P. O. Box 5727 Santa Fe, NM 87502	Delivered
Director Water Resources Dept. p. O. Box 1293 Albuquerque, NM 87103	Delivered
NM Water Well Association 1205 California NE Albuquerque, NM 87110	Delivered
Field Supervisor US Fish & Wildlife Service 2105 Osuna Road, Northeast Albuquerque, NM 87113-1001	Delivered

Name and Address	Status of Delivery
Patricia A. D'Andrea P. O. Box 6387 Santa Fe, NM 87502	Delivered
Bruce S. Garber Attorney at Law P. O. Box 0850 Santa Fe, NM 87504-0850	Delivered
Mike Matush State Land Office Building Santa Fe, NM 87503	Delivered
Science Applications, Inc. P. O. Box 3344 Boulder, CO 80303	Delivered
Dr. Harry Bishara P. O. Box 748 Cuba, NM 87013	Delivered
Director Albuquerque Environmental Health Department P. O. Box 1293 Albuquerque, NM 87103	Delivered
John Draper Montgomery & Andrews P. O. Box 2307 Santa Fe, NM 87504	Delivered
Perry Pearce Burlington Resources 300 Galisteo, Suite 101 Santa Fe, NM 87501	Delivered
Lynn Brandvold NM Bureau of Mines & Mineral Resources NM Institute of Mining & Tech. Socorro, NM 87801	Delivered
Kay Grotbeck RR 3, Box 109 JK Santa Fe, NM 87505-9532	Returned
Jeanne Haffen El Paso Natural Gas P. O. Box 1492 El Paso, TX 79978	No response as of 10/02/00
Richard P. Chagnon Hydrologist 2825 E. Malvern Drive Tucson, AZ 85716	Delivered

Name and Address	Status of Delivery
Regional Forester USFS Regional Office 517 Gold Avenue SW Albuquerque, NM 87102	Delivered
Director Colorado River Commission of Nevada 555 East Washington Avenue, Suite 3100 Las Vegas, NV 89158	Delivered
Gerald R. Zimmerman Colorado River Board of Calif. 770 Fairmont Ave., Ste. 100 Glendale, CA 91203-1035	Delivered
Director Division of Water Quality 288 North 1460 West Salt Lake City, UT 84114	Delivered
Jack A. Barnett Colorado River Basin Ctrl. Forum 106 West 500 South, Suite 101 Bountiful, UT 84010	Delivered
Chief Groundwater Bureau Runnels Building Santa Fe, NM 87504	Delivered
Chief Hazardous Waste Bureau Runnels Building Santa Fe, NM 87504	Delivered
Thomas W. Merlan, Director 228 East Palace Avenue Villa Rivera Room 101 Santa Fe, NM 87503	Delivered
Chester Rail 10613 Calle De Elena NW Albuquerque, NM 87048	Delivered
Ken Marsh Controlled Recovery Inc. P. O. Box 369 Hobbs, NM 88241	Returned, Resubmitted on 09/20/00 to P.O. Box 388, Hobbs, NM 88241-0388 Second submittal delivered
Colin Adams Environmental Counsel Public Service Company of New Mexico 414 Silver, Southwest Albuquerque, NM 87158	No response as of 10/02/00

Name and Address	Status of Delivery
Devon E. Jercinovic International Technology Corp. 5301 Central Avenue, N.E. Suite 700 Albuquerque, NM 87108	Delivered
NM Oil & Gas Association P. O. Box 1864 Santa Fe, New Mexico 87504-1864	Delivered
Len Oyenque The Tewa Company P.O. Box 1261 San Juan Pueblo, NM 87566	Delivered
William Turner New Mexico Trustee for Natural Resources c/o American Ground Water Consultants 610 Gold St. SW, Suite 111 Albuquerque, NM 87102	Delivered
NM Environment Department Surface Quality Bureau Harold Runnels Building Santa Fe, NM 87503	Delivered
Office of the Secretary New Mexico EMNRD 1914 San Ildefonso Rd Santa Fe, NM 87507	Delivered
County Commissioner Lea County Courthouse Box 4C Lovington, NM 88260	Delivered

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

August 30, 2000

CERTIFIED MAIL
RETURN RECEIPT NO: 5051-3501

Mr. Marc Oler
Equiva Services, LLC
1670 Broadway, Suite 2600
Denver, Colorado 80202-4838

RE: STAGE 2 ABATEMENT PLAN (AP-4) PROPOSAL
JAL BASIN STATION

Dear Mr. Oler:

The New Mexico Oil Conservation Division (OCD) has reviewed Equilon Enterprises, LLC/Equiva Services, LLC's (Equilon) July 26, 2000 "STAGE 2 ABATEMENT/DISCHARGE PLAN, JAL BASIN STATION, SECTION 5, TOWNSHIP 26 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, H2A JOB NO. 106.001" which was submitted on behalf of Equilon by their consultant H2A Environmental, Ltd. This document contains Equilon's Stage 2 Abatement Plan Proposal for remediation of soil and ground water contamination at Equilon's Jal Basin Station located in the SE/4, SE/4 and the SW/4, SE/4 of Section 32, Township 25 South, Range 37 East and in the NE/4, NE/4 and the NW/4, NE/4 of Section 5, Township 26 South, Range 37 East NMPM, Lea County, New Mexico.

The OCD has determined that the above referenced Stage 2 Abatement Plan Proposal is administratively complete. Before the OCD can complete a review of the Stage 2 proposal, the OCD requires that:

1. Equilon issue by September 14, 2000 the attached public notice of the Stage 2 proposal in the Albuquerque Journal, Hobbs News-Sun and the Lovington Daily Leader pursuant to OCD Rule 19.G.

2. Prior to issuing the public notice, Equilon shall issue written notice of the Stage 2 proposal pursuant to OCD Rule 19.G.(1). Please refer to the previously supplied 3.5" disk for a listing of "those persons, as identified by the Director, who have requested notification" pursuant to OCD Rule 19.G.(1).(d) and the contact for the New Mexico Trustee for Natural Resources.

Please provide the OCD with proof of notice as soon as possible upon completing issuance of the written and public notice.

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

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/wco

attachment

xc w/attachment: Chris Williams, OCD Hobbs District Supervisor
J. Michael Hawthorne, H2A Environmental, Ltd.

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 2 Abatement Plan Proposal has been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

Equilon Enterprises, LLC/Equiva Services, LLC, Marc Oler, Project Manager, Telephone (303) 860-3457, 1670 Broadway, Suite 2600, Denver, Colorado 80202-4838, has submitted a Stage 2 Abatement Plan Proposal for the Jal Basin Station, located south of Jal, New Mexico in the Southeast 1/4, of the Southeast 1/4 of Section 32, Township 25 South, Range 37 East and the Northeast 1/4 of the Northeast 1/4 and the Northwest 1/4 of the Northeast 1/4 of Section 5, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico. Equilon Enterprises, LLC/Equiva Services operates a crude oil tank battery at the site. Phase-separated hydrocarbons have been observed on the ground water. The Stage 2 Abatement Plan Proposal presents Equilon Enterprises, LLC/Equiva Services' proposed methods for remediation of the site including remediation of contaminated soils; remediation of contaminated ground water; site maintenance activities; a monitoring and sampling plan for soils and ground water; preparation of regular remediation reports; and, a schedule for implementation of all remediation and monitoring activities

Any interested person may obtain further information from the Oil Conservation Division and may submit to the Director of the Oil Conservation Division, at the address given above, written comments or a written request for a public hearing that include reasons why a hearing should be held. The Stage 2 Abatement Plan Proposal may be viewed at the above address or at the Oil Conservation Division Hobbs District Office, 1625 N. French Drive, Hobbs, New Mexico 88240, Telephone (505) 393-6161 between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed Stage 2 Abatement Plan Proposal, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which written comments or a written request for a hearing may be submitted.

Olson, William

From: Theresa Nix [SMTP:tnix@h2altd.com]
Sent: Monday, August 07, 2000 2:21 PM
To: Olson, William
Subject: Equilon Jal Basin Station

Mr. Olson,
As per our telephone conversation earlier today, this message provides notice that approximately 1.70 feet of phase-separated hydrocarbons (PSH) was detected in monitoring well MW-14 during the groundwater event conducted 08/02/00. Monitoring well MW-14 is the most downgradient well on-site.

One to two additional monitoring wells will be required to further delineate the plume on-site. Please call me if you have any questions (361-777-0860) or need additional information.

Theresa Nix
H2A Environmental, Ltd.
361.777.0860 (Phone)
361.777.0971 (Fax)
tnix@h2altd.com

H2A ENVIRONMENTAL, LTD.

ASSESSMENT • REMEDIATION • RISK ASSESSMENT • COMPLIANCE • LITIGATION / ENFORCEMENT SUPPORT

July 26, 2000

Mr. William C. Olson
Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Stage 2 Abatement/Discharge Plan
Jal Basin Station
Section 5, Township 26 South, Range 37 East
Lea County, New Mexico
H2A Job No. 106.001

Dear Mr. Olson:

Transmitted with this letter is the Stage 2 Abatement/Discharge Plan for operation of the Hi-Vac Remediation System located at Jal Basin Station in Lea County, New Mexico. Upon approval of the Notice of Intent (NOI) and this Stage 2 Abatement/Discharge Plan, as well as, completion of remediation well permitting with the State Engineer and approval from the State Land Office to discharge treated groundwater to their surface property, the remediation system will be put into operation.

Please contact me at (817) 251-9466 or email me at mhawthorne@h2altd.com if you have any questions, comments or need additional information. You may also contact Theresa Nix at (361) 777-0860 or email at tnix@h2altd.com.

Respectfully,

J. Michael Hawthorne, P.G., REM
President

Enclosure

cc: Marc Oler, Equiva Services LLC
OCD Hobbs Office

C:\Theresa\H2A\Jal - 106.001\rdischargepln.doc

500 N. CARROLL AVE., SUITE 120
SOUTHLAKE, TX 76092

(817) 251-9466
FAX (817) 251-9224

Olson, William

From: J. Michael Hawthorne [SMTP:mhawthorne@h2altd.com]
Sent: Thursday, July 06, 2000 4:32 PM
To: Olson, William
Cc: Marc C. Oler
Subject: Jal Station

Bill,

This is to confirm our phone conversation of today in which you granted Equilon Pipeline Co. LLC an extension to change the deadline for submittal of the Stage II Ground Water Abatement Plan for the Jal Station site from July 2, 2000 to July 28, 2000.

Thank you for your help in this matter. If you have any questions, please contact me (as indicated in the attached vcard), or Marc Oler of Equiva Services (303-860-3457).

J. Michael Hawthorne, P.G., REM
President

J. Michael Hawthorne.vcf

H2A Environmental, Ltd.

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

May 2, 2000

CERTIFIED MAIL
RETURN RECEIPT NO. 5051-3020

Mr. Greg Vratil
Equilon
P.O. Box 1910
Midland, Texas 79702-1910

RE: STAGE 1 ABATEMENT PLAN (AP-4) INVESTIGATION REPORT
JAL BASIN STATION

Dear Mr. Vratil:

The New Mexico Oil Conservation Division (OCD) has reviewed Equilon's January 6, 2000 "ADDITIONAL STAGE 1 ABATEMENT ACTIVITIES, JAL BASIN STATION, UNITS O & P, SEC. 32, T25S, R37E, AND UNIT B, SEC. 5, T26S, R37E, LEA COUNTY, NEW MEXICO, KEI JOB NO. 910103-3" which was submitted on behalf of Equilon by their consultant KEI. This document contains the results of Equilon's investigations of the magnitude of contamination related to a diesel release at the Jal Basin Station.

The above referenced Stage 1 site investigation report is approved. Pursuant to OCD Rule 19.E.(4), the OCD requires that Equilon submit a Stage 2 Abatement Plan Proposal to select and design remedial actions for contaminated soil and ground water which will result in the attainment of the abatement standards and requirements set forth in Rule 19.B. The Stage 2 Abatement Plan Proposal shall be submitted to the OCD Santa Fe Office by July 2, 2000 with a copy provided to the OCD Hobbs District Office.

If you have any questions, please contact Bill Olson of my staff at (505) 827-7154.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/wco

xc: Chris Williams, OCD Hobbs District Supervisor
Stas Grover, KEI

5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

January 6, 2000

Mr. Marc Oler
EQUIVA SERVICES, LLC
1670 Broadway, Suite 2600
Denver, Colorado 80202-4838

Re: Additional Stage I Abatement Activities
Jal Basin Station
Units O & P, Sec. 32, T 25 S, R 37 E,
and Unit B, Sec. 5, T 26 S, R 37 E
Lea County, New Mexico
KEI Job No. 910103-3

Dear Mr. Oler:

Transmitted with this letter are 2 copies of the final report for the additional Stage I Abatement Activities conducted at the above referenced site. One copy is provided for Mr. Vratil and the other is for your records. These activities included the installation of monitoring wells MW-13 through MW-15 and the plugging of monitoring well MW-7.

Two copies of this report have been transmitted to the New Mexico Oil Conservation Division on your behalf.

Please contact me at (210) 680-3767 if you have any questions.

Respectfully,

Stas Grover

Stas Grover
Project Manager

Enclosure

cc: OCD – Hobbs, Mr. Chris Williams
OCD – Santa Fe, Mr. William Olson

p:\equilon\910103\STAGE1\Rstage1A.doc

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

September 28, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z-274-520-713

Mr. Greg Vratil
Equilon
P.O. Box 1910
Midland, Texas 79702-1910

RE: STAGE 1 GROUND WATER ABATEMENT PLAN (AP-4)
JAL BASIN STATION

Dear Mr. Vratil:

The New Mexico Oil Conservation Division (OCD) has reviewed Equilon's August 31, 1999 "MODIFICATIONS TO APPROVED WORKPLAN, JAL BASIN STATION, LEA COUNTY, NEW MEXICO, JOB NO. 910103-6" and August 24, 1999 "JAL BASIN STATION, SE/4, SW/4 SECTION 32, TOWNSHIP 25 SOUTH, RANGE 37 EAST, JAL, LEA COUNTY, NEW MEXICO, JOB NO. 910103-6-0" which were submitted on behalf of Equilon by their consultant KEI. These documents correct information contained in the Equilon's prior July 30, 1999 work plan and requests a modification of condition #1 of the OCD's August 18, 1999 approval of the work plan.

The above referenced work plan modification request **is approved.** Please be advised that OCD approval does not limit Equilon to the proposed work plan should the investigation actions fail to adequately define the extent of contamination related to Equilon's activities or, if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve Equilon of responsibility for compliance with any other federal, state or local laws and regulations.

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

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Office
Theresa Nix, KEI
Marc Oler, Equiva Services

5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

August 31, 1999

Mr. William C. Olson
State of New Mexico
OIL CONSERVATION DIVISION
2040 S. Pacheco
Santa Fe, New Mexico 87505

Re: Modifications to Approved Workplan
Jal Basin Station
Lea County, New Mexico
Job No. 910103-6

Dear Mr. Olson:

This letter is provided in regards to our conversation yesterday pertaining to your letter of August 18, 1999 and the conditional requirements of item #1 for the Ground Water Remediation Workplan, dated July 30, 1999. This letter is provided to confirm your verbal approval of the modifications to the approved workplan by eliminating the conditional requirements of item #1 for 2 additional monitoring wells and moving the location of proposed MW-14 to a point roughly equidistant between MW-12 and proposed MW-15 on State land. Attached is a site drawing showing the newest proposed locations for the three additional monitoring wells (MWs 13, 14, and 15).

If you have any questions, please contact me at (210) 680-3767.

Respectfully,

Michael J. Lewis, P.E.
Operations Manager, San Antonio Office

Attachment

cc: Marc Oler, Equiva Services LLC
Chris Williams, OCD Hobbs District Office

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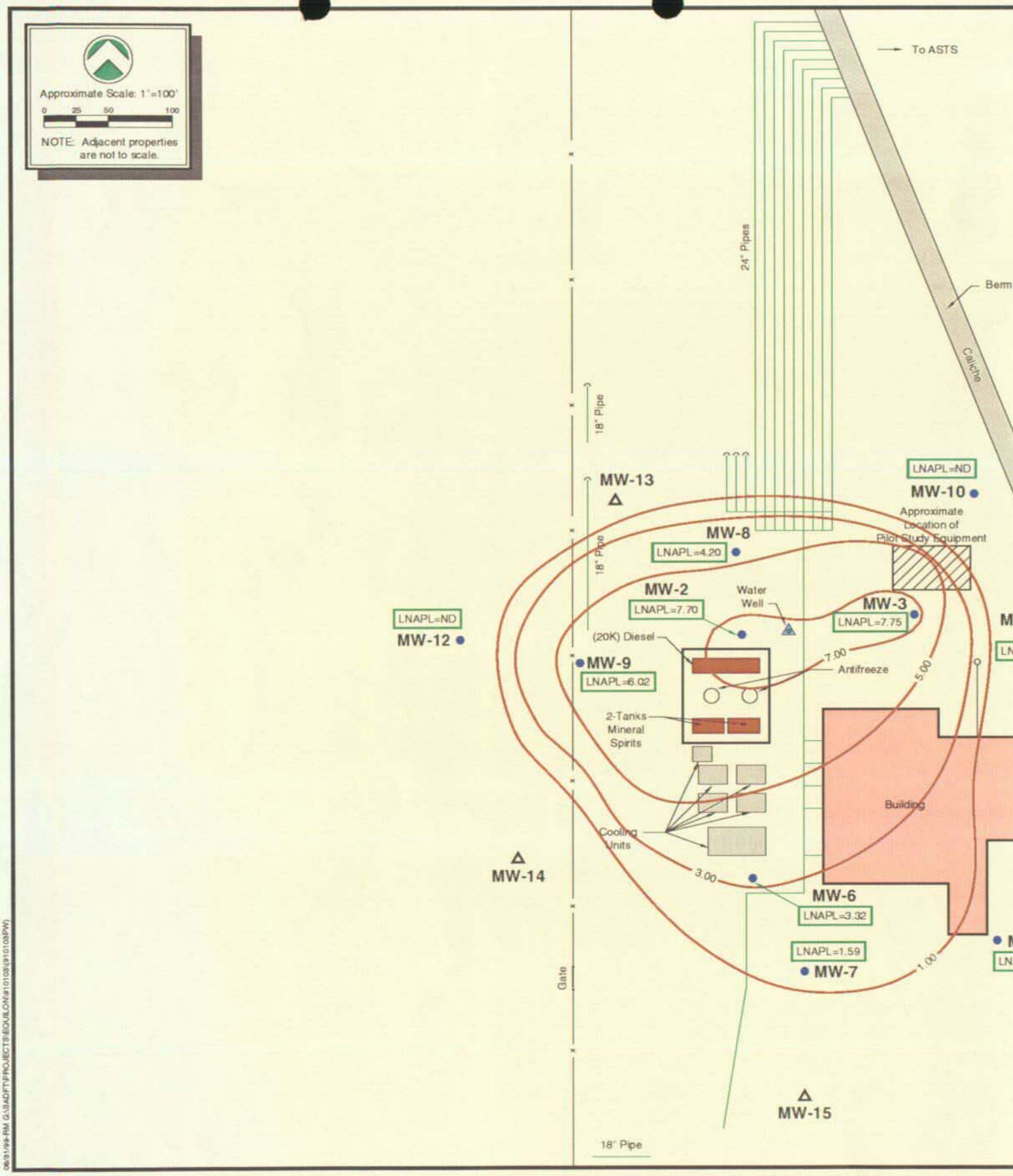


k·e·i

MODIFICATION TO PROPOSE

EQUILON PIPELINE COMPANY LLC JAL

5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

August 24, 1999

Mr. William C. Olson
STATE OF NEW MEXICO
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Jal-Basin Station
SE/4, SW/4 Section 32, Township 25 South, Range 37 East
Jal, Lea County, New Mexico
Job No. 910103-6-0

Dear Mr. Olson:

A work plan was submitted to your office on July 30, 1999 for the above referenced site. An error was noted on FIG. 1 included within the original work plan. LNAPL thickness presented in this figure for monitoring well MW-12 was incorrect. The correct LNAPL thickness was ND (not detected). However, the LNAPL thickness contours presented on FIG. 1 are correct. Attached is the revised FIG. 1 for the work plan.

We apologize for any inconvenience this error may have caused. If you have any questions please contact me at (210) 680-3767.

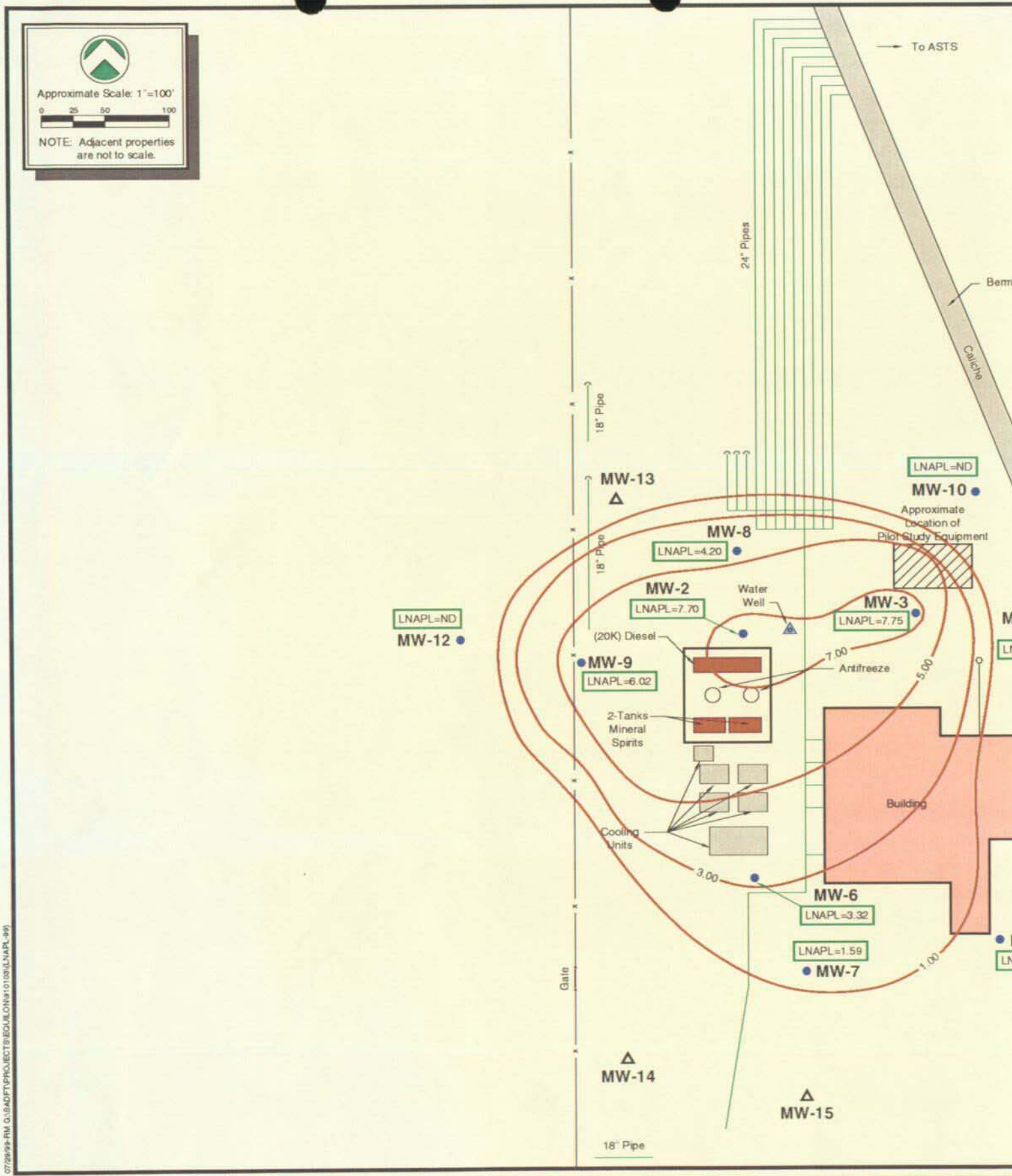
Respectfully,

Theresa Nix

Theresa Nix
Project Manager

cc: Marc Oler
OCD Hobbs District Office, Chris Williams

Tln\p:\equilon\910103\stage1\crevfig1.doc



07/29/09-RM G:\BADFT\PROJECTS\EQUILON\#101091(LNAPL-99)

k·e·i

SITE DETAILS / LNAPL

EQUILON PIPELINE COMPANY LLC

JAL

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

August 18, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z-274-520-699

Mr. Greg Vratil
Equilon
P.O. Box 1910
Midland, Texas 79702-1910

RE: STAGE 1 GROUND WATER ABATEMENT PLAN (AP-4)
JAL BASIN STATION

Dear Mr. Vratil:

The New Mexico Oil Conservation Division (OCD) has reviewed Equilon's July 30, 1999 "GROUND WATER REMEDIATION WORKPLAN, JAL BASIN STATION, LEA COUNTY, NEW MEXICO, JOB NO. 910103-1" which was submitted on behalf of Equilon by their consultant KEI. This document contains Equilon's work plan for installation of additional monitor wells to further define the extent of ground water contamination, plugging and abandoning monitor well MW-7 and a pilot test of a ground water remediation system.

