GW-

# PERMITS, RENEWALS, & MODS

#### **Bill Richardson**

Governor Joanna Prukop Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



October 7, 2009

Mr. Bob Stewart 211 N. Colorado Midland TX 79701

Re:

Renewal Discharge Permit, GW-048

Denton Davis Gas Plant

NW/4 SW/4 in Section 2, Township 15 South, Range 37 East, NMPM,

Lea County, New Mexico

Dear Mr. Stewart:

RECEIVED OCD 3

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 **Davis Gas Processing Inc.** discharge permit 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 30 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 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,

ORIGINALLY SIGNED BY Glenn von Gonten

Glenn von Gonten Acting 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 Gas Plant is \$4000.00 and has already been paid and processed. Please submit a signed copy of the permit and return to the OCD within 30 days.
- 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 September 12, 2014 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 July, 2009 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 Part 35 Waste: Pursuant to OCD Part 35 (19.15.35.8 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 Part 29 (19.15.29 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. The OCD does not consider covering contaminated areas a remediation of the spill/release.
- 16. OCD Inspections: The OCD performed an inspection of this facility on August 27, 2009. Mr. Bob Stewart, David Pepper and Elena Hofmann witnessed the inspection. All photographs referenced below are located in the attachment of this permit. As a result of this, OCD inspection concluded the following:
  - 1. Photo 1 2, 6: The basin of the old cooling tower is holding fluids without any function. If Owner/Operator wishes to maintain this pond they must re-engineer it to meet Condition B of this permit. If Owner/Operator cannot demonstrate the integrity of this pond they must cease operations, verify integrity and modify the containment so as to divert fluids. The Owner/Operator must document weather the containment has an impermeable bottom.
  - 2. Photo 3 5: The unused compressor building skid area is holding fluids that appear to have hydrocarbons. OCD requires the Owner/Operator to remove fluids and have the structure modified as to not receive any more fluids. Owner/Operator shall investigate any releases that may have occurred beneath the containment area. It appears that these fluids have overflowed to the north side of the building and have discharged on to the ground. The Owner/Operator shall remediate all releases from containment area.
  - 3. Photo 7 11: Several staged waste are on site. The Owner/Operator shall refer to Condition 6 of this permit for all waste on site and OCD Rule Part 35 for disposal of oil field waste. If waste stream disposal is not identified within the original application or any other subsequent application then OCD approval is needed prior to disposal of used filters, contaminated soil, etc.
  - 4. Photo 12 18, 37 and 38: Improperly managed containers and barrels. The June 2004 Permit Condition 4, 6, 7 and 8 identified procedures for maintaining containers and tanks. At the time of inspection there were several areas of concern. The Owner/Operator shall immediately address these concerns for all tanks/containers on site. Refer to OCD Rule Part 35 for disposal of containers and barrels. An inspection conducted by the OCD on February 8, 2005 previously noted these concerns.
  - 5. Photo 19 27, 33 36, 39: There were several areas within the facility yard that showed signs of discharges and releases on to the ground. The June 24, 2004 Permit Condition 5 identifies protocols for leaks and spills. Condition 13 identified procedures

for release notification and protocol. The Owner/Operator shall immediately cease all discharges on to the ground and shall initiate a work plan to address these spills and releases. There were indications of contaminated soil covered with clean fill (**Photo 25-27**). This is not remediation of the contaminated soil and the Owner/Operator shall cease this practice immediately. The renewal Permit condition 18 specifies conditions on releases.

6. Photo 28 – 32: Sumps operated as below-grade tanks. All sumps are single walled and have never been cleaned and integrity tested. The June 2004 Permit Condition 9 specified procedures for properly maintaining sumps/below-grade tanks. The Owner/Operator shall submit a work plan to replace these below-grade tanks.

The GW-048 file does not have any records of hydrostatic testing of drain/process lines on the facility. Please provide the records and identification of lines for the facility. Submit this along with the work plan. The Owner/operator shall submit their work plans by December 15, 2009 to address the identified concerns stated above.