The above referenced work plan **is approved with the following conditions**:

1. Equilon shall install 2 additional ground water monitoring wells to delineate the extent of contamination. The wells shall be installed at the locations shown on attached figure 1.

2. EQUILON shall complete all monitor wells as follows:

   a. At least 15 feet of well screen shall be placed across the water table interface with at least 5 feet of well screen above the water table and 10 feet of well screen below the water table.

   b. An appropriately sized gravel pack shall be set in the annulus around the well screen from the bottom of the hole to 2-3 feet above the top of the well screen.

   c. A 2-3 foot bentonite plug shall be placed above the gravel pack.

   d. The remainder of the hole shall be grouted to the surface with cement containing 3-5% bentonite.

e. A concrete pad and locking well cover shall be placed around the well casing at the surface.

f. The well shall be developed after construction using EPA approved procedures.

3. No less than 48 hours after the wells are developed, ground water from all monitor wells which do not contain free phase products shall be purged, sampled and analyzed for concentrations of benzene, toluene, ethylbenzene, xylene, polycyclic aromatic hydrocarbons (PAH), total dissolved solids (TDS) and New Mexico Water Quality Control Commission (WQCC) metals and cations and anions using EPA approved methods and quality assurance/quality control (QA/QC) procedures.

4. All wastes generated shall be disposed of at an OCD approved facility.

5. Equilon shall submit the results of the Stage 1 investigation to the OCD in a comprehensive report. The report shall be submitted to the OCD Santa Fe Office by January 1, 2000 with a copy provided to the OCD Hobbs District Office and shall include:

a. A description of all past and present investigation, remediation and monitoring activities which have occurred including conclusions and recommendations for additional investigations.

b. An inventory of all water wells within one mile of the site.

c. A geologic/lithologic log and well completion diagram for each monitor well.

d. A water table potentiometric map showing the location of pits, spills, monitor wells, boreholes and any other pertinent site features as well as the direction and magnitude of the hydraulic gradient.

e. A product thickness map created using the measured free product thickness observed in each ground water monitoring well.

f. Isopleth maps for contaminants of concern which were observed during the investigations.

g. Summary tables of all past and present soil and ground water quality sampling results including copies of all recent laboratory analytical data sheets and associated QA/QC data.

h. The disposition of all wastes generated.

6. Equilon shall notify the OCD at least 1 week in advance of all scheduled activities such that the OCD has the opportunity to witness the events and split samples.

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

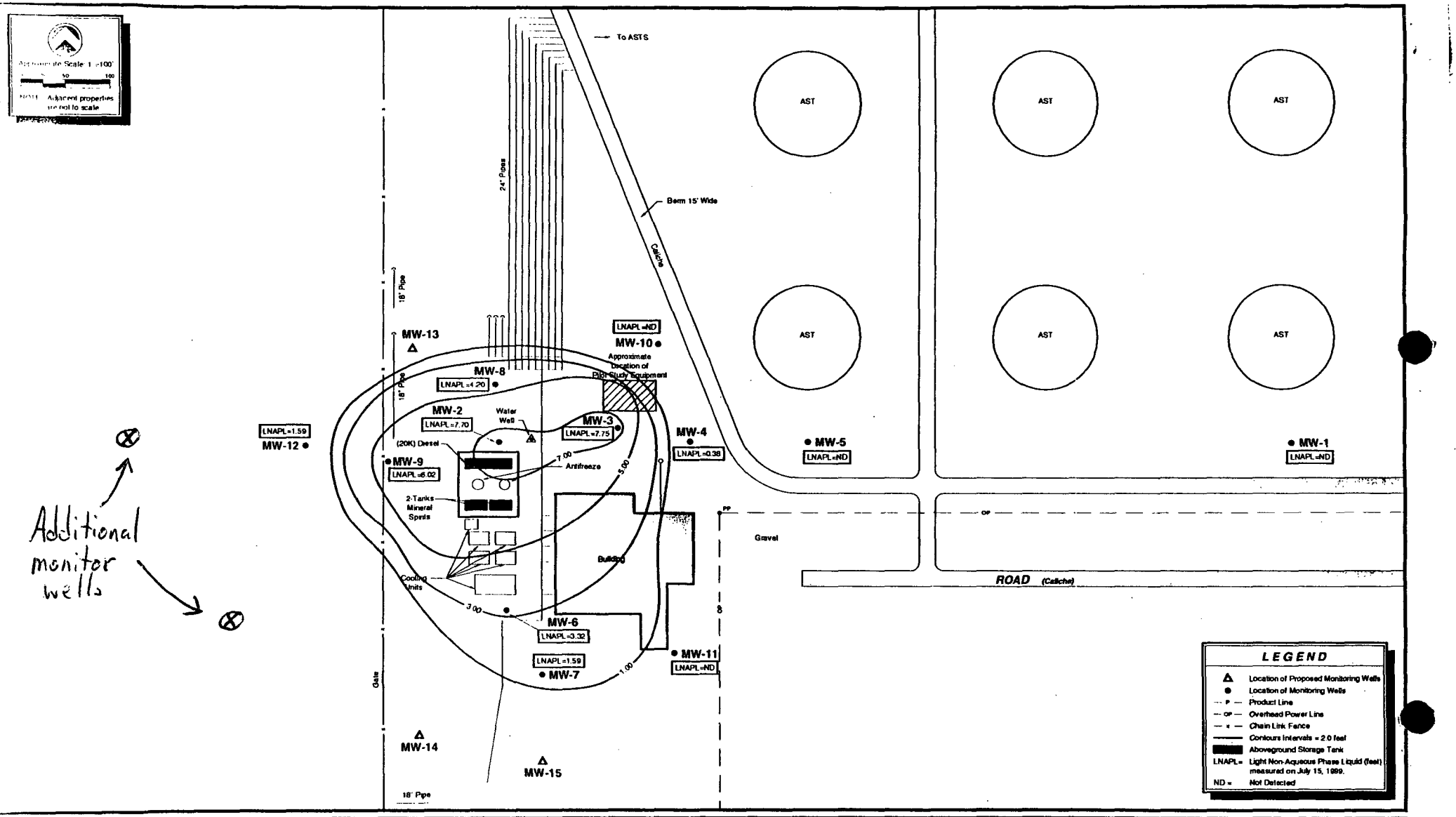
If you have any questions, please contact me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

attachment

xc w/attachment: Chris Williams, OCD Hobbs District Office
Theresa Nix, KEI
Marc Oler, Equiva Services



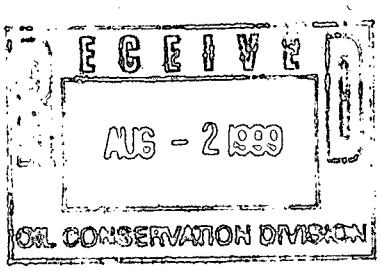
Additional monitor wells

k·e·i

SITE DETAILS / LNAPL THICKNESS MAP - JULY 1999			910103-6-0
EQUILON PIPELINE COMPANY LLC	JAL BASIN STATION	LEA COUNTY, NEW MEXICO	FIG 1

5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

July 30, 1999



Mr. William C. Olson
State of New Mexico
OIL CONSERVATION DIVISION
2040 S. Pacheco
Santa Fe, New Mexico 87505

Re: Ground Water Remediation Workplan
Jal Basin Station
Lea County, New Mexico
Job No. 910103-1

Dear Mr. Olson:

Transmitted with this letter is the modified workplan required by your letter dated June 16, 1999 for the Jal Basin Station. The modified workplan addresses the items outlined in your letter and a recommended pilot test that Equilon would like to conduct as soon as possible.

If you have any questions, please contact either Mike Lewis or me at (210) 680-3767.

Respectfully,

Theresa Nix

Theresa Nix
Project Manager

Enclosure

cc: Marc Oler, Equiva Services
Chris Williams, OCD Hobbs District Office

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CURRENT SITE CONDITIONS

Site features generally consist of the following:

- numerous above and below ground pipelines
- a large brick building with diesel engine powered pumps
- ten 5,000 barrel above ground storage tanks
- twelve monitoring wells

From previous assessment activities, light non-aqueous phase liquid (LNAPL) was detected in monitoring wells MW-2, MW-3, MW-4, MW-6, MW-7, MW-8, and MW-9. The LNAPL thickness observed from measurements taken on July 1999 ranged from 0.38 to 7.71 feet. Ground water samples obtained on June 22, 1999 from monitoring wells MW-1, MW-5, and MW-10 through MW-12, outside the LNAPL plume area, exhibited non-detectable concentrations of benzene, toluene, ethylbenzene, xylenes (BTEX) and concentrations of Total Petroleum Hydrocarbons, diesel range (TPH-DRO) ranging from non-detectable to 3.2 mg/L. The well locations are presented on FIG. 1.

The subsurface profile has been classified in general accordance with the Unified Soil Classification System by visually observing soil samples obtained during drilling. Surface soils encountered during drilling consisted of fine to coarse grained, well graded, loose sand with sparse gravel from surface to approximately 20 feet below ground surface. Below the surface soils was a sand exhibiting fine to medium grains, partially lithified, very calcareous with caliche nodules, and a medium to very dense sand. Complete soil descriptions are presented in the March 4, 1998 report by StanTech Environmental Services and in the April 8, 1999 report by KEI.

Presented below are a number of recommended activities to be conducted at Jal Station.

PLUG AND ABANDON MW-7

The facility requires the installation of a new electric pump for pipeline operations. The proposed location for the new pump is near monitoring well MW-7. Therefore, we request permission to plug and abandon MW-7 as follows:

- remove the monument identifying the monitoring well
- cut the PVC casing level with the ground surface
- fill the PVC casing to the ground surface with cement grout containing 3 to 5 percent bentonite powder

The monitoring well will be replaced with monitoring well MW-15 presented in the recommendations below.

RECOMMENDED ADDITIONAL ABATEMENT ACTIVITIES

- install 3 additional monitoring wells (to be designated MW-13, MW-14, and MW-15) northwest of MW-8, southwest of MW-6, and south of MW-7 to horizontally delineate the diesel contaminant plume
- collect ground water samples from additional monitoring wells MW-13, MW-14, and MW-15 and analyze for BTEX, TPH-DRO, PAH, major cations/anions, ICP metals, and TDS
- collect a ground water sample from existing MW-1 and analyze for chromium, chlorides, and TDS

- perform monthly gauging of all monitoring wells
- perform quarterly ground water sampling for determination of TPH-DRO and BTEX concentrations
- conduct pilot test outlined below
- continue operation of fluid recovery pumps in MW-2, MW-3, MW-6, and MW-9 until pilot test results are evaluated for effectiveness of Hi-Vac remediation system
- continue weekly system O&M
- submit summary progress reports every quarter

ABATEMENT OBJECTIVES

The current remediation system consists of continuous removal of LNAPL using low flow rate recovery pumps in monitoring wells MW-2, MW-3, MW-6, and MW-9. Based on evaluation of the assessment data, a more aggressive remediation system is recommended to meet the following objectives:

- reduce the potential for the migration of LNAPL and recover LNAPL from the site to the maximum extent practical
- reduce adsorbed-phase concentrations to below the clean-up standard or to the maximum extent practical
- reduce dissolved phase concentrations to below the clean-up standard or to the maximum extent practical

REMEDIATION PILOT TEST

The soil and ground water remediation system pilot test will be conducted using a multi-phase recovery system consisting of a Hi-Vac mobile system designed to simultaneously extract hydrocarbons from the subsurface in 3 phases (free liquid, dissolved phase, and vapor phase). In general, the system consists of a liquid ring pump, extensive liquid/solid/vapor separation equipment, a vapor abatement unit, and water treatment system. However, the vapor abatement unit and water treatment system will not be operated during the pilot test. The pilot test will be conducted for a duration of 1 week. It is estimated that approximately 800 gallons of fluids will be recovered and pumped into a frac tank on-site during the pilot test.

The Hi-Vac system uses a liquid ring pump and a "stinger" pipe with airlift holes inserted in a monitoring well to recover and remove LNAPL, ground water, and vapor. It is not currently known whether this technology will be effective at the depths which ground water and LNAPL are encountered at the site (approximately 75 feet below ground surface). The purpose of the pilot test is to determine the viability of Hi-Vac remediation for the site.

Hi-VAC SYSTEM COMPONENTS

The Hi-Vac mobile remediation system will be constructed on one 24 foot x 8 foot gooseneck flatbed trailer. The trailer will be equipped with two 7000 lb. axles and four 15,000 lb. leveling jacks.

The Hi-Vac extraction system will consist of primary and secondary bulk separators on the inlet side of the liquid ring pump system, a secondary air/water/particulate separator, a closed loop heat exchanger cooling system for the liquid ring pump, a 5-hp industrial air compressor, a double diaphragm transfer pump, a control panel, and a main breaker panel.

The liquid treatment system will contain a fractionation tank for LNAPL separation, a centrifugal transfer pump, and an air stripper. LNAPL collected during remediation will be pumped directly to a storage tank. The system will be equipped with a high level shutoff switch in the storage tank to terminate system operation in the event of a high level condition.

Recovery System

The liquid ring pump system will be a Travini Model TRO200 Dynaseal oil cooled liquid ring pump equipped with a 15-hp explosion proof motor, solenoid valve, and temperature switch. The Model TRO200 is capable of approximately 200 scfm at 26 inches of mercury. This pump uses a synthetic oil in a closed loop system which is cooled with an integral heat exchanger rather than seal water which must be constantly replaced as it evaporates.

Monitoring well MW-3 will be utilized as the extraction well. Pressure readings will be collected during the initial operation period to evaluate the radius of influence of the recovery system and the optimum arrangement of the recovery system.

MW-3 will be fitted with a vacuum pipe (stinger) extending through a sealed well cap to an initial depth approximately 40% into the LNAPL thickness to maximize the recovery of LNAPL while minimizing the recovery of ground water. Assuming the specific gravity of the LNAPL is approximately 0.85, the water level will equilibrate at a level above or near the bottom of the vacuum pipe during recovery. The vacuum pipe will be plumbed to the liquid ring pump. A gate valve and vacuum gauge will be installed on the line to control the vacuum exerted on MW-3. Sample ports will be installed to monitor the hydrocarbon concentrations at the discharge line of the liquid ring pump.

A site plan indicating the generalized system layout is presented on FIG. 1. A generalized system schematic is presented on FIG. 2.

LNAPL Fractionation Tank

The LNAPL fractionation tank will be constructed of 10 gauge steel and will be epoxy coated to inhibit rust and primed and painted with an industrial white paint. The fractionation tank will be designed with four compartments with three baffles. The first, second, and third compartment dividers will be designed with a flow through bottom weir. The fourth compartment will be equipped with level sensors for automatic pumping and a high level switch for termination of pumping in the event of a high level condition due to transfer pump failure. The fractionation tank will include coalescing media to enhance separation of LNAPL and ground water.

PERMITTING REQUIREMENTS

Currently a Notice of Intent is being prepared for the New Mexico Environment Department Air Quality Bureau. The facility does not expect to exceed any emission requirements.

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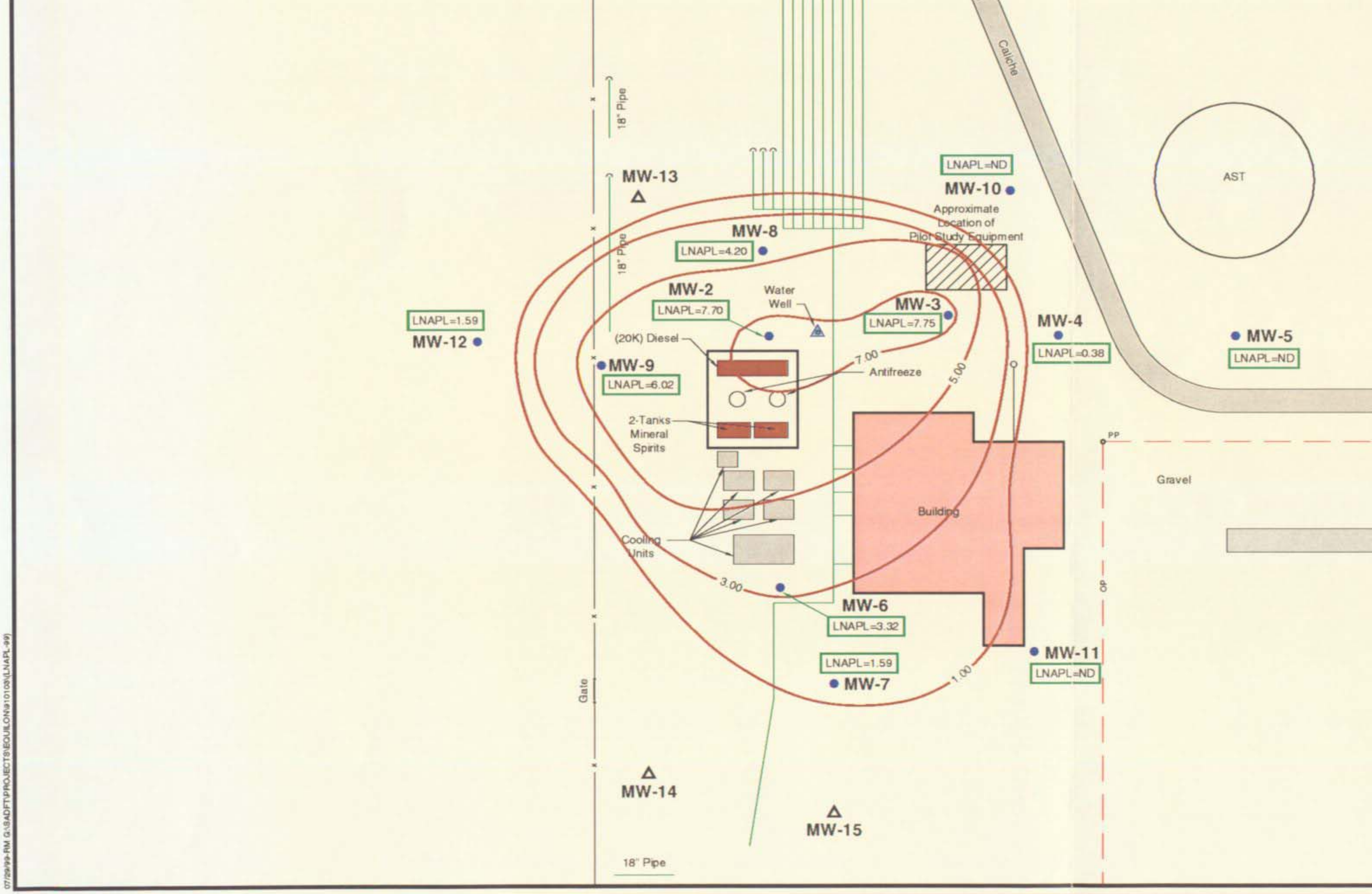

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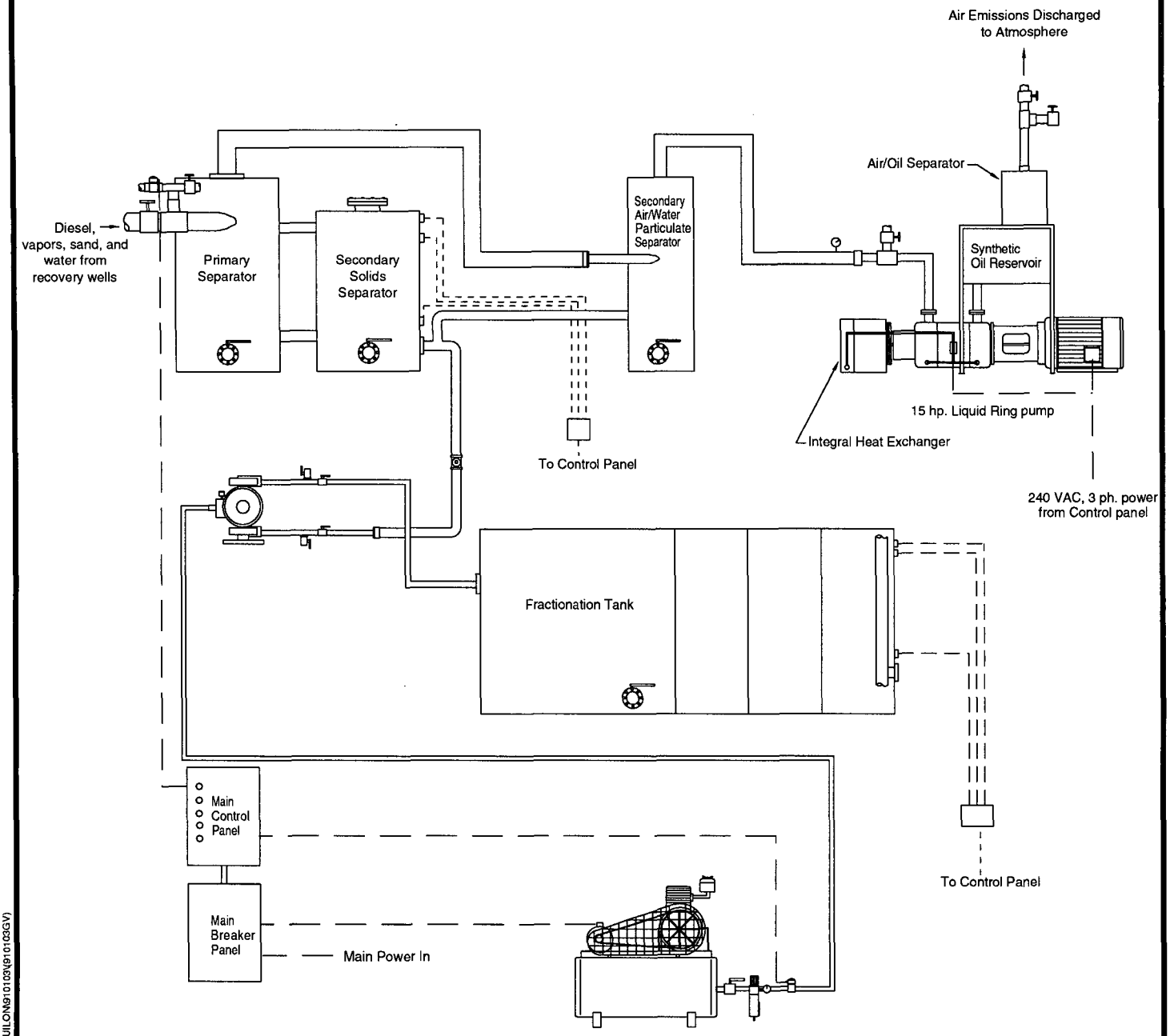
SITE DETAILS / LNAPL THICKNESS MAP - JULY 1999

EQUILON PIPELINE COMPANY LLC | JAL BASIN STATION | LEA CO



07/29/99-RM G:\SADFT\PROJECTS\EQUILON\910103\(910103GV)

k·e·i	*GeoVac™ SYSTEM PROCESS FLOW DIAGRAM*	910103-6-0
	EQUILON PIPELINE COMPANY LLC JAL BASIN STATION LEA COUNTY, NEW MEXICO	FIG 2

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

June 16, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z-274-520-674

Mr. Greg Vratil
Equilon
P.O. Box 1910
Midland, Texas 79702-1910

RE: STAGE 1 GROUND WATER ABATEMENT PLAN (AP-4)
JAL BASIN STATION

Dear Mr. Vratil:

The New Mexico Oil Conservation Division (OCD) has reviewed Equilon's April 8, 1999 "STAGE 1 ABATEMENT PLAN, JAL STATION, UNITS O & P, SEC. 32, T25S, R37E, AND UNIT B, SEC. 5, T26S, R37E, LEA COUNTY, NEW MEXICO, KEI JOB NO. 810006-1" which was submitted on behalf of Equilon by their consultant KEI. This document contains the results of the Stage 1 Abatement Plan investigation activities regarding ground water contamination resulting from a diesel spill at Equilon's Jal Basin Station. The document also contains Equilon's recommendations for installation of additional monitoring wells to further delineate the extent of ground water contamination at the site.

The investigation actions conducted to date are satisfactory. However, the report does not address the source and extent of chromium, chloride and total dissolved solids contamination discovered in monitor well MW-1. This ground water contamination in this area is in excess of New Mexico Water Quality Control Commission ground water standards. Prior to the OCD issuing approval of the recommendations in the above referenced report the OCD requires that Equilon submit a modified work plan which also addresses this contamination. The work plan will submitted to the OCD Santa Fe Office by August 16, 1999 with a copy provided to the OCD Hobbs District Office.

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

Sincerely,

William C. Olson
Hydrologist/Environmental Bureau

xc: Chris Williams, OCD Hobbs District Office
Theresa Nix, KEI
Marc Oler, Equiva Services

Z 274 520 674

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PS Form 3800, April 1995

5309 Wurzbach, Suite 100
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(210) 680-3767
(210) 680-3763 FAX

ENV-PI-REPORTS

April 8, 1999

RECEIVED

APR 0 9 1999

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Mr. Marc Oler
EQUIVA SERVICES, LLC
1670 Broadway, Suite 2600
Denver, Colorado 80202-4838

Re: Stage I Abatement Plan
Jal Station
Units O & P, Sec. 32, T 25 S, R 37 E,
and Unit B, Sec. 5, T 26 S, R 37 E
Lea County, New Mexico
KEI Job No. 810006-1

Dear Mr. Oler:

Transmitted with this letter is the Stage I Abatement Plan for the installation of 10 monitoring wells (designated MW-3 through MW-12) at the referenced site. Please call Theresa Nix or me at (210) 680-3767 if you have any questions.

Respectfully,

T. Shawn White
Project Manager

Enclosure

cc: Chris Williams, OCD Hobbs
William C. Olson, OCD Santa Fe

tsw\p:\tnmp\810006\assment1\rstage1.doc

ENV-PI-CORRESPONDENCE

5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

March 10, 1999

Mr. William C. Olson
STATE OF NEW MEXICO
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Texas-New Mexico Pipe Line Company
Jal Basin Station
Lea County, New Mexico
Job No. 810006-1

Dear Mr. Olson:

This letter is in response to your letter dated January 14, 1999, for the referenced site, which required submittal of a comprehensive Stage 1 investigation report to your office by March 12, 1999. This letter constitutes our formal request for extension of this deadline until April 9, 1999, for which you provided approval on our recent email correspondence concerning the site.

If you have any questions please contact me at (210) 680-3767.

Respectfully,

Theresa Nix

Theresa Nix
Project Manager

cc: TNMPL, Tony Savoie
Equilon, Marc Oler
OCD Hobbs District Office

tnmpl\810006\correspon\cstg1ext.doc

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

January 14, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z-274-520-590

Mr. Tony Savoie
Texas-New Mexico Pipe Line Company
P.O. Box 1030
Jal, New Mexico 88252

RE: STAGE 1 GROUND WATER ABATEMENT PLAN (AP-4)
JAL BASIN STATION

Dear Mr. Savoie:

The New Mexico Oil Conservation Division (OCD) has completed a review of the following Texas-New Mexico Pipe Line Company (TNMPLC) documents:

- October 22, 1998 "TEXAS- NEW MEXICO PIPE LINE COMPNAY, TPLI JAL STATION, LEA COUNTY, NEW MEXICO, KEI JOB NO. 810006-1".

- October 1, 1998 "TEXAS- NEW MEXICO PIPE LINE COMPNAY, TPLI JAL STATION, LEA COUNTY, NEW MEXICO, KEI JOB NO. 810006".

- June 26, 1998 "STAGE 1 ABATEMENT PLAN, TPLI JAL STATION, NEW MEXICO, KEI JOB NO. 810006-1".

These documents, which were submitted on behalf of TNMPLC by their consultant KEI, contain TNMPLC's stage 1 abatement plan for ground water contamination resulting from a diesel spill at TNMPLC's Jal Basin Station.

The above referenced Stage 1 Abatement Plan Proposal **is approved** with the following conditions:

1. All wastes generated during the investigation will be disposed of at an OCD approved facility.

2. Ground water metals samples will be analyzed for concentrations of all New Mexico Water Quality Control Commission (WQCC) metals including arsenic, lead, mercury and selenium. Laboratory detection limits for all metals constituents must be less than the WQCC standard for each constituent.

3. TNMPLC will submit a comprehensive Stage 1 investigation report to the OCD by March 12, 1999. The report will be submitted to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office. The report will contain:

   a. A description of all past and present investigation and remedial actions including discussion of the results as well as conclusions and monitoring recommendations.

   b. Summary tables of all past and present soil/waste and water quality sampling results including copies of recent laboratory analytical data sheets and associated QA/QC data. Laboratory analytical data sheets which have been previously submitted to the OCD need only be referenced and do not need to be included in the report.

   c. A site map showing the location of all soil/waste sampling points, boreholes, monitor wells and all relevant site features such as pit locations and spill areas.

   d. A ground water potentiometric map created using the water table elevations from all monitor wells. The map will show the direction and magnitude of the hydraulic gradient.

   e. Geologic/lithologic logs and well completion diagrams for each borehole and monitor well.

   f. Soil and ground water isopleth maps for contaminants of concern such as benzene, BTEX and any other significant contaminants found during the investigations.

   g. The disposition of all investigation derived wastes.

   h. Any other information pertinent to the investigations.

4. TNMPLC will notify the OCD at least 24 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and split samples.

Please be advised that OCD approval does not limit TNMPLC to the proposed work plan should the investigation actions fail to adequately define the extent of contamination, or if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve TNMPLC of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please contact Bill Olson of my staff at (505) 827-7154.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

xc: Chris Williams, OCD Hobbs District Office
Theresa Nix, KEI

Z 274 520 590

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5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

October 22, 1998

Mr. Roger C. Anderson
Environmental Bureau Chief
OIL CONSERVATION DIVISION
2040 South Pacheco Street
Sante Fe, New Mexico 87505

RE: Texas - New Mexico Pipe Line Company
TPLI Jal Station
Lea County, New Mexico
KEI Job No. 810006-1

Dear Mr. Anderson:

Transmitted with this letter is a list of the addresses to which notices of the publication advising the addressee of upcoming subsurface investigation activities for the Jal Station facility were submitted. The attached list identifies which notices were undeliverable and which notices were received by the addressee. Copies of the certified mail return receipt slips are also attached.

If you have any questions, please contact me at (210) 680-3767.

Sincerely,

Kevin A. Pelletier

for Theresa Nix
Project Manager

Attachment

cc: OCD Hobbs District Office
Mr. Tony Savoie, TNMPL
Marc Oler, Equilon

p:\tnmpl\810006\stage1\crtnrct.doc

NAME & ADDRESS	DATE RECEIVED
Regional Forester USFS Regional Office 517 Gold Avenue SW Albuquerque, NM 87102	09/22/98
Lynn Brandvold NM Bureau of Mines & Mineral Resources NM Institute of Mining & Tech. Socorro, NM 87801	09/25/98
Director Albuquerque Environmental Health Department P. O. Box 1293 Albuquerque, NM 87103	09/18/98
Mike Matush State Land Office Building Santa Fe, NM 87503	09/21/98
Masud Zaman Navajo Division of Water Resources P. O. Box 308 Window Rock, AZ 86515	RETURNED
Field Supervisor US Fish & Wildlife Service 2105 Osuna Road, Northeast Albuquerque, NM 87113-1001	09/18/98
NM Water Well Association 1205 California NE Albuquerque, NM 87110	09/18/98
Director Water Resources Dept. p. O. Box 1293 Albuquerque, NM 87103	09/18/98
State Director Bureau of Land Management P. O. Box 27115 Santa Fe, NM 87502-0115	09/21/98
State Engineer Water Resources Division Bataan Building Santa Fe, NM 87503	09/22/98
Governor Pueblo of Laguna P. O. Box 194 Laguna, NM 87026	09/21/98

NAME & ADDRESS	DATE RECEIVED
Environmental Affairs Public Service Company of New Mexico P. O. Box 2267 Albuquerque, NM 87103	09/18/98
Soil and Water Conservation Bureau New Mexico Department of Agriculture Agriculture Programs and Resouces Division Box 30005/APR Las Cruces, New Mexico 88003-8005	09/18/98
Director Department of Game & Fish Villagra Building Santa Fe, NM 87503	09/18/98
Maxine Goad NM Environment Department Surface Quality Bureau Harold Runnels Building Santa Fe, NM 87503	09/21/98
Secretary New Mexico Environment Dept. P. O. Box 26110 Santa Fe, NM 87504	09/18/98
Office of the Secretary New Mexico EMNRD 1914 San Ildefonso Rd. Sante Fe, NM 87507	09/28/98
Bob Steele Land & Mineral Resources P. O. Box 194 Laguna, N.M. 87026	09/21/98
Director State Parks & Recreation Villagra Building Santa Fe, N.M. 87503	09/21/98
State Land Office Hobbs District 3830 North Grimes Suite C Hobbs, NM 88240	09/22/98
County Commissioner Lea County Courthouse Box 4C Lovington, NM 88260	09/21/98

NAME & ADDRESS	DATE RECEIVED
Nadine Owen 909 W Taos Hobbs, NM 88240	RETURNED
Fred Cooper R.R. #1 Box 141 Blossom, TX 75416	09/19/98
Texas New Mexico Railroad (Austin & Northwestern R.R. Co) 9005 Mountain Ridge Dr. Bowie Bldg. Ste 110 Austin, TX 78759	09/17/98
Rodrigo Navarette P.O. Box 12 Jal, NM 88252	09/29/98
Joyce Marie Willis P.O. Box 307 Jal, NM 88252	09/21/9
George Willis P.O. Box 307 Jal, NM 88252	09/21/98
City Clerk P.O. Box 340 Jal, NM 88252	09/21/98
Mr. Dallas McCasland P.O. Box 206 Eunice NM 88231	09/20/98
Deck Millard Est., #4193 c/o NationsBank of TX - Devon Tax 1777 NE Loop 410, Suite 1250 San Antonio TX 78217	09/17/98
County Commissioner Lea County Courthouse Box 4C Lovington NM 88260	09/21/98
Farm and Ranch P.O. Box 206 Eunice NM 88231	09/24/98
M.E. Laughlin Reeves, Elsie Laughlin ET AL P.O. Box 90706 White Mountain Lake AZ 85912	09/29/98
Mr. Jimmie T. Cooper Star Rt. A, Box 55 Monument NM 88265	09/21/98
Dale Cooper Family Trust Box 6 Monument NM 88265	09/22/98

NAME & ADDRESS	DATE RECEIVED
Dell Barber, ET AL Box 1246 Colorado City TX 79512	09/18/98
S.W. Cattle Co. P.O. Box 1799 Hobbs NM 88240	09/21/98
G.P. Sims Box 1046 Eunice NM 88231	09/21/98
Ms. Dolores Nash P.O. Box 239 Monument NM 88265	09/21/98
County Commissioner Lea County Courthouse Box 4C Lovington NM 88260	09/21/98
Mr. Charlie F. Byrd P.O. Box 32 Monument NM 88265	09/24/98

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

M.E. Laughlin
Reeves, Elsie Laughlin ET AL
P.O. Box 90706
White Mountain Lake AZ 85912

4. Article Number
Z 435 770 364

Type of Service:
☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail ☑ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X

6. Signature — Agent
X M.W. Evans

7. Date of Delivery
SEP 29 1998

8. Addressee's Address *(ONLY if requested and fee paid)*

WHITE MOUNTAIN LAKE AZ USPS

PS Form **3811**, Apr. 1989 *U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:

Dale Cooper Family Trust
Box 6
Monument NM 88265

4a. Article Number
Z 435 770 371

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

7. Date of Delivery
9-22-98

5. Received By: *(Print Name)*
DALE COOPER

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

6. Signature: *(Addressee or Agent)*
X Dale Cooper

PS Form **3811**, December 1994 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:

Mr. Jimmie T. Cooper
Star Rt. A, Box 55
Monument NM 88265

4a. Article Number
Z 435 770 365

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

7. Date of Delivery
9-21-98

5. Received By: *(Print Name)*
Jimmie T Cooper

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

6. Signature: *(Addressee or Agent)*
X Jimmie T Cooper

PS Form **3811**, December 1994 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, 4a, and 4b.
- 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:

Dell Barber, ET AL
Box 1246
Colorado City TX 79512

4a. Article Number
Z 435 770 367

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

7. Date of Delivery
9/18/98

5. Received By: *(Print Name)*
Dell Barber

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

6. Signature: *(Addressee or Agent)*
X Dell Barber

PS Form **3811**, December 1994 Domestic Return Receipt

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:

S.W. CATTLE COMPANY
P.O. Box 1799
Hobbs NM 88240

4a. Article Number: Z 435 770 370

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

7. Date of Delivery: 9/21/98

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 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, 4a, and 4b.
- 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. Dolores Nash
P.O. Box 239
Monument NM 88265

4a. Article Number: Z 435 770 360

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

7. Date of Delivery: 9-21-98

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X Dolores Nash

PS Form **3811**, December 1994 Domestic Return Receipt

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:

G.P. Sims
Box 1046
Eunice NM 88231

4a. Article Number: Z 435 770 369

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

7. Date of Delivery: SEP 1998

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 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, 4a, and 4b.
- 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:

County Commissioner
Lea County Courthouse
Box 4C
Lovington, NM 88260

4a. Article Number: P 226 742 321

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

7. Date of Delivery: 9/21/98

5. Received By: *(Print Name)* KATHY McLaughlin

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

6. Signature: *(Addressee or Agent)*
X KMcLaughlin

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:

Mr. Dallas McCasland
P.O. Box 206
Eunice NM 88231

4a. Article Number
Z 435 770 285

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

7. Date of Delivery
9-12-98

5. Received By: *(Print Name)*
Karen Rowell

6. Signature: *(Addressee or Agent)*
X

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

PS Form **3811**, December 1994 102595-98-B-0229 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, 4a, and 4b.
- 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:

Deck Millard Est., #4193
c/o NathionsBank of TX - Devon Tax
1777 NE Loop 410, Suite 1250
San Antonio TX 78217

4a. Article Number
Z 435 770 283

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

7. Date of Delivery
9-17-98

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*
X Wyatt Jacobs

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

PS Form **3811**, December 1994 102595-98-B-0229 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, 4a, and 4b.
- 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:

County Commissioner
Lea County Courthouse
Box 4C
Lovington NM 88260

4a. Article Number
Z 435 770 282

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

7. Date of Delivery
9/11/98

5. Received By: *(Print Name)*
Kathy M Coughlin

6. Signature: *(Addressee or Agent)*
X

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

PS Form **3811**, December 1994 102595-98-B-0229 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, 4a, and 4b.
- 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:

Farm and Ranch
P.O. Box 206
Eunice NM 88231

4a. Article Number
Z 435 770 284

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

7. Date of Delivery
9-24-98

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*
X

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

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

k·e·i
5309 Wurzbach, Suite 100
San Antonio, Texas 78238

CERTIFIED

Z 435 770 292

MAIL

SAN ANTONIO, TX 782XX 16:59 09/16/98

ROSWELL PM 03 OCT 1998

RETURNED TO SENDER

Ms. Nadine Owen
909 West Taos
Hobbs NM 88240

LN
9.19.98
Co

Name
1st Notice 9/19
2nd Notice 9-26
Return 10-4

House Vacant
for sale

88240-1101 15

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:

Mr. Fred Cooper
RR 1, Box 141
Blossom TX 75416

4a. Article Number
Z435770287

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

7. Date of Delivery
9-19-Km

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*
X Christy K Cammack

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

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:

Texas New Mexico Railroad
Austin & Northwestern RR Co.
9005 Mountain Ridge Dr., #110
Austin TX 78759

4a. Article Number
Z435770293

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

7. Date of Delivery
9-17-98

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*
X Carla Hood

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

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:

Mr. Rodrigo Navarette
P.O. Box 12
Jal NM 88252

4a. Article Number: Z 435 770 288

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

7. Date of Delivery: 9-29-98

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X Cristina Navarette

PS Form **3811**, December 1994 102595-98-B-0229 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, 4a, and 4b.
- 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:

Mr. George Willis
P.O. Box 307
Jal NM 88252

4a. Article Number: Z 435 770 290

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

7. Date of Delivery: 9-21-98

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X George Willis

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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. Joyce Marie Willis
P.O. Box 307
Jal NM 88252

4a. Article Number: Z 435 770 289

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

7. Date of Delivery: 9-21-98

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X George Willis

PS Form **3811**, December 1994 102595-98-B-0229 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, 4a, and 4b.
- 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:

City Clerk
P.O. Box 340
Jal NM 88252

4a. Article Number: Z 435 770 291

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

7. Date of Delivery: 9-21-98

5. Received By: *(Print Name)*
Carolyn Moore

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

6. Signature: *(Addressee or Agent)*
X Carolyn Moore

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

k·e·i
5309 Wurzbach, Suite 100
San Antonio, Texas 78238

CERTIFIED

Z 435 770 312

SAN ANTONIO, TX 782XX 16:59 09/16/98 188 # 0410

MAIL

Not Deliverable As Addressed
Unable To Forward
Insufficient Address
Moved, Left No Address
Unclaimed
Refused
Attempted - Not Known
No Such Street
Vacant
No Such Number
No Mail Receptacle
Box Closed - No Order
Forwarding Order Expired

Masud Zaman
Naval Division of Water Resources
PO Box 308
[redacted]

[redacted]

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:

Office of the Secretary
NEW MEXICO EMNRD
1914 San Ildefonso Rd.
Sante Fe NM 87507

4a. Article Number 24357702971

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

7. Date of Delivery
SEP 28 1998

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X Brian K. Johnson

SANTA FE, NM 87501 USPS

PS Form 3811, December 1994 102595-98-B-0229 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, 4a, and 4b.
- 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. Lynn Brandvold
NM Bureau of Mines & Mineral Resourc
NM Institute of Mining & Tech.
Socorro NM 87801

4a. Article Number 24357703711

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

7. Date of Delivery
[redacted]
SEP 25 1998

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*
[redacted]

6. Signature: *(Addressee or Agent)*
X Lynn Brandvold

87801

PS Form 3811, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

SENDER:
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- Complete items 3, 4a, and 4b.
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- 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:

Regional Forester
USFS REGIONAL OFFICE
517 Gold Avenue SW
Albuquerque NM 87102

4a. Article Number: Z 435 770 310

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

7. Date of Delivery: SEP 22 1998

5. Received By: *(Print Name)* Jessous Harlow

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

6. Signature: *(Addressee or Agent)* X

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
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- 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:

STATE ENGINEER
Water Resources Division
Bataan Building
Santa Fe NM 87503

4a. Article Number: Z 435 770 303

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

7. Date of Delivery: SEP 22 1998

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)* X

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:

State Director
Bureau of Land Management
P. O. Box 27115
Santa Fe NM 87502-0115

4a. Article Number: Z 435 770 304

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

7. Date of Delivery: SEP 21 1998

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)* X

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

SENDER:
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- Complete items 3, 4a, and 4b.
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- 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:

Mr. Mike Matush
State Land Office Building
Santa Fe NM 87503

4a. Article Number: Z 435 770 308

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

7. Date of Delivery: SEP 21 1998

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)* X

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

SENDER:
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- 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. Maxine Goad
NEW MEXICO ENV. DEPT.
Surface Quality Bureau
Harold Runnels Building
Santa Fe NM 87503

4a. Article Number
Z 435 770 299

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

7. Date of Delivery
SEP 21 1998

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SANTA FE, NM 87502 SEP 21 1998 USPS

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:
Governor
PUEBLO OF LAGUNA
P. O. Box 194
Laguna NM 87026

4a. Article Number
Z 435 770 302

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

7. Date of Delivery
9/21/98

5. Received By: *(Print Name)* Ruth Sarracino

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

6. Signature: *(Addressee or Agent)*
X RAS

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
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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:
STATE LAND OFFICE
Hobbs District
3830 North Grimes, Suite C
Hobbs NM 88240

4a. Article Number
Z 435 770 294

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

7. Date of Delivery

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X Barbara Wood

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
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- 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:
Mr. Bob Steele
LAND & MINERAL RESOURCES
P. O. Box 194
Laguna NM 87026

4a. Article Number
Z 435 770 296

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

7. Date of Delivery
9/21/98

5. Received By: *(Print Name)* Ruth Sarracino

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

6. Signature: *(Addressee or Agent)*
X RAS

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

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- Write *"Return Receipt Requested"* on the mailpiece below the article number.
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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:

Director
STATE PARKS & RECREATION
Villagra Building
Santa Fe NM 87503

4a. Article Number
Z 435 770 295

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

7. Date of Delivery
SEP 21 1998

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X

Thank you for using Return Receipt Service.

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

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SENDER:
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- 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:

Director
Department of Game & Fish
Villagra Building
Santa Fe NM 87503

4a. Article Number
Z 435 770 300

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

7. Date of Delivery
SEP 18 1998

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X

Thank you for using Return Receipt Service.

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

SENDER:
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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:

oil and Water Conservation Bureau
ew **Mexico Department of Agricultu**
griculture Programs and Resouces Div
ox 30005/APR
as Cruces, New Mexico 88003-8005

4a. Article Number
Z 435 770 313

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

7. Date of Delivery

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X

Thank you for using Return Receipt Service.

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

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- 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:

Secretary
NEW MEXICO ENV. DEPT.
P. O. Box 26110
Santa Fe NM 87504

4a. Article Number
Z 435 770 298

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

7. Date of Delivery
SEP 18 1998

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X

Thank you for using Return Receipt Service.