- 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. <u>An unauthorized discharge is a violation of this permit.</u>
- 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: The owner/operator shall ensure that all employees understand all permit conditions.
- 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 Representative- print name

Company Representative- Signature

Title President

Date: 12-10-09

Inspector(s): Leonard Lowe

Company Rep: Bob Stewart, Elena Hofmann and David Pepper

Date: 08.27.09 Time: 8:00 – 10:40

Photo 1: Standing fluids near unused pump house.



Photo 2: Large quantities of standing



<u>Photo 3</u>: Fluids standing underneath unused compressor building.



Photo 4: Oily fluids noted in photo 3.



Photo 5: Oil fluids noted in photo 3.



<u>Photo 6</u>: Old cooling tower containment full of black soil.

Inspector(s): Leonard Lowe

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Time: 8:00 – 10:40

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Photo 7: Staged Mol sieve.



Photo 8: Staged Mol Sieve.



Photo 9: Staged contaminated soil.



Photo 10: Used filters staged near contaminated soil staging area.



Photo 11: Amount of used filters.



Photo 12: Improper barrel storage.

Inspector(s): Leonard Lowe

Company Rep: Bob Stewart, Elena Hofmann and David Pepper
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Photo 13: Improper barrel storage.



Photo 14: Crushed barrel leaking contents.



Photo 15: Unbermed/curbed container.



Photo 16: Question contents of barrel.



Photo 17: Improper barrel storage.



Photo 18: Improper barrel storage.

OCD Inspection: Davis Denton GP, GW - 048

Inspector(s): Leonard Lowe

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Date: 08.27.09

Time: 8:00 - 10:40



Photo 19: Discharge on ground.



Photo 20: Discharge on ground.



Photo 21: Discharge on ground.



Photo 22: Discharge on ground.



Photo 23: Discharge on ground.

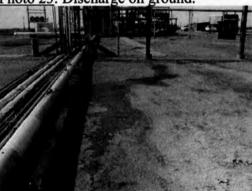


Photo 24: Discharge on ground.

Inspector(s): Leonard Lowe

Company Rep: Bob Stewart, Elena Hofmann and David Pepper
Time: 8:00 – 10:40

Date: 08.27.09



Photo 25: Discharged covered.

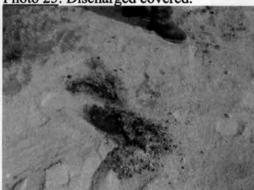


Photo 26: Contamination exposed under clean soil.



Photo 27: Clean soil spread around.



Photo 28: Single wall BGT skimmer.



Photo 29: Amount of fluids in BGT skimmer.



Photo 30: 2 BGT, one for each compressor.

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Photo 31: BGT full of fluids.



Photo 32: Single wall BGT.



Photo 33: Discharges.



Photo 34: Discharged within unlined AST secondary containment.



Photo 35: Discharged within unlined AST secondary containment.



Photo 36: Discharged within unlined AST secondary containment.

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Photo 37: Unbermed/lined saddle tank.

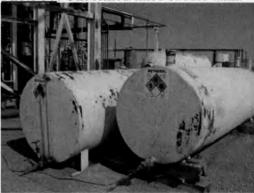


Photo 38: Unbermed/lined saddle tank.



Photo 39: Discharges within earthen unlined bermed area from AST.

#### Lowe, Leonard, EMNRD

From:

Lowe, Leonard, EMNRD

Sent:

Tuesday, December 08, 2009 2:36 PM

To:

bstewart@westtexasgas.com

Cc:

Sanchez, Daniel J., EMNRD; 'Jones, Larry'

Subject: Attachments:

GW-048 Permit GW048 PERMIT.pdf

Mr. Stewart,

Here is the Permit for the Davis Gas Plant. Please sign and return by December 18, 2009.

Condition 16 within the permit noted a deadline day of December 16 2009 to submit items to the OCD. That dead line has passed. Submit those items by January 16, 2010.

Please submit these request in a timely manner.