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

SENDER:
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- 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:

Field Supervisor
US Fish & Wildlife Service
2105 Osuna Road, Northeast
Albuquerque NM 87113-1001

4a. Article Number: Z 435 770 307

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

7. Date of Delivery: 9/18/98

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X David C. Leal

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

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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:

Director
Albuquerque Env. Health Dept.
P. O. Box 1293
Albuquerque NM 87103

4a. Article Number: Z 435 770 309

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

7. Date of Delivery

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X Larry English

ALBUQUERQUE NM 87103 SEP 18 1998 USPS

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
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- 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:

Director
WATER RESOURCES DEPT.
P. O. Box 1293
Albuquerque NM 87103

4a. Article Number: Z 435 770 305

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

7. Date of Delivery

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X Larry English

ALBUQUERQUE NM 87103 SEP 18 1998 USPS

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
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- Complete items 3, 4a, and 4b.
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- 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:

Environmental Affairs
Public Service Company of NM
P. O. Box 2267
Albuquerque NM 87103

4a. Article Number: Z 435 770 301

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

7. Date of Delivery

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
X Jerry Baca

ALBUQUERQUE NM 87103 SEP 18 1998 USPS

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:

NM WATER WELL ASSOC.
1205 California NE
Albuquerque NM 87110

4a. Article Number
Z 435 770 306

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

7. Date of Delivery
9-18-98

5. Received By: *(Print Name)*
Sue Ann Scott

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

6. Signature: *(Addressee or Agent)*
X Sue Ann Scott

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:

County Commissioner
Lea County Courthouse
Box 4C
Lovington, NM 88260

4a. Article Number
Z 435 770 286

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

7. Date of Delivery
9/21/98

5. Received By: *(Print Name)*
KATHY McLaughlin

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

6. Signature: *(Addressee or Agent)*
X K McLaughlin

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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:

Mr. Charlie F. Byrd
P.O. Box 32
Monument NM 88265

4a. Article Number
Z 435 770 368

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

7. Date of Delivery
9-24-98

5. Received By: *(Print Name)*
J R Byrd

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

6. Signature: *(Addressee or Agent)*
X J R Byrd

PS Form **3811,** December 1994

Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

United States Department of the Interior

Roger

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

October 15, 1998

William J. Lemay, Director
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Dear Mr. Lemay:

This responds to your agency's public notice we received on September 16, 1998, regarding the Stage 1 Abatement Plan for the Jal Station oil transportation and storage facility described below:

> **Tony Savoie, Texas-New Mexico Pipe Line Company.** Mr. Savoie has submitted a Stage 1 Abatement Plan for investigation of groundwater contamination by Light Non-Aqueous Phase Liquid (LNAPL). The investigation activities include: confirmation of property boundaries; determination of site geology and hydrogeology; subsurface hydraulic conductivity, transmissivity, and storavity; a search for water wells within one mile of the site; and other investigations of the presence of and concentrations of LNAPL in surrounding groundwater and soils.

The U.S. Fish and Wildlife Service (Service) heartily approves of investigations such as this one that will lead to the remediation of contaminated environments. The Service's only suggestion is to determine if there are any springs or seeps which could transmit contaminated groundwater to the surface. Potential groundwater seepage areas include arroyos and other surface depressions, such as playas. If surface contamination is suspected, samples should be collected to determine if there are any potential risks to birds and other wildlife that could use these waters.

Thank you for the opportunity to review and comment on this application. If you have any questions about these comments, please contact Russell MacRae at (505) 346-2525, extension 124.

Sincerely,

Jennifer Fowler-Propst
Field Supervisor

5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

October 1, 1998

Mr. Roger C. Anderson
Environmental Bureau Chief
OIL CONSERVATION DIVISION
2040 South Pacheco Street
Sante Fe, New Mexico 87505

RE: Texas - New Mexico Pipe Line Company
TPLI Jal Station
Lea County, New Mexico
KEI Job No. 810006

Dear Mr. Anderson:

Transmitted with this letter are the original affidavits of publication of the legal notices for the Stage 1 Abatement Plan at Texas - New Mexico Pipe Line Company release site TPLI Jal Station. The legal notices were published in the Hobbs Daily News-Sun and the Jal Record on September 17, 1998.

If you have any questions, please contact me at (210) 680-3767.

Sincerely,

Theresa Nix

Theresa Nix
Project Manager

Attachment

cc: OCD Hobbs District Office
Mr. Tony Savoie, TNMPL
Marc Oler, Equilon

p:\tnmpl\810006\stage1\caffidav.doc

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
) ss
COUNTY OF LEA

BERT BREWER
Being first duly sworn on oath deposes and says that

he ~~she~~ XX is the GENERAL MANAGER

of THE JAL RECORD, a weekly newspaper of general circulation published in the English language at Jal, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-Six (26) consecutive weeks prior to the first publication of the notice hereto attached, as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached entitled

JOB#81006-1-0

and numbered ..... in the

..... Court of Lea County, New Mexico, was published in a regular and entire issue of THE JAL RECORD, and not in any supplement thereof, once each week on the same day of the weeks for 1 (ONE) consecutive weeks, beginning with the issue of

9-17, 19 98, and ending with the issue of 9-17, 19 98

And that the cost of publishing said notice is the sum of $ 76.45

which sum has been Paid / Assessed as Court Cost.

✓ Bert Brewer

Subscribed and sworn to before me this 17TH day of SEPTEMBER, 19 98

Betty Hayes - BETTY HAYES
Notary Public, ~~Lea County, New Mexico~~ Winkler County Texas

My Commission expires 9/4 2000

BETTY HAYES
NOTARY PUBLIC
State of Texas

ATTACH PRINTED COPY HERE

*** See Attached ***

Legal Notice

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 has been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

Texas - New Mexico Pipe Line Company, Tony Savoie, (505) 395-2705, P. O. Box 1030, Jal, New Mexico 88252 has submitted a Stage 1 Abatement Plan for the Jal Station facility, 2 miles south of Jal on State Highway 18, Jal, New Mexico 88252 in the SE/4, SW/4 of Section 32, Township 25 South, Range 37 East, Lea County, New Mexico. The site is approximately 27 acres where Texas - New Mexico Pipe Line Company operates a crude oil transportation and storage facility. Light Non-Aqueous Phase Liquid (LNAPL) has been observed on the ground water. The Stage 1 abatement plan presents the following subsurface investigation activities: confirmation of property line location, determine site geology and hydrogeology, subsurface hydraulic conductivity, transmissivity, and storativity information; conduct a registered water well search within a 1 mile radius of the site; installation of monitoring/recovery wells to delineate hydrocarbon impact around MW-2 in general accordance with the TNMPL Initial Ground Water Investigation Standard Protocol for New Mexico dated December 1, 1997; collect soil and ground water samples for laboratory analysis from each monitoring/recovery well to determine the magnitude of hydrocarbon impact to ground water; collect a ground water sample for laboratory analysis from the on-site water well; obtain depth to ground water measurements and calculate the ground water gradient and direction; survey all well locations by a Professional Land Surveyor registered in the State of New Mexico; and prepare a report summarizing field activities and laboratory results.

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 may be viewed at the above address or at the Oil Conservation Division District Office, 1000 West Broadway, Hobbs, New Mexico 88240, Telephone (505) 392-4046, between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed Stage 1 abatement plan, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him.

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, KATHI BEARDEN

Publisher

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period.

of 1

weeks.

Beginning with the issue dated

September 17 1998

and ending with the issue dated

September 17 1998

Kathi Bearden

Publisher

Sworn and subscribed to before me this 17th day of September 1998

Jodi Henson

Notary Public.

My Commission expires
October 18, 2000
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE
September 17, 1998
NOTICE OF PUBLICATION

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

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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 may be viewed at the above address or at the Oil Conservation Division District Office, 1000 West Broadway, Hobbs, New Mexico 88240, Telephone (505) 392-4046, between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed Stage 1 abatement plan, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him.

#16145

01103168000 02519715

KEI
5309 Wurzbach, Suite 100
SAN ANTONIO, TX 78238

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

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

September 3, 1998

CERTIFIED MAIL
RETURN RECEIPT NO: Z-274-520-555

Mr. Tony Savoie
Texas-New Mexico Pipe Line Company
P.O. Box 1030
Jal, New Mexico 88252

RE: STAGE 1 GROUND WATER ABATEMENT PLAN (AP-4)
JAL BASIN STATION

Dear Mr. Savoie:

The New Mexico Oil Conservation Division (OCD) has reviewed Texas-New Mexico Pipe Line Company's (TNMPLC) June 26, 1998 "STAGE 1 ABATEMENT PLAN, TPLI JAL STATION, NEW MEXICO, KEI JOB NO. 810006-1 which was submitted on behalf of TNMPLC by their consultant KEI. This document contains TNMPLC's stage 1 abatement plan for ground water contamination resulting from a diesel spill at TNMPLC's Jal Basin Station.

Upon a review of the above referenced documents, the OCD has determined that the Stage 1 Abatement Plan is administratively complete. The OCD requires that TNMPLC issue public notice pursuant to OCD Rule 19.G. Enclosed you will find a 3.5" disk containing a "WordPerfect" listing of those persons, as identified by the Director, who have requested notification pursuant to OCD Rule 19.G.(1).(d). Please provide the OCD with proof of notice upon completing issuance of the public notice.

If you have any questions, please contact Bill Olson of my staff at (505) 827-7154.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

xc: Wayne Price, OCD Hobb District Office
Theresa Nix, KEI

Z 274 520 555

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

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Postmark or Date	

PS Form 3800, April 1995

k·e·i
5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

June 26, 1998

Mr. Roger Anderson
OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, New Mexico 87505

RE: Stage 1 Abatement Plan
TPLI Jal Station, New Mexico
KEI Job No. 810006-1

Dear Mr. Anderson:

Transmitted with this letter is the Stage 1 Abatement Plan required by your letter dated April 29, 1998. I have also attached a draft Notice of Publication. Within 15 days after the OCD determines that the Stage 1 abatement plan is complete, TNMPL will be required to issue public notice in a form approved by the OCD in a newspaper or general circulation in the county in which the release occurred, and in a newspaper of general circulation in the State. Prior to public notice, TNMPL shall give written notice, as approved by the OCD, of this Stage 1 abatement plan to the following persons:

- surface owners of record within 1 mile of the perimeter of the geographic area where the standards and requirements are exceeded
- the county commission where the geographic area where the standards and requirements are exceeded is located
- the appropriate city official(s) if the geographic area where the standards and requirements are exceeded is located
- those persons, as identified by the Director, who have requested notification, who shall be notified by mail
- the New Mexico Trustee for Natural Resources, and any other local, state, or federal governmental agency affected, as identified by the Director, which shall be notified by certified mail
- the appropriate Governor or President of any Indian Tribe, Pueblo or Nation if the geographic area where the standards and requirements set forth are exceed is located or is partially located within tribal boundaries or within 1 mile of the tribal boundaries, who shall be notified by certified mail

Please contact Mike Hawthorne at (972) 484-4197 or me at (210) 680-3767 with your comments or suggested changes.

Respectfully,

for
Theresa Nix
Project Manager

cc: OCD Hobbs, Wayne Price
Mr. Tony Savoie
Mr. Marc Oler
Mr. Bill Keenan
Mr. Joel Jones
J. Michael Hawthorne

p:\tnmp\810006\rstage1p.doc

SITE DESCRIPTION

In February of 1998 borings and monitoring wells were installed in selected areas of the facility. Light Non-Aqueous Phase Liquid (LNAPL) was observed in one monitoring well (designated MW-2). Approximately 3 feet of LNAPL has been observed in this well. A water sample was obtained from the on-site water well utilized as a non-potable water source for the facility. This sample exhibited non-detectable TPH-DRO, TPH-ORO, and BTEX concentrations. A TPH-GRO concentration of 0.088 mg/l was observed in this sample. A site map is presented as FIG. 1.

PROPOSED STAGE 1 ABATEMENT PLAN ACTIVITIES

Stage 1 abatement plan activities will consist of the following:

- confirm property line location in the field and/or with records, as necessary
- conduct a records research for the area to determine site geology and hydrogeology, subsurface hydraulic conductivity, transmissivity, and storativity information
- conduct a registered water well search within a 1 mile radius of the site
- install a minimum of 3 monitoring/recovery wells to delineate hydrocarbon impact around MW-2 in general accordance with the TNMPL Initial Ground Water Investigation Standard Protocol for New Mexico dated December 1, 1997 (see attached)
- if field conditions dictate, install additional wells to delineate hydrocarbon impact (projected maximum of 10 drilling days, subject to field alteration)
- collect soil samples for field screening and/or laboratory analysis from each boring to determine vertical extent and magnitude of hydrocarbon impact to vadose-zone soils
- classify the subsurface soil profile in general accordance with the Unified Soil Classification System by visually observing the soil samples obtained during the assessment
- collect ground water samples for laboratory analysis from each monitoring/recovery well to determine the magnitude of hydrocarbon impact to ground water
- collect a ground water sample for laboratory analysis from the on-site water well
- obtain depth to ground water measurements and calculate the ground water gradient and direction
- survey all well locations by a Professional Land Surveyor registered in the State of New Mexico
- prepare a report summarizing field activities and laboratory results

SCOPE OF WORK

A generalized scope of work is presented below. The final scope may be adjusted in the field based upon conditions encountered.

Initially, as limited by physical accessibility, 2 to 4 monitoring/recovery wells (referred to as "1st tier wells") will be installed around the suspected source area. Soil samples will be collected every 20 feet and drill cuttings will be sampled every 10 feet between soil samples. Soil samples will be collected continuously from 85 feet to ground water (estimated at 93 feet below ground surface). The soils will be classified in the field, soil samples will be field screened, and selected samples from the wells will be prepared and shipped to the laboratory for analysis.

If delineation of the LNAPL extent is not achieved with the 1st tier wells, additional wells (2nd tier) will be installed approximately 100 feet outward from those 1st tier wells that exhibit LNAPL. Soil samples from the 2nd tier wells will be collected at 50 feet below ground surface and continuously from 85 feet to ground water. The soils will be classified in the field, soil samples will be field screened, and selected samples from the monitoring wells will be prepared and shipped to the laboratory for analysis.

If the 2nd tier wells do not define the LNAPL extent, a 3rd tier of additional wells will be installed (within the limits of the maximum planned drilling) approximately 100 feet outward from those 2nd tier wells that exhibit LNAPL. If the 2nd tier wells are outside of the LNAPL plume, the 3rd tier wells will be installed approximately 50 feet inward toward the 1st tier wells in order to more precisely define the LNAPL plume extent.

Selected soil samples will be submitted for determination of TPH-DRO and BTEX concentrations. The sample exhibiting the highest TPH concentration will also be analyzed for SPLP volatile organic compounds (VOC), SPLP semi-volatile organic compounds (SVOC), and SPLP TPH concentrations. One undisturbed soil sample will be collected and submitted for determination of moisture content and fraction of organic content (FOC).

Upon advancement to total depth and collection of soil samples, a permanent well consisting of factory slotted PVC and blank riser will be placed in the open hole of each boring designated as a permanent well. The borings that exhibit LNAPL will be completed as 4-inch wells. The borings without apparent LNAPL will be completed as 2-inch wells.

GROUND WATER SAMPLING AND ANALYTICAL

Upon completion of drilling, each well will be gauged to determine the depth to ground water and the LNAPL thickness, if present. Each well will be purged and ground water samples will be collected from wells which do not contain LNAPL. One ground water and one LNAPL sample will be obtained from 1 well exhibiting LNAPL in order to characterize the LNAPL and any dissolved-phase hydrocarbon that may be partitioning into ground water. A ground water sample will also be collected from the on-site water supply well.

Ground water samples from the monitoring/recovery wells will be submitted for determination of BTEX, polycyclic aromatic hydrocarbons (PAH), heavy metals, major cations/anions, and total dissolved solids (TDS) concentrations. The sample from the on-site water well will be analyzed for TPH-GRO and PAH. The LNAPL sample will be fingerprinted to characterize constituent hydrocarbons.

SURFACE WATER MONITORING

Jal Lake is located approximately 3 miles north of the facility. Jal Lake is a manmade lake which is supplied with freshwater by the City of Jal West Water Field. The water is pumped through an 8 inch concrete pipeline from a city water well located west of town. Upon determination of gradient and flow direction, it will be determined if any research or investigation activities are necessary on Jal Lake.

MONITORING PROGRAM

All monitoring/recovery wells and the on-site water well shall be sampled quarterly for determination of BTEX concentrations. Samples will also initially be analyzed for PAH concentrations. Only wells exhibiting PAH concentrations above ND will be resampled for PAH on a quarterly basis. A quarterly report will be submitted within 45 days of the sampling event.

QA/QC PROCEDURES

Decontamination Of Equipment

Cleaning of drilling equipment will be the responsibility of the drilling company. In general, the cleaning procedures will consist of using high pressure steam to wash the drilling and sampling equipment prior to drilling and prior to starting each hole. Prior to use, the sampling equipment will be cleaned with Liqui-Nox detergent and rinsed with distilled water.

Soil Sampling

Samples of the subsurface soils will be obtained utilizing an air rotary drilling rig with split spoon samples at the intervals presented above. Representative soil samples will be divided into 2 separate portions using clean, disposable gloves and clean sampling tools. One portion of the soil sample will be placed in a disposable sample bag. The bag will be labeled and sealed for head-space analysis using a photo-ionization detector (PID) calibrated to a 100 ppm isobutylene standard. Each sample will be allowed to volatilize for approximately 30 minutes at ambient temperature prior to conducting the analysis.

The other portion of the soil sample will be placed in a sterile glass container equipped with a Teflon-lined lid furnished by the analytical laboratory. The container will be filled to capacity to limit the amount of head-space present. Each container will be labeled and placed on ice in an insulated cooler. Upon selection of samples for analysis, the cooler will be sealed for shipment to the laboratory. Proper chain-of-custody documentation will be maintained throughout the sampling process.

Soil samples will be express mailed to an approved laboratory for BTEX, TPH-DRO, SPLP SVOC, SPLP VOC, SPLP TPH, moisture content, and FOC analyses using the methods described below. Soil samples will be analyzed for BTEX, TPH-DRO, and SPLP concentrations within 14 days following the collection date.

The soil samples will be analyzed in accordance with the methods as follows:

- BTEX concentrations in accordance with EPA Method SW846-8020
- TPH concentrations in accordance with modified EPA Method 8015-DRO
- SPLP VOC concentrations in accordance with EPA Method SW846-1312/8260
- SPLP SVOC concentrations in accordance with EPA Method SW846-1312/8270
- SPLP TPH concentrations in accordance with EPA Method 1312/418.1
- moisture content in accordance with ASTM 2216-71
- FOC concentrations in accordance with ASTM Method D2974

Ground Water Sampling

Monitoring wells will be developed and purged with a clean PVC bailer. The bailer will be cleaned prior to each use with Liqui-Nox detergent and rinsed with distilled water. Monitoring wells with sufficient recharge will be purged by removing a minimum of 3 well volumes. Monitoring wells that do not recharge sufficiently will be purged until no additional ground water can be obtained.

After purging the wells, ground water samples will be collected with a disposable Teflon sampler and polyethylene line by personnel wearing clean, disposable gloves. Ground water sample containers will be filled in the order of decreasing volatilization sensitivity (i.e., BTEX containers will be filled first and PAH containers second).

Ground water samples collected for BTEX analysis will be placed in 40 ml glass VOA vials equipped with Teflon-lined caps. The containers will be provided by the analytical laboratory. The vials will be filled to a positive meniscus, sealed, and visually checked to ensure the absence of air bubbles.

Ground water samples collected for PAH analysis will be filled to capacity in sterile, 1 liter glass containers equipped with Teflon-lined caps. Ground water samples collected for metals analysis will be filled to capacity in sterile, 1 liter plastic containers equipped with Teflon-lined caps. The containers will be provided by the analytical laboratory.

The filled containers will be labeled and placed on ice in an insulated cooler. The cooler will be sealed for transportation to the analytical laboratory. Proper chain-of-custody documentation will be maintained throughout the sampling process.

The ground water samples will be analyzed in accordance with the methods as follows:

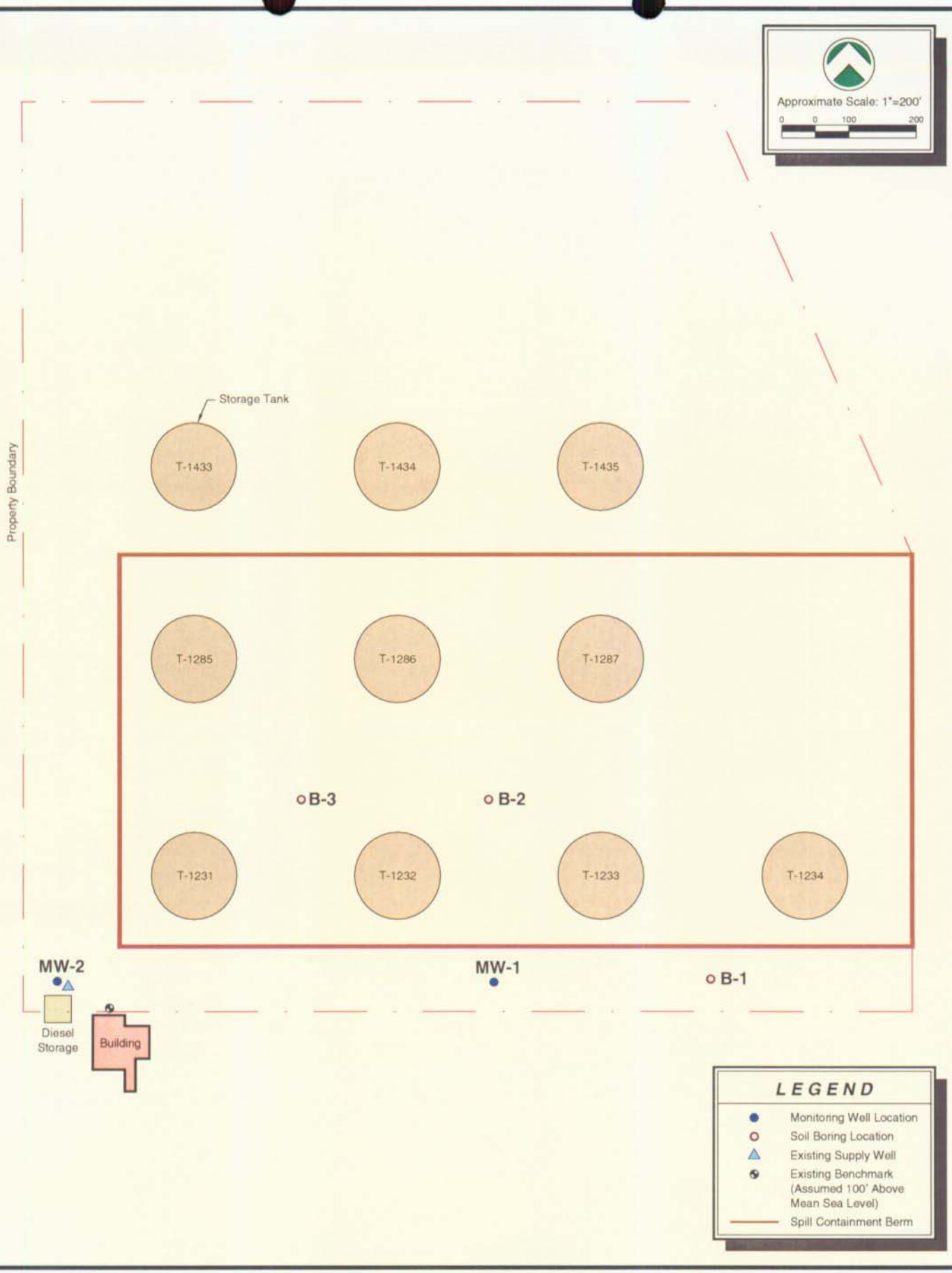
- BTEX concentrations in accordance with EPA Method SW846-8020
- PAH concentrations in accordance with EPA Method 8100 or 8270
- Metals concentrations in accordance with EPA ICP Method 6010
- Major cations concentrations in accordance with SM4500CO2D
- Major anions concentrations in accordance with EPA Method 300.0
- TDS concentrations in accordance with EPA Method 160.1

Laboratory Protocol

The laboratory will be responsible for proper QA/QC procedures. These procedures will either be transmitted with the laboratory reports or on file at the laboratory.

SCHEDULE OF ACTIVITIES

The activities outlined above will be conducted upon approval of this plan. Following completion of the initial site assessment, the developed data will be compiled and analyzed to determine appropriate remediation options for the site. A plan describing the recommended options will be developed and submitted for approval.



06/29/98 RM G:\810006\

k·e·i	SITE DETAILS	810006
	TEXAS-NEW MEXICO PIPE LINE CO. JAL STATION LEA COUNTY, NEW MEXICO	FIG 1

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 has been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

Texas - New Mexico Pipe Line Company, Tony Savoie, (505) 395-2705, P. O. Box 1030, Jal, New Mexico 88252 has submitted a Stage 1 Abatement Plan for the Jal Station facility, 2 miles south of Jal on State Highway 18, Jal, New Mexico 88252 in the SE/4, SW/4 of Section 32, Township 25 South, Range 37 East, Lea County, New Mexico. The site is approximately 27 acres where Texas - New Mexico Pipe Line Company operates a crude oil transportation and storage facility. Light Non-Aqueous Phase Liquid (LNAPL) has been observed on the ground water. The Stage 1 abatement plan presents the following subsurface investigation activities: confirmation of property line location, determine site geology and hydrogeology, subsurface hydraulic conductivity, transmissivity, and storativity information; conduct a registered water well search within a 1 mile radius of the site; installation of monitoring/recovery wells to delineate hydrocarbon impact around MW-2 in general accordance with the TNMPL Initial Ground Water Investigation Standard Protocol for New Mexico dated December 1, 1997; collect soil and ground water samples for laboratory analysis from each monitoring/recovery well to determine the magnitude of hydrocarbon impact to ground water; collect a ground water sample for laboratory analysis from the on-site water well; obtain depth to ground water measurements and calculate the ground water gradient and direction; survey all well locations by a Professional Land Surveyor registered in the State of New Mexico; and prepare a report summarizing field activities and laboratory results.

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5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

December 1, 1997

Mr. Tony Savoie
TEXAS - NEW MEXICO PIPE LINE COMPANY
P. O. Box 1030
Jal, New Mexico 88252

Re: Initial Ground Water Investigation - Standard Protocol - New Mexico
Texas - New Mexico Pipe Line Company
KEI Job No. 610057

Dear Mr. Savoie:

This document presents the Initial Ground Water Investigation - Standard Protocol for Texas - New Mexico Pipe Line release investigation sites which may have impacted ground water in New Mexico. It is not intended to apply to releases that have only impacted soils. Monitoring well installation and soil and ground water sampling procedures are defined to investigate a site for potential hydrocarbon impact in soil and ground water. Every effort will be made to adhere to the scope as defined herein. However, some alterations may be necessary without prior notification to OCD based on conditions encountered in the field.

MONITORING WELL INSTALLATION

Following evaluation of available field and analytical data for a given site, monitoring wells will be installed to complete a triangulation of ground water monitoring points around the suspected source area. At least one monitoring well will be installed in the apparent upgradient direction from the source area, and at least two monitoring wells will be installed in the apparent downgradient direction from the source area. A minimum of three monitoring wells will be installed. However, should site conditions warrant, additional wells may also be installed.

The monitoring wells will be installed to approximately ten feet into ground water as observed during drilling. The well materials will consist of either two inch or four inch internal diameter, threaded connection, Schedule 40 PVC solid pipe, and 15 feet of either 0.010 or 0.020 inch slotted PVC well screen. A graded, clean silica sand will be placed in the annulus of the screened interval for each well. A minimum two foot bentonite seal will be placed above the sand packing and either a stick-up or flush mount, steel protective cover will then be concreted in place. Each well will be protected with a locked cap.

The monitoring wells will be installed by a well driller licensed in the State of New Mexico. Elevations of the monitoring well PVC riser, top of cover, surface pad, and ground surface will be determined.

GROUND WATER MONITORING

A ground water monitoring event will be conducted after installation and development of the monitoring wells. The event will consist of gauging the water level in each monitoring well, checking for the potential presence of phase-separate hydrocarbons (PSH), and purging and sampling all wells not containing PSH. The ground water flow direction and gradient will be determined from data obtained during the monitoring event.

Monitoring wells will be developed and purged. The purging equipment will be cleaned prior to each use in accordance with standard regulatory sampling protocols. Monitoring wells with sufficient recharge will be purged by removing a minimum of three well volumes. Monitoring wells that do not recharge sufficiently will be purged until no additional ground water can be removed.

SOIL SAMPLING

During drilling, a minimum of two soil samples from each borehole will be obtained based on the following criteria:

- The sample with the highest head-space reading,
- The sample directly above the ground water level measured at the time of drilling, and/or
- The sample at the bottom of each boring.

The samples will be submitted for determination of the following potential parameters:

- Total Petroleum Hydrocarbons (TPH) by EPA Method 418.1 or modified 8015(DRO).
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method SW846-8020.
- (Optional) - the sample exhibiting the highest TPH concentration (if any) may also be analyzed for SPLP TPH by EPA Method 1312/418.1 or 1312/8015, SPLP Volatiles (VOC) by EPA Method SW846-1312/8260, and SPLP Semi-volatiles (SVOC) by EPA Method SW846-1312/8270.

To evaluate the potential for contaminant migration, a soil sample from the unsaturated zone of a soil boring not impacted by the release as determined by field screening during drilling will be obtained for the determination of engineering soil parameters. These soil parameters will include moisture content and fraction organic carbon by ASTM Method D2974

Additional samples will be collected if multiple lithologies are present which may affect transport of potential petroleum hydrocarbons.

GROUND WATER SAMPLING

After purging the wells, ground water samples will be collected and analyzed in the field for temperature, pH, and dissolved oxygen. Ground water samples will also be submitted to the analytical laboratory for determination of the following potential parameter concentrations:

- BTEX by EPA Method SW846-8020.
- Polycyclic Aromatic Hydrocarbons (PAH) by EPA Method 8100.
- Major Cations by EPA Method 6010.
- Major Anions by EPA Method 300.0.
- Carbonate and Bicarbonate by Method SM4500CO2D.
- Total dissolved solids (TDS) by EPA Method 160.1.
- Sulfate and chlorides by EPA Method 300.0.
- Heavy Metals (ICP Scan) by EPA Method 6010.

The major cations/anions include the following:

Calcium	Bicarbonate
Magnesium	Carbonate
Potassium	Chloride
Sodium	Sulfate
Total Dissolved Solids (TDS)	

The heavy metals include the following:

Aluminum	Barium
Beryllium	Boron
Cadmium	Calcium
Chromium	Cobalt
Copper	Iron
Magnesium	Manganese
Molybdenum	Nickel
Silicon	Silver
Strontium	Tin
Vanadium	Zinc

The laboratory results will be evaluated against the New Mexico Water Quality Control Commission (NMWQCC) standards for drinking water sources.

QA/QC PROCEDURES

SOIL

Native soil samples will be collected either continuously or at selected discrete intervals from the ground surface to a depth of approximately two feet below ground water as observed during drilling. Soil samples will be obtained every two feet for the first 10 feet, followed by every five feet thereafter. The soil samples will be used to evaluate water levels and the distribution of potential phase-separate hydrocarbons (PSH).

Representative soil samples will be divided into two separate portions using clean, disposable gloves and clean sampling tools. One portion of the soil sample will be placed in a disposable sample bag. The bag will be labeled and sealed for head-space analysis using a photo-ionization detector (PID) calibrated to a 100 ppm isobutylene standard. Each sample will be allowed to volatilize for approximately 30 minutes at ambient temperature prior to conducting the PID analysis.

The other portion of the soil sample will be placed in a sterile glass container equipped with a Teflon-lined lid furnished by the analytical laboratory. The container will be filled to capacity with soil to limit the amount of head-space present. Each container will be labeled and placed on ice in an insulated cooler. Upon selection of samples for analysis, the cooler will be sealed for shipment to the laboratory. Proper chain-of-custody documentation will be maintained throughout the sampling process.

GROUND WATER

Ground water samples will be collected with a disposable Teflon bailer and polyethylene line by personnel wearing clean, disposable gloves. Ground water sample containers will be filled in the order of decreasing volatilization sensitivity (i.e., BTEX containers filled first and PAH containers second).

Ground water samples collected for potential BTEX analysis will be placed in sterile, 40 ml glass VOA vials equipped with Teflon-lined caps or as directed by the analytical laboratory. The containers will be provided and pre-preserved with HCl by the analytical laboratory.

Ground water samples collected for potential PAH analysis will be filled to capacity in sterile, one liter glass containers equipped with Teflon-lined caps or as directed by the analytical laboratory. The containers will be provided by the analytical laboratory.

Ground water samples collected for potential major cations/anions will be filled to capacity in sterile, one liter glass containers equipped with Teflon-lined caps or as directed by the analytical laboratory. The containers will be provided by the analytical laboratory.

Ground water samples collected for potential heavy metals will be filled to capacity in sterile, one liter glass containers equipped with Teflon-lined caps or as directed by the analytical laboratory. The containers will be provided and pre-preserved with nitric acid by the analytical laboratory.

All containers will be filled to a positive meniscus, sealed, and visually checked for the presence of air bubbles. The filled containers will be labeled and placed on ice in an insulated cooler. The cooler will be sealed for transportation to the analytical laboratory. Proper chain-of-custody documentation will be maintained throughout the sampling process.

The laboratory will be responsible for proper QA/QC procedures. These procedures will either be transmitted with the laboratory reports or on file at the laboratory.

If you have any questions, please contact me via E-mail or by phone at (210) 680-3767.

Respectfully,

J. Michael Hawthorne, P.G., REM

tin\p:\tnmpl\610057\rgwproto.doc

cc: Mr. Edwin H. Gripp
Mr. Marc Oler

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

April 29, 1998

CERTIFIED MAIL
RETURN RECEIPT NO: Z-235-437-264

Mr. Tony Savoie
Texas-New Mexico Pipe Line Company
P.O. Box 1030
Jal, New Mexico 88252

RE: GROUND WATER ABATEMENT
JAL BASIN STATION

Dear Mr. Savoie:

The New Mexico Oil Conservation Division (OCD) has reviewed Texas-New Mexico Pipe Line Company's (TNMPLC) January 30, 1998 "TEXACO PIPELINE INC,DISCOVERY OF IMPACTED GROUND WATER, JAL BASIN STATION, SE/4, SW/4 SECTION 32, TOWNSHIP 25 SOUTH, RANGE 37 EAST, JAL, LEA COUNTY, NEW MEXICO, JOB NO. 810006 which was submitted on behalf of TNMPLC by their consultant KEI. This document contains TNMPLC's notification of ground water contamination resulting from a diesel spill at TNMPLC's Jal Basin Station.

Pursuant to 19 NMAC 15.A.19.C.1, the OCD requires an abatement plan for the TNM-98-S-01 site to abate ground water pollution. To initiate the abatement plan process, the OCD requires that TNMPLC submit to the OCD by June 26, 1998 a Stage 1 abatement plan investigation proposal pursuant to OCD Rule 19.E.1. and OCD Rule 19.E.3.

If you have any questions, please contact Bill Olson of my staff at (505) 827-7154.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

xc: Wayne Price, OCD Aztec Office
Michael Hawthorne, KEI

Z 235 437 264

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

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TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, April 1995

TEXAS-NEW MEXICO PIPE LINE COMPANY

John A. Savoie
P.O. Box 1030
Jal, New Mexico 88252

April 8, 1998

Mr. William C. Olson
State of New Mexico
Energy Minerals And Natural Resources Division
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

RE: Delineation Assessment Work Plan
TPLI Jal Station, New Mexico

Dear Mr. Olson:

Transmitted with this letter is the work plan to conduct delineation assessment activities at the referenced site.

If you have any questions, please contact me at (505) 395-2705.

Respectfully,

J. A. Savoie

John A. Savoie

cc: Mr. Wayne Price NMOCD Hobbs, New Mexico
Mr. Edwin H. Gripp TNMPL
Mr. David R. Seaton TPLI

EXISTING CONDITIONS

In February of 1998 borings and monitoring wells were installed in selected areas of the facility. Light Non-Aqueous Phase Liquid (LNAPL) was observed in one monitoring well (designated MW-2). Approximately 3 feet of LNAPL has been observed in this well. A water sample was obtained from the on-site water well utilized as a non-potable water source for the facility. This sample exhibited non-detectable TPH(DRO), TPH(ORO), and BTEX concentrations. A TPH(GRO) concentration of 0.088 mg/l was observed in this sample.

DELINEATION ASSESSMENT ACTIVITIES

Delineation assessment activities will consist of the following:

- confirm property line location in the field and/or with records, as necessary
- install a minimum of three monitoring/recovery wells to delineate hydrocarbon impact around MW-2 in general accordance with the TNMPL Initial Ground Water Investigation Standard Protocol for New Mexico dated December 1, 1997
- if field conditions dictate, install additional wells to delineate hydrocarbon impact (projected maximum of 10 drilling days, subject to field alteration)
- collect soil samples for laboratory analysis from each boring
- collect ground water samples for laboratory analysis from each monitoring/recovery well
- collect a ground water sample for laboratory analysis from the on-site water well
- survey all well locations by a Professional Land Surveyor registered in the State of New Mexico
- prepare a report summarizing field activities and laboratory results

SCOPE OF WORK

A generalized scope of work is presented below. The final scope may be adjusted in the field based upon conditions encountered.

Initially, as limited by physical accessibility, two to four monitoring/recovery wells (referred to as "1st tier wells") will be installed around the suspected source area. Soil samples will be collected every 20 feet and drill cuttings will be sampled every ten feet between soil samples. Soil samples will be collected continuously from 85 feet to ground water (estimated at 93 feet below ground surface). The soils will be classified in the field, soil samples will be field screened, and selected samples from the wells will be prepared and shipped to the laboratory for analysis.

If delineation of the LNAPL extent is not achieved with the 1st tier wells, additional wells (2nd tier) will be installed approximately 100 feet outward from those 1st tier wells that exhibit LNAPL. Soil samples from the 2nd tier wells will be collected at 50 feet below ground surface and continuously from 85 feet to ground water. The soils will be classified in the field, soil samples will be field screened, and selected samples from the monitoring wells will be prepared and shipped to the laboratory for analysis.

If the 2nd tier wells do not define the LNAPL extent, a 3rd tier of additional wells will be installed (within the limits of the maximum planned drilling) approximately 100 feet outward from those

2nd tier wells that exhibit LNAPL. If the 2nd tier wells are outside of the LNAPL plume, the 3rd tier wells will be installed approximately 50 feet inward toward the 1st tier wells in order to more precisely define the LNAPL plume extent.

Selected soil samples will be submitted for determination of TPH and BTEX concentrations using EPA Method 8015 Diesel Range Organics (DRO) and SW846-8020, respectively. The sample exhibiting the highest TPH concentration will also be analyzed for SPLP volatile organic compounds (VOCs), SPLP semi-volatile organic compounds (SVOCs), and SPLP TPH concentrations using EPA Method 1312/8260, 1312/8270, and 1312/418.1, respectively. One undisturbed soil sample will be collected and submitted for determination of moisture content using ASTM Method 2216-71 and organic content by ASTM Method D2974.

Upon advancement to total depth and collection of soil samples, a permanent well consisting of factory slotted PVC and blank riser will be placed in the open hole of each boring designated as a permanent well. The borings that exhibit LNAPL will be completed as 4-inch wells. The borings without apparent LNAPL will be completed as 2-inch wells.

GROUND WATER SAMPLING AND ANALYTICAL

Upon completion of drilling, each well will be gauged to determine the depth to ground water and the LNAPL thickness, if present. Each well will be purged of approximately three well volumes of water. After purging the wells, ground water samples will be collected from wells which do not contain LNAPL using a disposable Teflon sampler and polyethylene line. One ground water and one LNAPL sample will be obtained from one well exhibiting LNAPL in order to characterize the LNAPL and any dissolved-phase hydrocarbon that may be partitioning into ground water. A ground water sample will also be collected from the on-site water supply well.

Ground water samples from the monitoring/recovery wells will be submitted for determination of heavy metals, BTEX, polycyclic aromatic hydrocarbons (PAH), major cations/anions, and total dissolved solids (TDS) concentrations using EPA Method 6010, SW846-8020, 8270, SM4500CO2D, 300.0, and 160.1, respectively. The sample from the on-site water well will be analyzed for TPH(GRO) and PAH's. The LNAPL sample will be fingerprinted to characterize constituent hydrocarbons. Proper chain-of-custody documentation will be maintained throughout the sampling process.

REMEDIATION ACTIVITIES

Following completion of the site assessment activities, the developed data will be compiled and analyzed to determine appropriate remediation options for the site. A plan describing the recommended options will be developed and submitted.

5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

January 30, 1998

Mr. Roger Anderson
STATE OF NEW MEXICO
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: **TEXACO PIPELINE INC**
Discovery of Impacted Ground Water
Jal-Basin Station
SE/4, SW/4 Section 32, Township 25 South, Range 37 East
Jal, Lea County, New Mexico
Job No. 810006

Dear Mr. Anderson:

This letter provides written notification of the discovery of (apparent) diesel fuel on ground water at the referenced site during subsurface investigation activities.

On January 28, 1998, apparent diesel fuel was observed in a 2" diameter monitoring well located on the above referenced site, following installation of that well. The apparent diesel fuel thickness was approximately three feet on top of the ground water at a depth of approximately 90 feet below ground surface. Mr. Tony Savoie of Texas - New Mexico Pipeline Co. (TNMPL) notified Mr. Olson of OCD Santa Fe of this discovery on January 29, 1998, by telephone.

TNMPL plans to install additional monitoring/recovery wells at the site to further characterize the nature and extent of impact to ground water and to initiate recovery activities.

If you have any questions please contact Mr. Savoie at (505) 395-2705 or call me at (210) 680-3767.

Respectfully,

J. Michael Hawthorne, P.G., REM
Senior Geologist

cc: TNMPL, Tony Savoie
OCD Hobbs District Office, Wayne Price

tnmpl\810006\cpshnot.doc

k·e·i
5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

FAX TRANSMITTAL

To: Bill Olson From: Mike Hawthorne

Fax Number: 505 827 8177 Date: 2/2/98

Subject: Written Confirmation of Releases

Job Number: 810004 / 810006

Total number of pages including cover sheet: 3

Special Instructions/Comments:

Bill,

Here are the written confirmations for the 2 releases Tony Savoie reported last week. Please call with any questions.

k·e·i
5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

January 30, 1998

Mr. Roger Anderson
STATE OF NEW MEXICO
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: **TEXACO PIPELINE INC**
Discovery of Impacted Ground Water
Jal-Basin Station
SE/4, SW/4 Section 32, Township 25 South, Range 37 East
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Respectfully,

J. Michael Hawthorne, P.G., REM
Senior Geologist

cc: TNMPL, Tony Savoie
OCD Hobbs District Office, Wayne Price

tnmpl\810006\cpshnot.doc

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☑ Telephone ☐ Personal | Time 0830 | Date 1/30/98

Originating Party	Other Parties
Tony Savoie - Tex/Mex Pipeline	Bill Olson - Environmental Bur

Subject

Ground Water Notification - TNM-98-S01
- Jal Basin Station

Discussion

TNM-98-S01
- center of SW1/4, sec 20, T19S, R37E
- depth to water = 15'
- product on water
- result of 1984 spill

Jal Basin Station
- SE1/4 SW1/4, sec 32, T25S, R37E
- depth to water = 90'
- Diesel on water
- found during site assessment for Texaco sale

Conclusions or Agreements

He will file subsegment report in 10 days.

Distribution
Files
Wayne Price - OCD Hobbs

Signed Bill Olson

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised January 24, 2001

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES, GAS PLANTS, REFINERIES, COMPRESSOR, GEOTHERMAL FACILITES AND CRUDE OIL PUMP STATIONS

(Refer to the OCD Guidelines for assistance in completing the application)

GW0350

☐ New ☐ Renewal ☒ Modification

1. Type: **HiVac Soil and Groundwater Extraction System**
2. Operator: **Equilon Pipeline Company LLC (facility), H_2A Environmental, Ltd. (HiVac system)**

   Address: **2 miles south of Jal on State Highway 18**

   Contact Person: **J. Michael Hawthorne (HiVac system)** Phone: **817-251-9466 (HiVac system)**
3. Location: **SE** /4 **SE** /4 Section **32** Township **25 South** Range **37 East**

   Submit large scale topographic map showing exact location.

   See Discharge Plan GW-326 and attached FIG. 1. The facility is also located in the NE/4, NE/4 and NW/4, NE/4 of Section 5, Township 26 South, Range 37 East.
4. Attach the name, telephone number and address of the landowner of the facility site.
   See Discharge Plan GW-326.
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.
   See Discharge plan GW-326 for facility layout. See APPENDIX A and FIG. 2.
6. Attach a description of all materials stored or used at the facility.
   See Discharge Plan GW-326 and APPENDIX B for materials related to the HiVac system operation.
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included.
   See Discharge Plan GW-326.
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures
   See Discharge Plan GW-326 and APPENDIX C.
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems.
   See Discharge Plan GW-326 and APPENDIX D.
10. Attach a routine inspection and maintenance plan to ensure permit compliance.
    See Discharge Plan GW-326 and APPENDIX E.
11. Attach a contingency plan for reporting and clean-up of spills or releases.
    See Discharge Plan GW-326.
12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included.
    See Discharge Plan GW-326 and TABLES II and III.
13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders. **See Discharge Plan GW-326.**

RECEIVED
02
MAR 2001
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

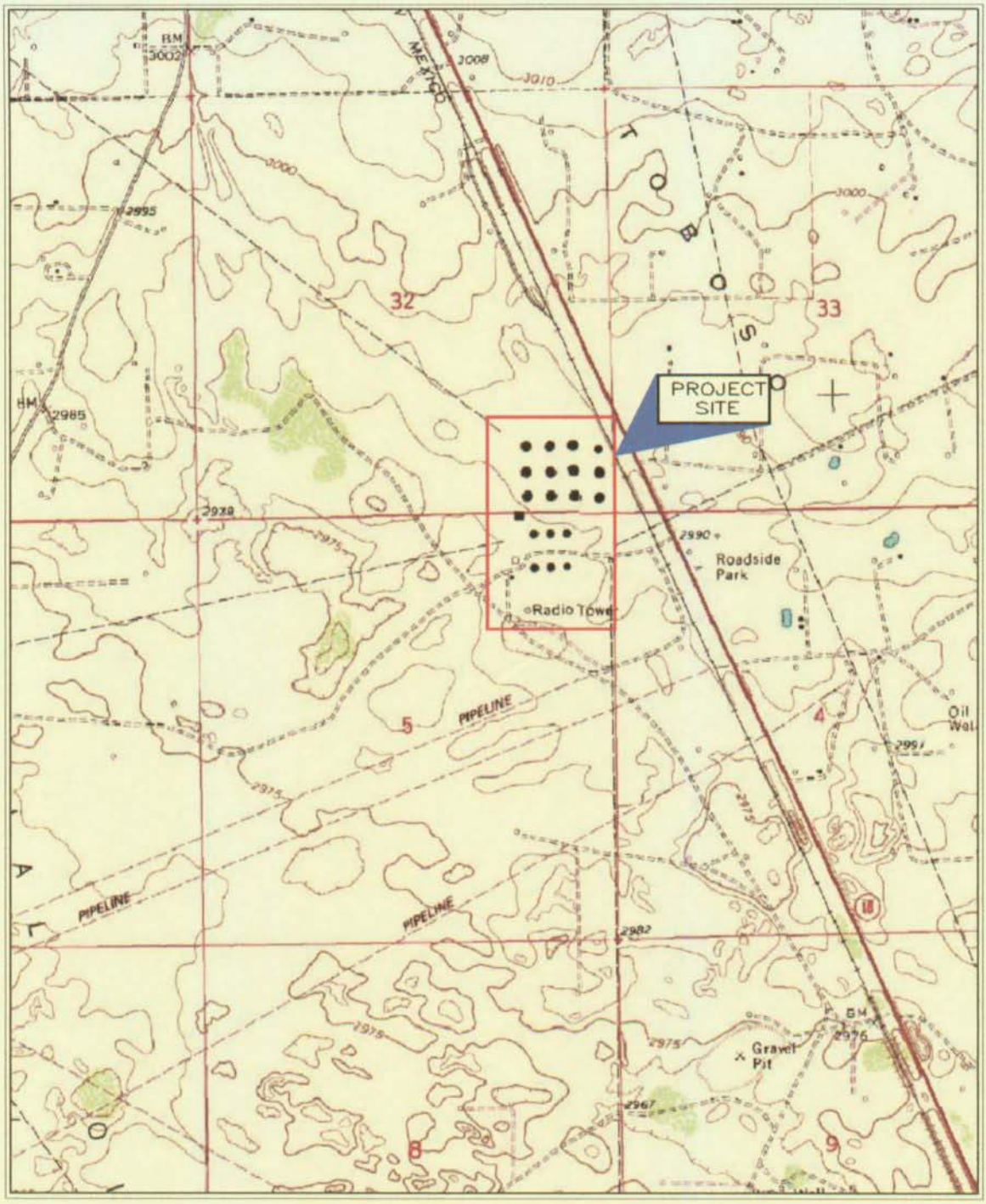
14. CERTIFICATIONI hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: **Theresa Nix** Title: **Senior Project Manager**

Signature: Theresa Nix Date: 3/1/01

C:\Theresa\H2A\Jal - 106.001\Stage 2-Discharge Pln\Discharge Plan Application.rtf

JAL QUADRANGLE
NEW MEXICO - TEXAS



LAT=32° 04' 36"
LONG=103° 10' 38"
PHOTOREVISED 1981

SCALE 1:24000

0 1/2 1
(Miles)

0 2000 4000
(Feet)

FIGURE 1

SITE LOCATION MAP

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A ENVIRONMENTAL LTD

Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

H2A\EQUILON\106.001SCHEM

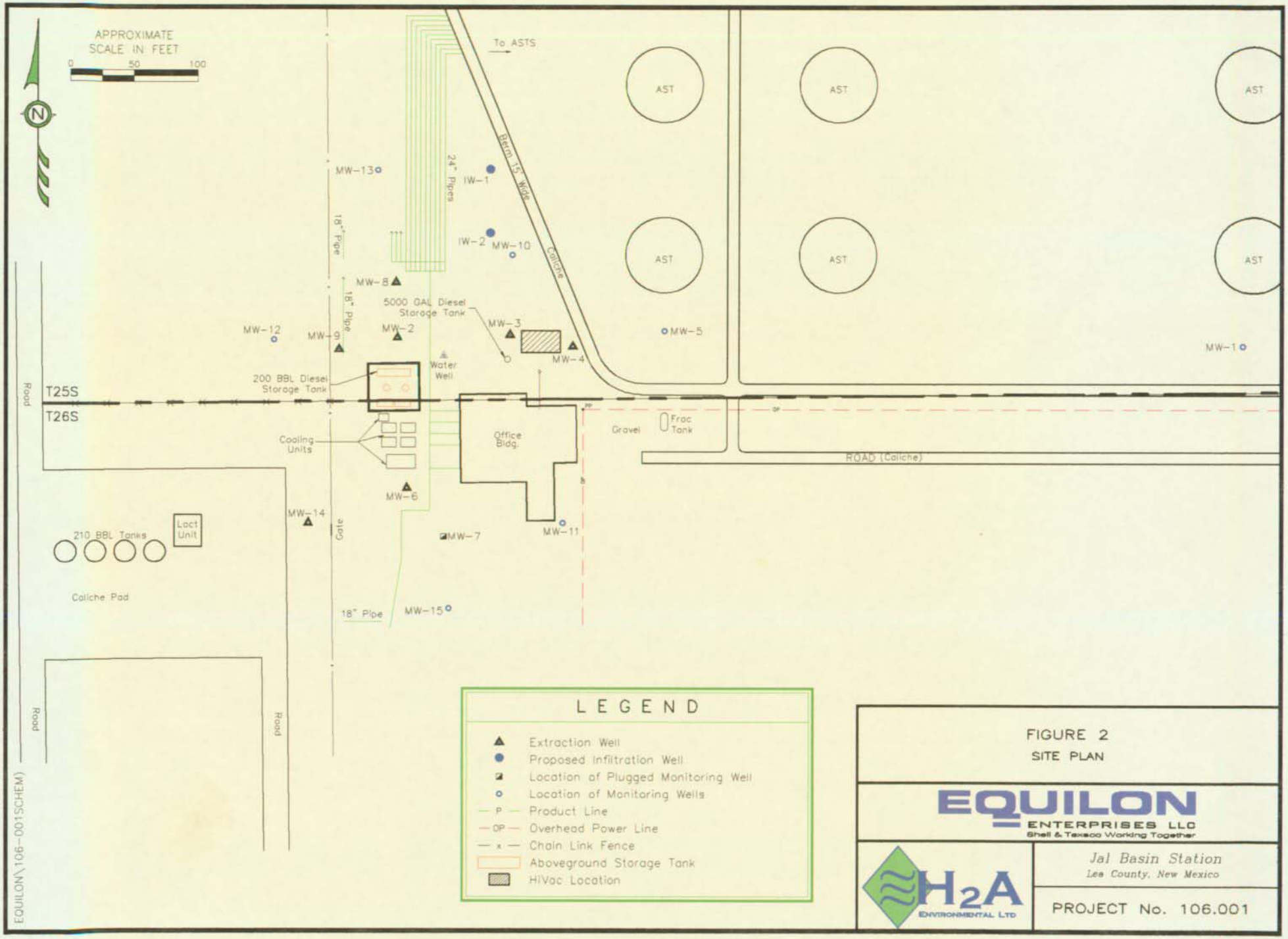


FIGURE 2
SITE PLAN

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A Environmental Ltd

Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

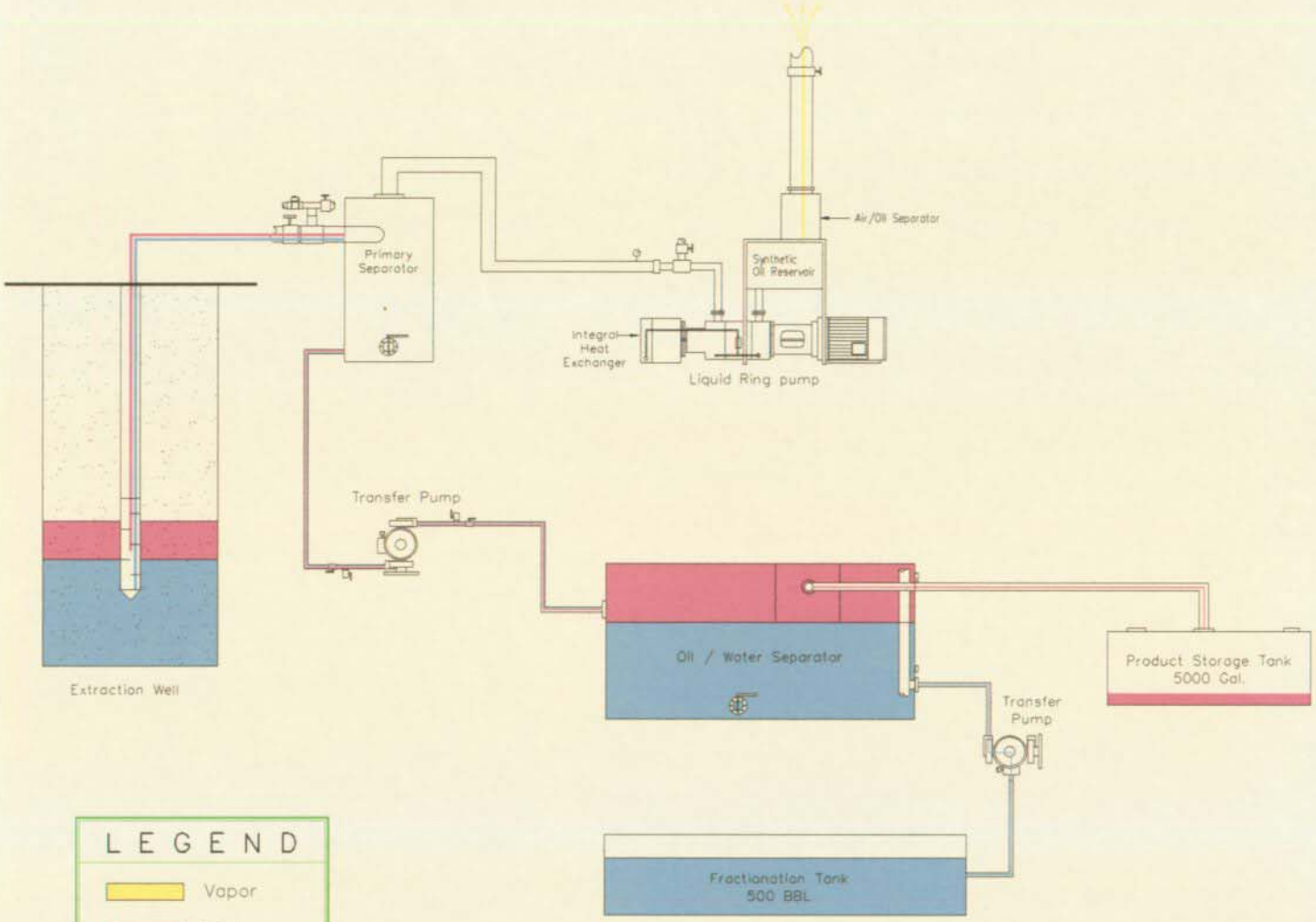


FIGURE 3

HIVAC VACUUM SYSTEM SCHEMATIC
PRIOR TO DISCHARGE PLAN APPROVAL

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A ENVIRONMENTAL LTD

Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

106001HIVACSYSTEM

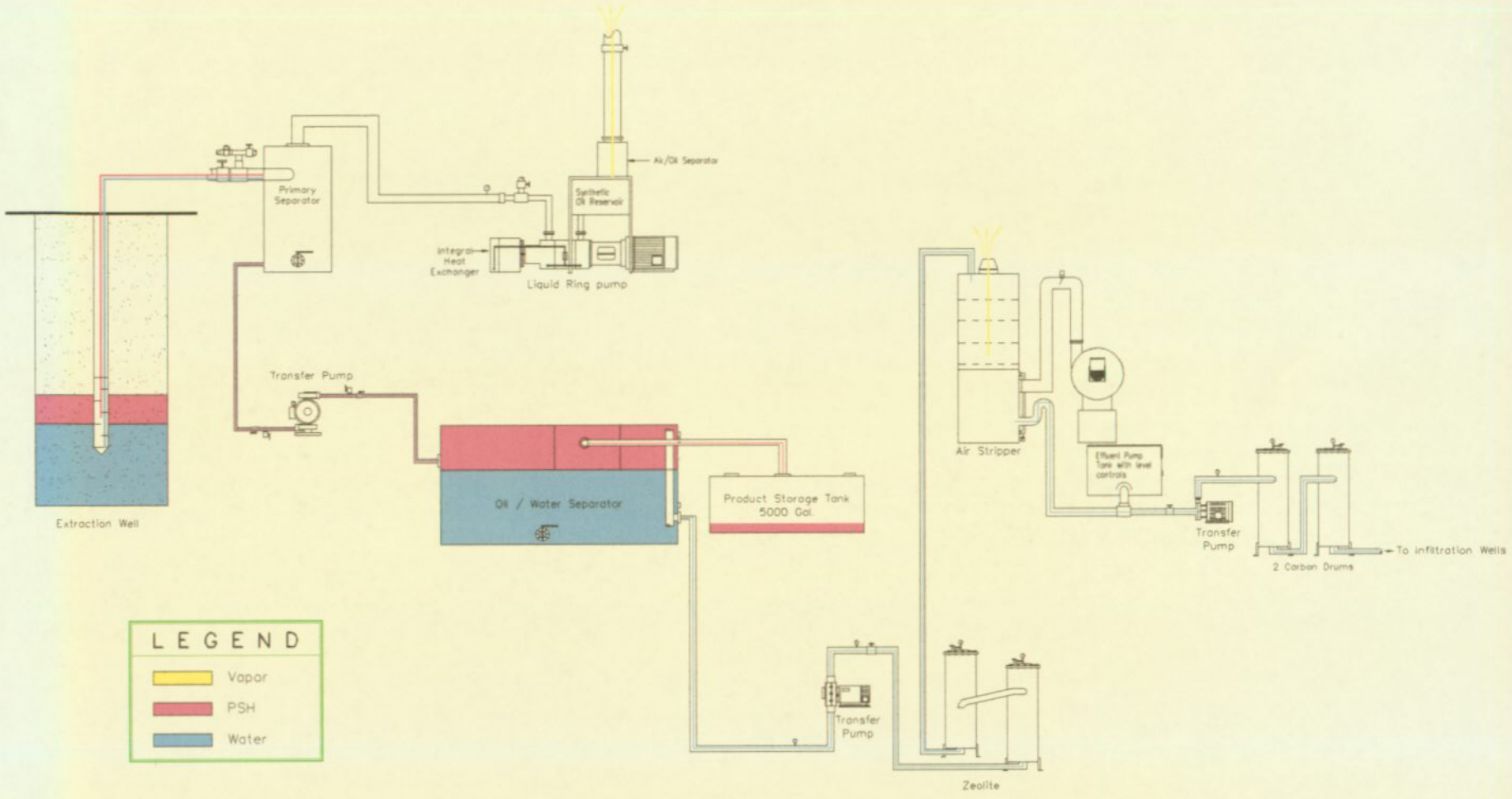


FIGURE 4

HIVAC VACUUM SYSTEM SCHEMATIC
UPON DISCHARGE PLAN APPROVAL

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A ENVIRONMENTAL LTD

Jal Basin Station
Lea County, New Mexico

PROJECT No. 106.001

106001 HIVACSYSTEM

EXTRACTION WELL MW-6

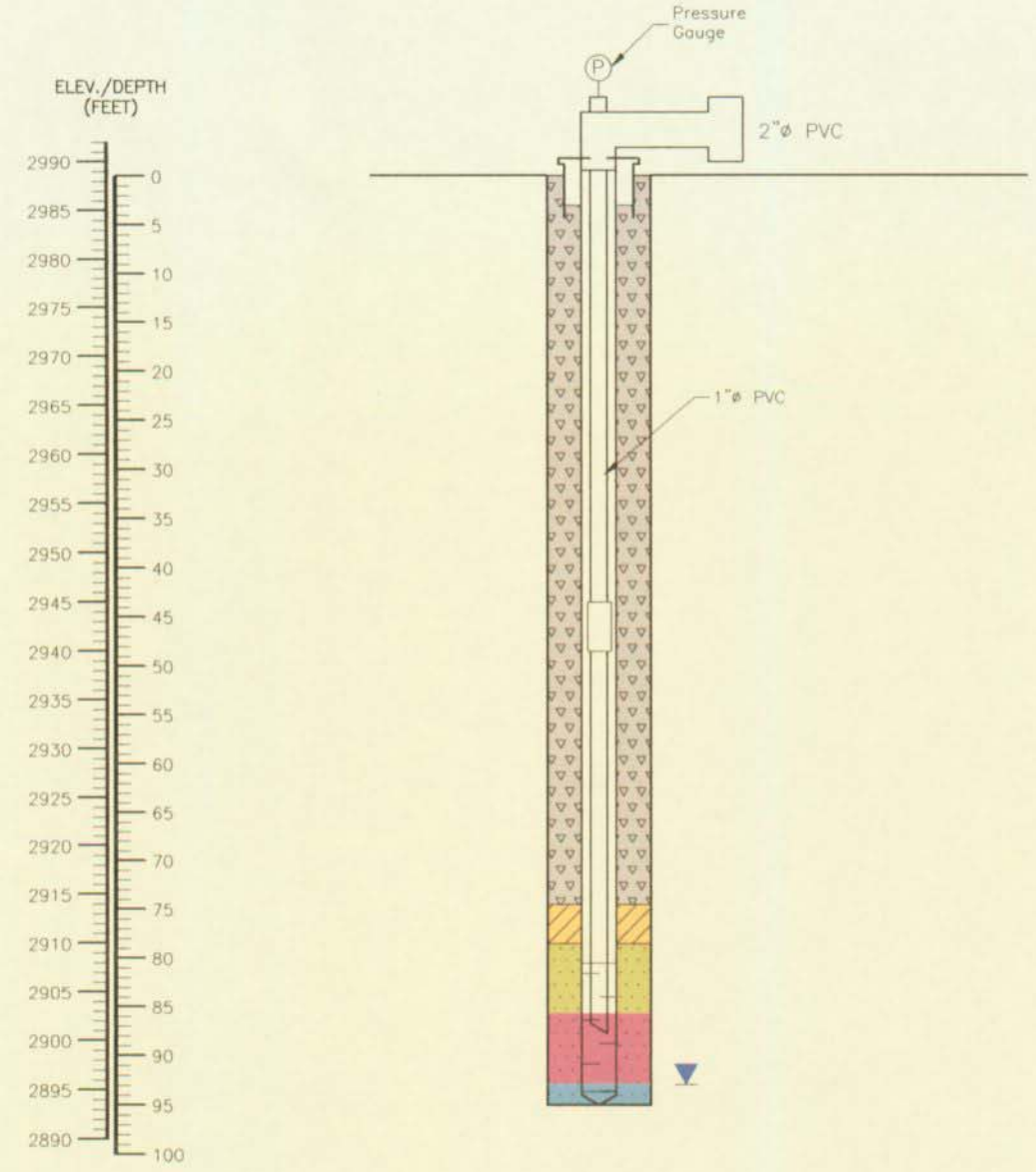


FIGURE 5

TYPICAL EXTRACTION WELL DIAGRAM

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A ENVIRONMENTAL LTD

Jal Basin Station
Jal, New Mexico

PROJECT No. 106.001

06-001WELLDIAG

INFILTRATION WELL IW-1

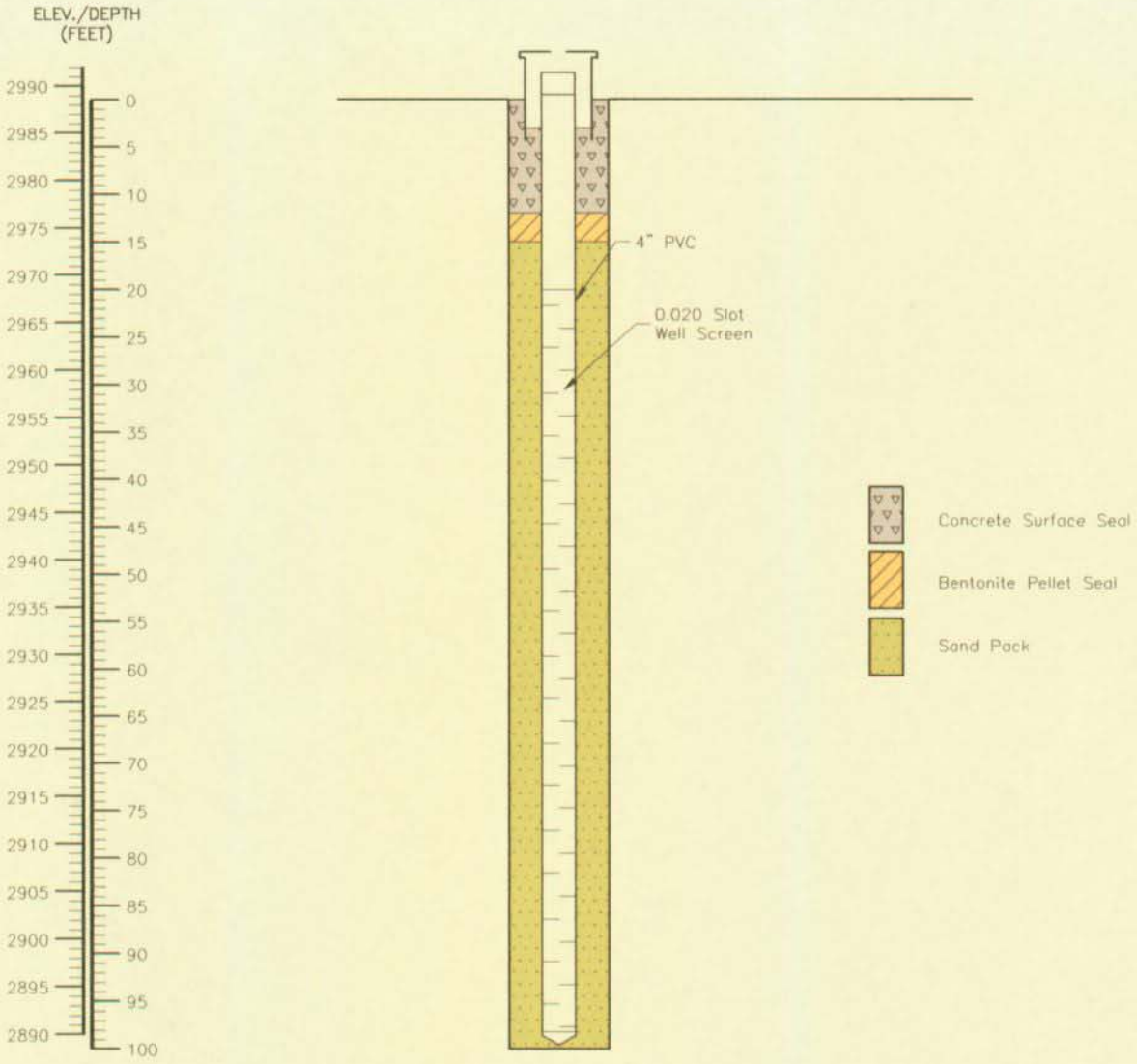


FIGURE 6

TYPICAL INFILTRATION WELL DIAGRAM

EQUILON ENTERPRISES LLC
Shell & Texaco Working Together

H2A Environmental Ltd

Jas Basin Station
Lea County, New Mexico

PROJECT No. 106.001

H2A/Equilon/Jal Basin/106-001 Well Diag

TABLE I

SAMPLING SCHEDULE – Hi-VAC SYSTEM
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

CONTAMINANT	SAMPLING FREQUENCY*	SAMPLE LOCATION	TOTAL NO. OF SAMPLES	EPA METHOD	CLOSURE CONCENTRATION (mg/l)
Arsenic	Initial testing Annually	System Effluent	1 1 per year	6010	0.1
Barium	Initial testing Annually	System Effluent	1 1 per year	6010	1.0
Cadmium	Initial testing Annually	System Effluent	1 1 per year	6010	0.01
Chromium	Initial testing Annually	System Effluent	1 1 per year	6010	0.05
Cyanide	Initial testing Every 3 years	System Effluent	1 1 per 3 yrs	335.2	0.2
Fluoride	Initial testing Every 3 years	System Effluent	1 1 per 3 yrs	300	1.6
Lead	Initial testing Annually	System Effluent	1 1 per year	6010	0.05
Total Mercury	Initial testing Annually	System Effluent	1 1 per year	7470	0.002
Nitrate (NO_3 as N)	Initial testing Annually	System Effluent	1 1 per year	353.2	10.0
Selenium	Initial testing Annually	System Effluent	1 1 per year	6010	0.05
Silver	Initial testing Annually	System Effluent	1 1 per year	6010	0.05
Benzene	Initial testing Monthly	System Effluent	1 1 per mo.	8020	0.01
Toluene	Initial testing Monthly	System Effluent	1 1 per mo.	8020	0.75
Carbon Tetrachloride	Initial testing Annually	System Effluent	1 1 per year	8260	0.01
1,2-Dichloroethane	Initial testing Annually	System Effluent	1 1 per year	8260	0.01

TABLE I
(continued)

SAMPLING SCHEDULE – Hi-VAC SYSTEM
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

CONTAMINANT	SAMPLING FREQUENCY*	SAMPLE LOCATION	TOTAL NO. OF SAMPLES	EPA METHOD	MAX EFFLUENT CONCENTRATION (mg/l)
1,1-Dichloroethylene	Initial testing Annually	System Effluent	1 1 per year	8260	0.005
1,1,2,2-Tetrachloroethylene	Initial testing Annually	System Effluent	1 1 per year	8260	0.02
1,1,2-Trichloroethylene	Initial testing Annually	System Effluent	1 1 per year	8260	0.1
Ethylbenzene	Initial testing Monthly	System Effluent	1 1 per mo.	8020	0.75
Total Xylenes	Initial testing Monthly	System Effluent	1 1 per mo.	8020	0.62
Methylene Chloride	Initial testing Annually	System Effluent	1 1 per year	8260	0.1
Chloroform	Initial testing Annually	System Effluent	1 1 per year	8260	0.1
1,1-Dichloroethane	Initial testing Annually	System Effluent	1 1 per year	8260	0.025
Ethylene Dibromide	Initial testing Annually	System Effluent	1 1 per year	8260	0.0001
1,1,1-Trichloroethane	Initial testing Annually	System Effluent	1 1 per year	8260	0.06
1,1,2-Trichloroethane	Initial testing Annually	System Effluent	1 1 per year	8260	0.01
1,1,2,2-Tetrachloroethane	Initial testing Annually	System Effluent	1 1 per year	8260	0.01
Vinyl Chloride	Initial testing Annually	System Effluent	1 1 per year	8260	0.001
PAHs: Total Naphthalene plus monomethylnaphthalenes	Initial testing Annually	System Effluent	1 1 per year	8270	0.03
Benzo-a-pyrene	Initial testing Annually	System Effluent	1 1 per year	8270	0.0007
Chloride	Initial testing Annually	System Effluent	1 1 per year	300	250.0
Copper	Initial testing Annually	System Effluent	1 1 per year	6010	1.0
Iron	Initial testing Annually	System Effluent	1 1 per year	6010	1.0
Manganese	Initial testing Annually	System Effluent	1 1 per year	6010	0.2
Phenols	Initial testing Every 3 years	System Effluent	1 1 per 3 yrs	8270	0.005

TABLE I
(continued)

SAMPLING SCHEDULE – Hi-VAC SYSTEM
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

CONTAMINANT	SAMPLING FREQUENCY*	SAMPLE LOCATION	TOTAL NO. OF SAMPLES	EPA METHOD	MAX EFFLUENT CONCENTRATION (mg/l)
Sulfate	Initial testing Annually	System Effluent	1 1 per year	300.0	600.0
Total Dissolved Solids (TDS)	Initial testing Annually	System Effluent	1 1 per year	160.1	1000.0
Zinc	Initial testing Annually	System Effluent	1 1 per year	6010	10.0
pH	Initial testing Annually	System Effluent	1 1 per year	150.1	between 6 and 9
Aluminum	Initial testing Annually	System Effluent	1 1 per year	6010	5.0
Boron	Initial testing Annually	System Effluent	1 1 per year	6010	0.75
Cobalt	Initial testing Annually	System Effluent	1 1 per year	6010	0.05
Molybdenum	Initial testing Annually	System Effluent	1 1 per year	6010	1.0
Nickel	Initial testing Annually	System Effluent	1 1 per year	6010	0.2

TABLE II

SUMMARY OF GROUNDWATER MONITORING
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

WELL	DATE	SURFACE ELEV. (feet)	DEPTH TO WATER (feet)	ELEV. OF WATER (feet)	DEPTH TO PSH (feet)	ELEV. OF PSH (feet)	PSH THICKNESS (feet)
MW-01	02/04/99	2992.30	90.27	2902.03	---	---	---
	02/22/99	2992.30	90.19	2902.11			
	03/11/99	2992.30	90.31	2901.99			
	04/07/99	2992.30	90.63	2901.67			
	05/03/99	2992.30	90.22	2902.08			
	06/08/99	2992.30	90.40	2901.90			
	06/22/99	2992.30	90.43	2901.87			
	07/06/99	2992.30	90.41	2901.89			
	08/14/99	2992.30	90.48	2901.82	---	---	---
	09/16/99	2992.30	90.44	2901.86	---	---	---
	10/19/99	2992.30	90.43	2901.87			
	11/01/99	2992.30	90.43	2901.87			
	08/02/00	2992.30	90.58	2901.72	---	---	---
	11/24/00	**2992.30**	**90.68**	**2901.62**	**---**	**---**	**---**
MW-02	02/04/99	2987.02	92.17	2901.95	83.89	2903.13	8.28
	02/22/99	2987.02	92.15	2901.85	84.02	2903.00	8.13
	03/11/99	2987.02	92.14	2901.88	83.98	2903.04	8.16
	03/24/99	2987.02	92.13	2901.64	84.26	2902.76	7.87
	03/31/99	2987.02	91.86	2902.05	83.83	2903.19	8.03
	04/02/99	2987.02	92.11	2901.85	84.02	2903.00	8.09
	04/07/99	2987.02	92.18	2902.02	83.81	2903.21	8.37
	07/15/99	2987.02	91.99	2901.65	84.28	2902.74	7.71
	10/26/99	2987.02	91.99	2901.44	84.52	2902.50	7.47
	11/01/99	2987.02	91.99	2895.03	---	---	---
	08/02/00	2987.02	92.48	2901.10	84.84	2902.18	7.64
	11/24/00	**2987.02**	**92.44**	**2900.50**	**85.54**	**2901.48**	**6.90**
MW-03	02/04/99	2987.91	92.55	2902.25	84.52	2903.39	8.03
	02/22/99	2987.91	92.53	2902.24	84.53	2903.38	8.00
	03/11/99	2987.91	92.49	2902.16	84.64	2903.27	7.85
	03/24/99	2987.91	92.45	2902.21	84.58	2903.33	7.87
	03/31/99	2987.91	92.42	2902.11	84.71	2903.20	7.71
	04/02/99	2987.91	92.45	2902.08	84.74	2903.17	7.71
	07/15/99	2987.91	95.20	2899.45	87.34	2900.57	7.86
	08/07/99	2987.91	92.44	2901.95	84.89	2903.02	7.55
	08/14/99	2987.91	92.50	2901.83	85.02	2902.89	7.48
	08/22/99	2987.91	95.25	2898.37	88.60	2899.31	6.65
	09/01/99	2987.91	92.50	2901.80	85.05	2902.86	7.45
	09/11/99	2987.91	95.31	2898.99	87.86	2900.05	7.45
	09/16/99	2987.91	92.35	2901.93	84.92	2902.99	7.43
	09/25/99	2987.91	92.45	2901.68	85.20	2902.71	7.25
	10/02/99	2987.91	92.35	2901.05	85.95	2901.96	6.40
	10/09/99	2987.91	94.93	2899.24	87.63	2900.28	7.30
	10/15/99	2987.91	95.10	2899.12	87.75	2900.16	7.35
	10/21/99	2987.91	92.35	2901.82	85.05	2902.86	7.30
	10/26/99	2987.91	92.35	2901.78	85.10	2902.81	7.25
	11/01/99	2987.91	92.50	2901.99	84.83	2903.08	7.67
	08/02/00	2987.91	92.50	2901.99	84.83	2903.08	7.67
	11/24/00	**2987.91**	**92.31**	**2900.07**	**87.10**	**2900.81**	**5.21**

TABLE II

SUMMARY OF GROUNDWATER MONITORING
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

WELL	DATE	SURFACE ELEV. (feet)	DEPTH TO WATER (feet)	ELEV. OF WATER (feet)	DEPTH TO PSH (feet)	ELEV. OF PSH (feet)	PSH THICKNESS (feet)
MW-04	02/04/99	2988.22	85.83	2902.39	—	—	—
	02/22/99	2988.22	85.90	2902.32	—	—	—
	03/11/99	2988.22	85.94	2902.28	—	—	—
	04/07/99	2988.22	86.11	2902.11	—	—	—
	05/03/99	2988.22	86.00	2902.27	85.94	2902.28	0.06
	05/10/99	2988.22	86.18	2902.14	86.06	2902.16	0.12
	05/18/99	2988.22	86.31	2902.04	86.16	2902.06	0.15
	05/24/99	2988.22	86.30	2902.06	86.14	2902.08	0.16
	06/01/99	2988.22	86.14	2902.19	86.01	2902.21	0.13
	06/08/99	2988.22	86.28	2902.10	86.09	2902.13	0.19
	06/14/99	2988.22	86.20	2902.20	85.99	2902.23	0.21
	06/22/99	2988.22	86.08	2902.32	85.87	2902.35	0.21
	07/02/99	2988.22	86.14	2902.31	85.87	2902.35	0.27
	07/06/99	2988.22	86.50	2902.01	86.16	2902.06	0.34
	07/13/99	2988.22	86.56	2901.97	86.20	2902.02	0.36
	07/20/99	2988.22	86.54	2902.01	86.16	2902.06	0.38
	07/26/99	2988.22	86.56	2902.00	86.16	2902.06	0.40
	08/07/99	2988.22	86.77	2901.85	86.30	2901.92	0.47
	08/14/99	2988.22	86.89	2901.83	86.31	2901.91	0.58
	08/22/99	2988.22	86.91	2901.87	86.26	2901.96	0.65
	09/01/99	2988.22	86.86	2901.92	86.21	2902.01	0.65
	09/11/99	2988.22	87.08	2901.82	86.29	2901.93	0.79
	09/16/99	2988.22	87.06	2901.85	86.26	2901.96	0.80
	09/25/99	2988.22	87.11	2901.89	86.20	2902.02	0.91
	10/02/99	2988.22	87.16	2901.88	86.20	2902.02	0.96
	10/09/99	2988.22	87.18	2901.94	86.13	2902.09	1.05
	10/15/99	2988.22	87.16	2901.96	86.11	2902.11	1.05
	10/21/99	2988.22	87.41	2901.84	86.21	2902.01	1.20
	10/26/99	2988.22	87.43	2901.85	86.19	2902.03	1.24
	11/01/99	2988.22	89.21	2901.49	86.32	2901.90	2.89
	08/02/00	2988.22	89.21	2901.49	86.32	2901.90	2.89
	11/24/00	**2988.22**	**90.46**	**2899.65**	**88.26**	**2899.96**	**2.20**
MW-05	02/04/99	2988.47	86.03	2902.44	—	—	—
	02/22/99	2988.47	86.07	2902.40	—	—	—
	03/11/99	2988.47	86.21	2902.26	—	—	—
	04/07/99	2988.47	86.25	2902.22	—	—	—
	05/03/99	2988.47	86.14	2902.33	—	—	—
	06/08/99	2988.47	86.49	2901.98	—	—	—
	06/22/99	2988.47	86.35	2902.12	—	—	—
	07/06/99	2988.47	86.43	2902.04	—	—	—
	08/14/99	2988.47	86.54	2901.93	—	—	—
	09/16/99	2988.47	86.54	2901.93	—	—	—
	10/19/99	2988.47	86.46	2902.01	—	—	—
	11/01/99	2988.47	86.90	2901.57	—	—	—
	08/02/00	2988.47	86.90	2901.57	—	—	—
	11/24/00	**2988.47**	**87.04**	**2901.43**	—	—	—
MW-06	02/04/99	2987.40	87.01	2902.35	84.72	2902.68	2.29
	02/22/99	2987.40	88.75	2902.20	84.61	2902.79	4.14
	03/03/99	2987.40	89.16	2902.13	84.63	2902.77	4.53
	07/15/99	2987.40	88.48	2901.77	85.16	2902.24	3.32
	08/07/99	2987.40	90.69	2900.94	85.76	2901.64	4.93
	08/14/99	2987.40	90.98	2901.57	84.98	2902.42	6.00
	08/22/99	2987.40	90.98	2901.64	84.90	2902.50	6.08
	09/01/99	2987.40	90.93	2901.67	84.87	2902.53	6.06
	09/11/99	2987.40	91.11	2901.58	84.95	2902.45	6.16
	09/16/99	2987.40	91.00	2901.65	84.88	2902.52	6.12

TABLE II

SUMMARY OF GROUNDWATER MONITORING
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

WELL	DATE	SURFACE ELEV. (feet)	DEPTH TO WATER (feet)	ELEV. OF WATER (feet)	DEPTH TO PSH (feet)	ELEV. OF PSH (feet)	PSH THICKNESS (feet)
MW-06 cont.	09/25/99	2987.40	90.85	2901.72	84.83	2902.57	6.02
	10/02/99	2987.40	90.88	2901.70	84.84	2902.56	6.04
	10/09/99	2987.40	90.86	2901.72	84.82	2902.58	6.04
	10/15/99	2987.40	90.88	2901.74	84.80	2902.60	6.08
	10/21/99	2987.40	91.05	2901.64	84.88	2902.52	6.17
	10/26/99	2987.40	91.03	2901.65	84.88	2902.52	6.15
	11/01/99	2987.40	92.03	2901.20	85.23	2902.17	6.80
	08/02/00	2987.40	92.03	2901.20	85.23	2902.17	6.80
	11/24/00	**2987.40**	**92.33**	**2900.65**	**85.83**	**2901.57**	**6.50**
MW-07	02/04/99	2986.31	84.03	2902.28	—	—	—
	02/22/99	2986.31	84.13	2902.18	—	—	—
	03/11/99	2986.31	84.26	2902.05	—	—	—
	04/07/99	2986.31	84.35	2901.96	—	—	—
	05/03/99	2986.31	84.36	2902.10	84.18	2902.13	0.18
	05/10/99	2986.31	84.58	2902.02	84.24	2902.07	0.34
	05/18/99	2986.31	84.88	2901.92	84.31	2902.00	0.57
	05/24/99	2986.31	84.89	2901.93	84.29	2902.02	0.60
	06/01/99	2986.31	84.77	2901.99	84.25	2902.06	0.52
	06/08/99	2986.31	84.99	2901.92	84.29	2902.02	0.70
	06/14/99	2986.31	84.31	2902.76	83.43	2902.88	0.88
	06/22/99	2986.31	84.27	2902.83	83.35	2902.96	0.92
	07/02/99	2986.31	85.32	2901.92	84.24	2902.07	1.08
	07/06/99	2986.31	85.49	2901.81	84.34	2901.97	1.15
	07/13/99	2986.31	85.72	2901.77	84.34	2901.97	1.38
	07/20/99	2986.31	85.87	2901.80	84.28	2902.03	1.59
	07/26/99	2986.31	86.14	2901.76	84.29	2902.02	1.85
	08/07/99	2986.31	86.54	2901.64	84.36	2901.95	2.18
	08/14/99	2986.31	86.94	2901.63	84.31	2902.00	2.63
	08/22/99	2986.31	87.49	2901.65	84.19	2902.12	3.30
	09/01/99	2986.31	87.74	2901.68	84.11	2902.20	3.63
	09/11/99	2986.31	88.14	2901.69	84.04	2902.27	4.10
	09/16/99	2986.31	88.24	2901.72	83.99	2902.32	4.25
	09/25/99	2986.31	88.34	2900.14	85.81	2900.50	2.53
	10/02/99	2986.31	88.49	2901.81	83.84	2902.47	4.65
	10/09/99	2986.31	88.64	2901.79	83.84	2902.47	4.80
	10/15/99	2986.31	88.69	2901.82	83.79	2902.52	4.90
	10/19/99	PLUGGED AND ABANDONED					
MW-08	02/04/99	2987.97	86.00	2901.98	85.99	2901.98	0.01
	02/22/99	2987.97	86.06	2901.93	86.04	2901.93	0.02
	03/11/99	2987.97	86.18	2901.86	86.10	2901.87	0.08
	03/24/99	2987.97	86.42	2901.88	86.04	2901.93	0.38
	03/31/99	2987.97	86.47	2901.88	86.03	2901.94	0.44
	04/02/99	2987.97	86.39	2901.79	86.14	2901.83	0.25
	04/07/99	2987.97	86.94	2901.77	86.08	2901.89	0.86
	04/13/99	2987.97	86.83	2901.90	85.94	2902.03	0.89
	04/19/99	2987.97	87.01	2901.87	85.95	2902.02	1.06
	04/26/99	2987.97	87.30	2901.81	85.97	2902.00	1.33
	05/03/99	2987.97	87.47	2901.85	85.90	2902.07	1.57
	05/10/99	2987.97	87.89	2901.75	85.94	2902.03	1.95
	05/18/99	2987.97	88.39	2901.66	85.96	2902.01	2.43
	05/24/99	2987.97	88.60	2901.68	85.91	2902.06	2.69
	06/01/99	2987.97	89.04	2901.74	85.76	2902.21	3.28
	06/08/99	2987.97	88.51	2901.79	85.80	2902.17	2.71
	06/14/99	2987.97	86.14	2904.58	82.94	2905.03	3.20
	06/22/99	2987.97	85.74	2905.36	82.09	2905.88	3.65
	07/02/99	2987.97	89.62	2901.64	85.78	2902.19	3.84
	07/06/99	2987.97	89.76	2901.64	85.76	2902.21	4.00

TABLE II

SUMMARY OF GROUNDWATER MONITORING
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

WELL	DATE	SURFACE ELEV. (feet)	DEPTH TO WATER (feet)	ELEV. OF WATER (feet)	DEPTH TO PSH (feet)	ELEV. OF PSH (feet)	PSH THICKNESS (feet)
MW-08	07/13/99	2987.97	89.92	2901.55	85.84	2902.13	4.08
cont.	07/20/99	2987.97	89.94	2901.63	85.74	2902.23	4.20
	07/26/99	2987.97	90.09	2901.63	85.72	2902.25	4.37
	08/07/99	2987.97	90.20	2901.57	85.77	2902.20	4.43
	08/14/99	2987.97	90.44	2901.65	85.64	2902.33	4.80
	08/22/99	2987.97	90.49	2901.51	85.79	2902.18	4.70
	09/01/99	2987.97	90.40	2901.52	85.80	2902.17	4.60
	09/11/99	2987.97	90.74	2901.48	85.79	2902.18	4.95
	09/16/99	2987.97	90.74	2901.44	85.83	2902.14	4.91
	09/25/99	2987.97	90.74	2901.52	85.74	2902.23	5.00
	10/02/99	2987.97	90.79	2901.48	85.78	2902.19	5.01
	10/09/99	2987.97	90.74	2901.51	85.75	2902.22	4.99
	10/15/99	2987.97	90.89	2901.50	85.74	2902.23	5.15
	10/21/99	2987.97	91.04	2900.59	86.77	2901.20	4.27
	10/26/99	2987.97	91.09	2901.44	85.77	2902.20	5.32
	11/01/99	2987.97	91.09	2901.44	85.77	2902.20	5.32
	08/02/00	2987.97	90.92	2901.06	86.25	2901.72	4.67
	11/24/00	**2987.97**	**91.44**	**2900.56**	**86.74**	**2901.23**	**4.70**
MW-09	02/04/99	2987.39	86.06	2901.83	85.48	2901.91	0.58
	02/22/99	2987.39	88.60	2902.34	84.46	2902.93	4.14
	03/11/99	2987.39	91.48	2901.67	84.77	2902.62	6.71
	03/24/99	2987.39	91.43	2901.67	84.78	2902.61	6.65
	03/31/99	2987.39	91.40	2901.72	84.72	2902.67	6.68
	04/02/99	2987.39	91.52	2901.60	84.84	2902.55	6.68
	04/07/99	2987.39	91.58	2901.57	84.87	2902.52	6.71
	07/15/99	2987.39	91.13	2901.43	85.11	2902.28	6.02
	10/26/99	2987.39	90.63	2901.22	85.43	2901.96	5.20
	11/01/99	2987.39	90.63	2900.93	85.77	2901.62	4.86
	08/02/00	2987.39	92.73	2900.81	85.56	2901.83	7.17
	11/24/00	**2987.39**	**92.63**	**2900.38**	**86.08**	**2901.31**	**6.55**
MW-10	02/04/99	2987.96	85.73	2902.23	---	---	---
	02/22/99	2987.96	85.76	2902.20	---	---	---
	03/11/99	2987.96	85.87	2902.09	---	---	---
	04/07/99	2987.96	85.93	2902.03	---	---	---
	05/03/99	2987.96	85.81	2902.15	---	---	---
	06/08/99	2987.96	86.02	2901.94	---	---	---
	06/22/99	2987.96	87.07	2900.89	---	---	---
	07/06/99	2987.96	87.07	2900.89	---	---	---
	08/14/99	2987.96	86.19	2901.77	---	---	---
	09/16/99	2987.96	86.22	2901.74	---	---	---
	10/19/99	2987.96	86.17	2901.79	---	---	---
	11/01/99	2987.96	86.17	2901.79	---	---	---
	08/02/00	2987.96	86.57	2901.39	---	---	---
	11/24/00	**2987.96**	**86.72**	**2901.24**	**---**	**---**	**---**
MW-11	02/04/99	2989.37	87.54	2901.83	---	---	---
	02/22/99	2989.37	87.50	2901.87	---	---	---
	03/11/99	2989.37	87.60	2901.77	---	---	---
	04/07/99	2989.37	87.56	2901.81	---	---	---
	05/03/99	2989.37	87.38	2901.99	---	---	---
	06/08/99	2989.37	87.72	2901.65	---	---	---
	06/22/99	2989.37	87.76	2901.61	---	---	---
	07/06/99	2989.37	87.84	2901.53	---	---	---
	08/14/99	2989.37	87.98	2901.39	---	---	---
	09/16/99	2989.37	87.61	2901.76	---	---	---
	10/19/99	2989.37	87.66	2901.71	---	---	---
	11/01/99	2989.37	87.07	2902.30	---	---	---

TABLE II

SUMMARY OF GROUNDWATER MONITORING
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

WELL	DATE	SURFACE ELEV. (feet)	DEPTH TO WATER (feet)	ELEV. OF WATER (feet)	DEPTH TO PSH (feet)	ELEV. OF PSH (feet)	PSH THICKNESS (feet)
MW-11	08/02/00	2989.37	87.65	2901.72	---	---	---
cont.	**11/24/00**	**2989.37**	**87.87**	**2901.50**	**---**	**---**	**---**
MW-12	02/04/99	2987.79	86.52	2901.27	---	---	---
	02/22/99	2987.79	86.26	2901.53	---	---	---
	03/11/99	2987.79	86.38	2901.41	---	---	---
	04/07/99	2987.79	86.46	2901.33	---	---	---
	05/03/99	2987.79	86.36	2901.43	---	---	---
	06/08/99	2987.79	86.55	2901.24	---	---	---
	06/22/99	2987.79	86.55	2901.24	---	---	---
	07/06/99	2987.79	86.60	2901.19	---	---	---
	08/14/99	2987.79	86.70	2901.09	---	---	---
	09/16/99	2987.79	86.71	2901.08	---	---	---
	10/19/99	2987.79	86.72	2901.07	---	---	---
	11/01/99	2987.79	86.72	2901.07	---	---	---
	08/02/00	2987.79	87.08	2900.71	---	---	---
	11/24/00	**2987.79**	**88.45**	**2899.34**	**86.90**	**2900.89**	**1.55**
MW-13	10/19/99	2989.79	88.28	2901.51	---	---	---
	11/01/99	2989.79	88.28	2901.51	---	---	---
	08/02/99	2989.79	88.62	2901.17	---	---	---
	11/24/00	**2989.79**	**88.67**	**2901.12**	**---**	**---**	**---**
MW-14	10/19/99	2986.02	85.04	2900.98	---	---	---
	11/01/99	2986.02	85.04	2900.98	---	---	---
	08/02/99	2986.02	86.95	2900.53	85.25	2900.77	1.70
	11/24/00	**2986.02**	**88.60**	**2900.51**	**85.00**	**2901.02**	**3.60**
MW-15	10/19/99	2986.45	85.32	2901.13	---	---	---
	11/01/99	2986.45	85.32	2901.13	---	---	---
	08/02/99	2986.45	85.30	2901.15	---	---	---
	11/24/00	**2986.45**	**85.36**	**2901.09**	**---**	**---**	**---**

TABLE III

SUMMARY OF GROUNDWATER RESULTS - BTEX AND TPH
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

SAMPLE LOCATION	DATE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYL-BENZENE (mg/l)	XYLENES (mg/l)	BTEX (mg/l)	TPH-DRO (mg/l)
MW-1	02/23/99	ND	ND	ND	ND	ND	---
	08/22/99	ND	ND	ND	ND	ND	ND
	10/19/99	ND	ND	ND	ND	ND	0.135
	08/02/00	ND	ND	ND	ND	ND	---
	11/24/00	ND	ND	ND	ND	ND	---
MW-2	02/23/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (8.28')					
	08/22/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (7.71')					
	10/19/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (7.47')					
	08/02/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (7.64')					
	11/24/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (7.64')					
MW-3	02/23/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (8.00')					
	08/22/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (7.45')					
	10/19/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (7.30')					
	08/02/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (7.67')					
	11/24/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (7.67')					
MW-4	02/23/99	ND	ND	ND	0.005	0.005	---
	08/22/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (0.65')					
	10/19/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (1.05')					
	08/02/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (2.89')					
	11/24/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (2.89')					
MW-5	02/23/99	ND	ND	ND	ND	ND	---
	08/22/99	ND	ND	ND	ND	ND	ND
	10/19/99	ND	ND	ND	ND	ND	0.156
	08/02/00	ND	ND	ND	ND	ND	---
	11/24/00	ND	ND	ND	ND	ND	---
MW-6	02/23/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (4.14')					
	08/22/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (6.08')					
	10/19/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (6.08')					
	08/02/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (6.80')					
	11/24/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (6.80')					
MW-7	02/23/99	ND	ND	ND	0.004	0.004	---
	08/22/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (3.30')					
	10/19/99	PLUGGED AND ABANDONED					

TABLE III

SUMMARY OF GROUNDWATER RESULTS - BTEX AND TPH
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

SAMPLE LOCATION	DATE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYL-BENZENE (mg/l)	XYLENES (mg/l)	BTEX (mg/l)	TPH-DRO (mg/l)
MW-8	02/23/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (0.02')					
	08/22/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (4.70')					
	10/19/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (5.15')					
	08/02/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (4.67')					
	11/24/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (4.67')					
MW-9	02/23/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (4.14')					
	08/22/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (6.02')					
	10/19/99	NOT SAMPLED DUE TO THE PRESENCE OF PSH (5.20')					
	08/02/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (7.17')					
	11/24/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (7.17')					
MW-10	02/23/99	ND	ND	ND	ND	ND	---
	08/22/99	ND	ND	ND	ND	ND	ND
	10/19/99	ND	ND	ND	ND	ND	0.124
	08/02/00	ND	ND	ND	ND	ND	---
	11/24/00	ND	ND	ND	ND	ND	---
MW-11	02/23/99	ND	ND	ND	ND	ND	---
	08/22/99	ND	ND	ND	ND	ND	3.2
	10/19/99	ND	ND	ND	ND	ND	0.077
	08/02/00	ND	ND	ND	ND	ND	---
	11/24/00	ND	ND	ND	ND	ND	---
MW-12	02/23/99	ND	ND	ND	ND	ND	---
	08/22/99	ND	ND	ND	ND	ND	2.5
	10/19/99	ND	ND	ND	ND	ND	0.306
	08/02/00	0.031	ND	ND	0.045	0.076	---
	11/24/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (2.89')					
MW-13	10/19/99	ND	ND	ND	ND	ND	0.127
	08/02/00	ND	ND	ND	ND	ND	---
	11/24/00	ND	ND	ND	ND	ND	---
MW-14	10/19/99	0.007	ND	ND	0.010	0.017	0.481
	08/02/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (1.70')					
	11/24/00	NOT SAMPLED DUE TO THE PRESENCES OF PSH (1.70')					

TABLE III

SUMMARY OF GROUNDWATER RESULTS - BTEX AND TPH
EQUILON PIPELINE COMPANY, LLC
JAL BASIN STATION
LEA COUNTY, NEW MEXICO

SAMPLE LOCATION	DATE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYL-BENZENE (mg/l)	XYLENES (mg/l)	BTEX (mg/l)	TPH-DRO (mg/l)
MW-15	10/19/99	ND	ND	ND	ND	ND	0.132
	08/02/00	ND	ND	ND	ND	ND	---
	11/24/00	ND	ND	ND	ND	ND	---
Product Tank	06/14/99	0.077	0.218	0.118	0.274	0.687	---

APPENDIX A

HI-VAC SYSTEM DESCRIPTION

The system consists of a mobile HiVac system incorporating a liquid ring extraction pump and associated separation and treatment equipment. The system includes primary and secondary bulk separators on the inlet side of the liquid ring pump system, a secondary air/water/particulate separator, a closed loop heat exchanger cooling system for the liquid ring pump, and associated equipment. The system is trailer mounted. The system location is presented on FIG. 2.

The liquid ring pump extracts groundwater, product, suspended particles, and soil vapors with a vacuum up to 26 inches of mercury. The collected media is processed through a series of separators. The vapor stream is discharged to the atmosphere. Collected fluids are pumped through a 100 gallon (nominal) oil/water separator (OWS) for separation. This discharge plan is being prepared for submittal to the Oil Conservation Division (OCD) to re-infiltrate the water back into the subsurface. Upon approval, the system will be operated such that product separated in the OWS is recovered in a product storage tank, and water separated in the OWS is treated. The water will be processed through a counter current air stripping system (A/S) and zeolite and carbon filters, as necessary. Vapors from the A/S will be discharged to the atmosphere and water from the A/S will be filtered and then re-infiltrated back into the subsurface, pending OCD approval. The system will be equipped with safety shutoff switches in the event of a high level condition.

Currently, the HiVac system is operated such that product separated in the OWS is recovered in a product storage tank, and water separated in the OWS is stored in a frac tank for off-site disposal. A process flow diagram for the current operation of the HiVac system is presented as FIG. 3. A process flow diagram for the proposed operation of the HiVac system, upon OCD discharge plan approval, is presented as FIG. 4.

Various monitoring wells at the site that exhibit hydrocarbon impact are being utilized as the extraction points. Vacuum readings are collected on a regular basis to evaluate the radius of influence and optimum arrangement of the recovery system.

The recovery wells are fitted with a vacuum pipe (stinger) extending through a sealed well cap to maximize the recovery of LNAPL while minimizing the recovery of groundwater. The vacuum pipe is plumbed to the liquid ring pump. All piping and facilities from the well to the liquid ring pump are under vacuum. A gate valve and vacuum gauge is installed on the line to control the vacuum exerted on each extraction well. A sample port is installed to monitor the hydrocarbon concentrations in the vent stack from the discharge line of the liquid ring pump. A multi-phase vacuum extraction well detail is presented as FIG. 5.

The LNAPL fractionation tank (OWS) is constructed of 10-gauge steel and epoxy coated to inhibit rust and primed and painted with an industrial white paint.

APPENDIX B

MATERIALS STORED OR USED AT THE FACILITY ASSOCIATED WITH THE HIVAC SYSTEM

Materials stored on-site for the HiVac system operation may include zeolite and water conditioning agents. The general composition of the material, container type, estimated volume stored, and location is provided below. Material Safety Data Sheets (MSDS) for all materials used at the facility are available upon request and are maintained at the on-site office building. All other materials stored or used at the facility for the storage and transfer of crude oil and operation and maintenance activities associated with these will be covered under a separate facility discharge plan.

CARBON

The two 55-gallon drums containing carbon will be installed in the process stream following the air stripper and before discharge into the re-infiltration wells. The purpose of the carbon is to provide one last hydrocarbon stripping process from the recovered groundwater prior to re-infiltrating back into the subsurface.

ZEOLITE

A filter containing Zeolite will be installed in the process stream following the oil/water separator and before the air stripper. The purpose of the Zeolite is to prevent hydrocarbon emulsion with recovered groundwater from reaching the air stripper. The vessel will be placed on the ground next to the remediation system. A copy of the MSDS sheet for Zeolite is attached.

WATER CONDITIONING AGENTS

Water conditioning agents will be added to the process stream to reduce mineral fouling of the equipment. Initial water analysis indicates that Nalco Chemical #7396 and a 2% solution of hydrochloric acid would be the proper water conditioning agent for this site. The chemical solution will be injected into the process stream via a peristaltic pump. The chemical will be stored in a DOT approved 55-gallon poly drum. The drum will be properly labeled and stored next to the remediation system. A copy of the MSDS sheet for the chemical is attached.

AMERICAN ABSORBENTS NATURAL PRODUCTS, INC.

Return to AANPI Home Page

MATERIAL SAFETY DATA SHEET FOR ZEOLITE

(VARIETY CLINOPTILOLITE)

SECTION 1- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT MANUFACTURER: AMERICAN ABSORBENT NATURAL PRODUCTS INC. 3800 HUDSON BEND ROAD, AUSTIN, TEXAS 78734 TELEPHONE: (512) 266-2481

EFFECTIVE DATE: 06/01/99

PRODUCT NAME: AMERICAN ABSORBENT NATURAL ZEOLITE (VARIETY CLINOPTILOLITE)

CAS#: 12173-10-3

DERIVATION: NATURALLY OCCURRING MINERAL AGGREGATE

GENERAL USE: ABSORBENT, MECHANICAL AND CHEMICAL FILTRATION

SECTION 2- COMPOSITION / INFORMATION ON INGREDIENTS

CONSTITUENTS: SILICATE MINERAL SPECIES PRIMARILY CLINOPTILOLITE (CLINO), CLAY, FELSPAR AND MORDENITE (TOTAL >99.9%) CLINO = $(Na_4K_4)Al_8Si_{40}O_{96}) \times 24H_2O$

SECTION 3: HAZARDS IDENTIFICATION

EXPOSURE POTENTIAL: CAN BECOME POWDERY AND EASILY AIRBORNE IF CRUSHED. LIMITED DUST EXPOSURE POTENTIAL TO UNCRUSHED OR COARSE CRUSHED MATERIAL (>120 STANDARD MESH, .125 MILLIMETERS)

PRIMARY ENTRY ROUTE (DUST ONLY): RESPIRATORY SYSTEM, EYES

TARGET ORGANS: LUNGS, EYES

ACUTE EFFECTS:

INHALATION	EXPOSURE TO HEAVY CONCENTRATIONS OF AIRBORNE POWDER CAN CAUSE RESPIRATORY CONGESTION
EYES	CAN CAUSE REDDENEDING AND BLURRED VISION WITH EXPOSURE TO EYES
DERMAL EXPOSURE	EXPOSED SKIN CAN BECOME IRRITATED

CHRONIC EFFECTS:

INHALATION	PROLONGED BREATHING OF AIRBORNE PARTICLES MAY CAUSE SILICOSIS OR DIMINISHED RESPIRATORY CAPACITY

SECTION 4: FIRST AID MEASURES

INHALATION	REMOVE FROM EXPOSURE, PLACE ON RESPIRATOR IF NECESSARY
EYES	IRRIGATE EYES WITH WATER OR EYE WASH
DERMAL EXPOSURE	FLUSH EXPOSED SKIN AREA WITH WATER TO REMOVE RESIDUE

SECTION 5: FIREFIGHTING MEASURES

NON-COMBUSTIBLE

SECTION 6: ACCIDENTAL RELEASE MEASURES

SCOOP OR SWEEP UP SPILL AND PLACE IN CONTAINER FOR NON HAZARDOUS MATERIALS. MINIMIZE DUST GENERATION

SECTION 7: HANDLING AND STORAGE

HANDLING: HANDLE THE PRODUCT AS NONHAZARDOUS MATERIAL AND MINIMIZE CRUSHING AND DUST GENERATION.

STORAGE: STORE IN NON-HAZARDOUS MATERIALS CONTAINERS.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

WHEN WORKING WITH OR AROUND FINELY GROUND OR CRUSHED MATERIAL LESS THAN 120 MESH, (125mm), WEAR RESPIRATORY PROTECTION. WEAR RESPIRATORY PROTECTION WHEN AIRBORNE DUST IS VISIBLE OR EXCEEDS .05mg/m^3. SEEK PROFESSIONAL ADVICE PRIOR TO RESPIRATOR SELECTION. WEAR GLOVES AND PROTECTIVE CLOTHING TO PREVENT IRRITATION TO EXPOSED SKIN WHEN HANDLING LOOSE MATERIAL. WETTING FINE MATERIAL SUBSTANTIALLY REDUCES DUST GENERATION.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: SOLID GRANULES

APPEARANCE AND ODOR: WHITE TO CREAM COLORED ODORLESS GRANULES

VAPOR PRESSURE: NOT APPLICABLE

SPECIFIC GRAVITY: 1.5 - 1.7

BULK DENSITY: 1.57 - 1.87

WATER SOLUBILITY: INSOLUBLE

DESICCANT AND ABSORBENT: ACTIVE

NON COMBUSTIBLE

MELTING POINT: +/- 2520°F

BOILING POINT: NOT APPLICABLE

OSHA PEL's: NONE ESTABLISHED

ACGHI TLV: NONE ESTABLISHED

NIOSH REL (TWA): NONE ESTABLISHED (use .05mg/m^3 for chrystaline silica)

IDLH LEVEL: NONE ESTABLISHED

SECTION 10: STABILITY AND REACTIVITY

STABILITY: (pH) 2 -12

HAZARDOUS DECOMPOSITION: NONE

REACTIVITY: PASSIVE ION EXCHANGER, NO VIOLENT REACTIVITY

SECTION 11: TOXICOLOGICAL INFORMATION

NO KNOWN OR DOCUMENTED TOXICOLOGICAL EFFECTS

SECTION 12: ECOLOGICAL INFORMATION

NO ECOLOGICAL CONCERNS KNOWN

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSE OF AS NON-HAZARDOUS MATERIAL OR RECYCLE AS SOIL AMENDMENT

SECTION 14: TRANSPORTATION INFORMATION

TRANSPORT IN ENCLOSED CONTAINERS TO PREVENT DUST AND WIND DISPERSION

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 7396 WATER STABILIZATION

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

SECTION 01 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: NALCO 7396 WATER STABILIZATION
DESCRIPTION: An aqueous solution of pyrophosphate

NFPA 704M/HMIS RATING: 1/1 HEALTH 0/0 FLAMMABILITY 0/0 REACTIVITY 0 OTHER
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 02 COMPOSITION AND INFORMATION ON INGREDIENTS

Our hazard evaluation of the ingredient(s) under OSHA's Hazard Communication Rule, 29 CFR 1910.1200 has found none of the ingredient(s) hazardous.

SECTION 03 HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:
CAUTION: May cause irritation to skin and eyes. Avoid contact with skin, eyes and clothing. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

PRIMARY ROUTES OF EXPOSURE: Eye, Skin

EYE CONTACT: Can cause irritation.
SKIN CONTACT: May cause irritation with prolonged contact.

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

SECTION 04 FIRST AID INFORMATION

EYES: Flush with water for 15 minutes. Call a physician.
SKIN: Flush with water for 15 minutes.
INGESTION: Do not induce vomiting. Give water. Call a physician.
INHALATION: Remove to fresh air. Treat symptoms. Call a physician.

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

SECTION 05 FIRE FIGHTING MEASURES

FLASH POINT: None

EXTINGUISHING MEDIA: Not applicable

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SECTION 06 ACCIDENTAL RELEASE MEASURES

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (800) I-M-ALERT or (800) 462-5378.

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 15.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 15.

SECTION 07 HANDLING AND STORAGE

Storage : Keep container closed when not in use.

SECTION 08 EXPOSURE CONTROLS AND PERSONAL PROTECTION

RESPIRATORY PROTECTION: Respiratory protection is not normally needed.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a positive pressure, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended.

PROTECTIVE EQUIPMENT: Use impermeable gloves and chemical splash goggles when attaching feeding equipment, doing maintenance or handling product. Examples of impermeable gloves available on the market are neoprene, nitrile, PVC, natural rubber, viton and butyl (compatibility studies have not been performed).

The availability of an eye wash fountain and safety shower is recommended.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

SECTION 09 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Light yellow	FORM: Liquid	
SOLUBILITY IN WATER:	Completely	
SPECIFIC GRAVITY:	1.72 @ 70 Degrees F	ASTM D-1298
pH (NEAT) =	11.5	ASTM E-70
FREEZE POINT:	Less than 20 Degrees F	ASTM D-1177
BOILING POINT:	235 Degrees F @ 760 mm Hg	ASTM D-86
FLASH POINT:	None	

NOTE: These physical properties are typical values for this product.

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SECTION 10 STABLILITY AND REACTIVITY

INCOMPATIBILITY: None known

SECTION 11 TOXICOLCGICAL INFORMATION

TOXICITY STUDIES: Toxicity studies have been conducted on this product. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS): LD50 = 2,900 mg/kg

ACUTE DERMAL TOXICITY (ALBINO RABBITS): LD50 = Greater than 7,940 mg/kg

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):
SKIN IRRITATION INDEX DRAIZE RATING: 1.0/8.0

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):
EYE IRRITATION INDEX DRAIZE RATING: 17.3/110.0

HUMAN HAZARD CHARACTERIZATION: Based on our hazard characterization, the potential human hazard is: LOW

SECTION 12 ECOLOGICAL INFORMATION

BIOCHEMICAL OXYGEN DEMAND (5-day BOD): 0

CHEMICAL OXYGEN DEMAND (COD): Less than 100 mg/L

AQUATIC DATA:

96-hour static acute LC50 to Bluegill Sunfish = 420 ppm

96-hour static acute LC50 to Rainbow Trout = 450 ppm

If released into the environment, see CERCLA in Section 15.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION: Based on our Hazard Characterization, the potential environmental hazard is: LOW.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL: If this product becomes a waste, it meets the criteria of a hazardous waste as defined under the Resources Conservation and Recovery Act (RCRA) 40 CFR 261. Hazardous Waste D002.

As a hazardous liquid waste, it must be solidified with stabilizing agents (such as sand, fly ash, or cement) so that no free liquid remains before disposal to a licensed industrial waste landfill (Hazardous Waste Treatment, Storage and Disposal facility). A hazardous liquid waste can also be deep-well injected in accordance with local, state, and federal regulations.

SECTION 14 TRANSPORTATION INFORMATION

PROPER SHIPPING NAME/HAZARD CLASS MAY VARY BY PACKAGING, PROPERTIES, AND MODE OF TRANSPORTATION. TYPICAL PROPER SHIPPING NAMES FOR THIS PRODUCT ARE:

ALL TRANSPORTATION MODES	:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
UN/ID NO	:	UN 3266
HAZARD CLASS - PRIMARY	:	8 - CORROSIVE
PACKING GROUP	:	III
IMDG PAGE NO	:	8147-1
IATA PACKING INSTRUCTION	:	CARGO: 820
IATA CARGO AIRCRAFT LIMIT	:	60 L (MAX NET QUANTITY PER PACKAGE)
FLASH POINT	:	NONE
TECHNICAL NAME(S)	:	TETRAPOTASSIUM PYROPHOSPHATE
RQ LBS (PER PACKAGE)	:	NONE
RQ COMPONENT(S)	:	NONE

SECTION 15 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:
Based on our hazard evaluation, this product is not hazardous.

CERCLA/SUPERFUND, 40 CFR 117, 302:
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):
This product does not contain ingredients on the List of Toxic Chemicals.

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TOXIC SUBSTANCES CONTROL ACT (TSCA):
The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

FOOD AND DRUG ADMINISTRATION (FDA):
Federal Food, Drug and Cosmetic Act:
When use situations necessitate compliance with FDA regulations, this product is acceptable under 21 CFR 176.170 - components of paper and paperboard in contact with aqueous and fatty foods.

U. S. DEPARTMENT OF AGRICULTURE (USDA):
USDA Inspection and Grading Programs - Food Safety and Inspection Service:
This product is authorized by USDA for use in federally inspected meat and poultry plants. Authorized use is under category G2 and G7. The following limitations apply: phosphate concentration cannot exceed 10 ppm as phosphate ion.

NATIONAL SANITATION FOUNDATION (ANSI/NSF STANDARD 60):
This product has received NSF/International certification under ANSI/NSF Standard 60 in the Corrosion and Scale Control category under the official chemical name of Tetrapotassium Pyrophosphate. Maximum product application dosage is 20 mg/l. Only products manufactured at Plant 1 USA and whose container label bears the ANSI/NSF Mark may be used in potable water treatment applications.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:
Consult Section 13 for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):
None of the ingredients are specifically listed.

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments), Sec. 611 (40 CFR 82, CLASS I and II Ozone depleting substances):
This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:
This product does not contain any chemicals which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS:
This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:
The following ingredient(s) are disclosed for compliance with State Right To Know Laws:

Tetra potassium pyrophosphate (phosphate as PO4 348)	7320-34-5
Water	7732-18-5

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SECTION 16 OTHER INFORMATION

None

SECTION 17 USER'S RESPONSIBILITY

Our Risk Characterization is being determined.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 18 REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (CD-ROM version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

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APPENDIX C

CURRENT LIQUID AND SOLID WASTE COLLECTION/TREATMENT/DISPOSAL PROCEDURES

RECOVERED GROUNDWATER

The HiVac system is currently recovering approximately 106.7 gallons per day of total fluids. Currently the product separated in the OWS is recovered in a product storage tank, and water separated in the OWS is stored in a frac tank for off-site disposal.

RECOVERED DIESEL

Recovered diesel will be stored in an on-site tank pending disposal or recovery at an approved facility.

APPENDIX D

PROPOSED MODIFICATIONS TO EXISTING COLLECTION/TREATMENT/DISPOSAL SYSTEMS

CARBON

Once the treatment portion of the HiVac is operation, the carbon drums will require periodic replacement. The used carbon will be disposed of either on-site via land farming or at a nearby commercial land treatment facility.

ZEOLITE

Once the treatment portion of the HiVac is operational, the Zeolite will require periodic replacement. The used Zeolite will be disposed of either on-site via land farming or at a nearby commercial land treatment facility.

RECOVERED GROUNDWATER

The HiVac system is currently recovering approximately 106.7 gallons per day of total fluids. Upon approval of this discharge plan, the water will be treated and reinfiltrated into the subsurface via two infiltration wells. The discharge from the system will be piped into two 4-inch infiltration wells. These wells will be approximately 100 feet deep and will contain 80 feet of 0.020 slot screen. A typical infiltration well diagram is presented as FIG. 6.

In order to demonstrate that the treatment system is achieving the standards of Rule 19.B., the HiVac system effluent will be tested daily for the first 7 days, weekly for the next 4 weeks and then monthly. The effluent will be sampled according to TABLE I.

RECOVERED DIESEL

Recovered diesel will be stored in an on-site tank pending disposal or recovery at an approved facility.

APPENDIX E

ROUTINE INSPECTION AND MAINTENANCE PLAN

Periodic inspections of the HiVac system, valves, gauges, and piping will be conducted. The equipment is inspected for integrity, spills, drips, and leaks. If a significant leak is detected, appropriate response actions shall be taken.

No surface impoundments, leach fields or other disposal systems requiring inspection and records maintenance are associated with HiVac system operation.

The system has no surface impoundments, leach fields or other active disposal systems for which groundwater monitoring is used to detect leakage.