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: <a href="mailto:leonard.lowe@state.nm.us">leonard.lowe@state.nm.us</a>

Website: http://www.emnrd.state.nm.us/ocd/

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson

Joanna Prukop
Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



October 7, 2009

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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,

Glenn von Gonten

Acting Environmental Bureau Chief

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- **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 Part 29 (19.15.29 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. The OCD does not consider covering contaminated areas a remediation of the spill/release.
- **16. OCD Inspections:** The OCD performed an inspection of this facility on August 27, 2009. Mr. Bob Stewart, David Pepper and Elena Hofmann witnessed the inspection. All photographs referenced below are located in the attachment of this permit. As a result of this, OCD inspection concluded the following:
  - 1. Photo 1 2, 6: The basin of the old cooling tower is holding fluids without any function. If Owner/Operator wishes to maintain this pond they must re-engineer it to meet Condition B of this permit. If Owner/Operator cannot demonstrate the integrity of this pond they must cease operations, verify integrity and modify the containment so as to divert fluids. The Owner/Operator must document weather the containment has an impermeable bottom.
  - 2. Photo 3 5: The unused compressor building skid area is holding fluids that appear to have hydrocarbons. OCD requires the Owner/Operator to remove fluids and have the structure modified as to not receive any more fluids. Owner/Operator shall investigate any releases that may have occurred beneath the containment area. It appears that these fluids have overflowed to the north side of the building and have discharged on to the ground. The Owner/Operator shall remediate all releases from containment area.
  - 3. Photo 7 11: Several staged waste are on site. The Owner/Operator shall refer to Condition 6 of this permit for all waste on site and OCD Rule Part 35 for disposal of oil field waste. If waste stream disposal is not identified within the original application or any other subsequent application then OCD approval is needed prior to disposal of used filters, contaminated soil, etc.
  - 4. Photo 12 18, 37 and 38: Improperly managed containers and barrels. The June 2004 Permit Condition 4, 6, 7 and 8 identified procedures for maintaining containers and tanks. At the time of inspection there were several areas of concern. The Owner/Operator shall immediately address these concerns for all tanks/containers on site. Refer to OCD Rule Part 35 for disposal of containers and barrels. An inspection conducted by the OCD on February 8, 2005 previously noted these concerns.
  - 5. Photo 19 27, 33 36, 39: There were several areas within the facility yard that showed signs of discharges and releases on to the ground. The June 24, 2004 Permit Condition 5 identifies protocols for leaks and spills. Condition 13 identified procedures

for release notification and protocol. The Owner/Operator shall immediately cease all discharges on to the ground and shall initiate a work plan to address these spills and releases. There were indications of contaminated soil covered with clean fill (**Photo 25 – 27**). This is not remediation of the contaminated soil and the Owner/Operator shall cease this practice immediately. The renewal Permit condition 18 specifies conditions on releases.

6. Photo 28 – 32: Sumps operated as below-grade tanks. All sumps are single walled and have never been cleaned and integrity tested. The June 2004 Permit Condition 9 specified procedures for properly maintaining sumps/below-grade tanks. The Owner/Operator shall submit a work plan to replace these below-grade tanks.

The GW-048 file does not have any records of hydrostatic testing of drain/process lines on the facility. Please provide the records and identification of lines for the facility. Submit this along with the work plan. The Owner/operator shall submit their work plans by December 15, 2009 to address the identified concerns stated above.

- 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. <u>An unauthorized discharge is a violation of this permit.</u>
- 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: The owner/operator shall ensure that all employees understand all permit conditions.
- 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

<u>Conditions accepted by</u>: "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:                              |   |

Inspector(s): Leonard Lowe

Company Rep: Bob Stewart, Elena Hofmann and David Pepper

Date: 08.27.09 Time: 8:00 – 10:40 Page 1



Photo 1: Standing fluids near unused pump house.

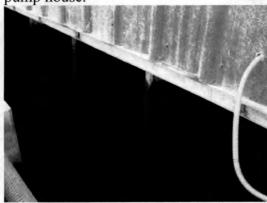


Photo 2: Large quantities of standing fluids.



<u>Photo 3</u>: Fluids standing underneath unused compressor building.



Photo 4: Oily fluids noted in photo 3.



Photo 5: Oil fluids noted in photo 3.



<u>Photo 6</u>: Old cooling tower containment full of black soil.

Inspector(s): Leonard Lowe
Company Rep: Bob Stewart, Elena Hofmann and David Pepper

Date: 08.27.09 Time: 8:00 - 10:40



Photo 7: Staged Mol sieve.



Photo 8: Staged Mol Sieve.



Photo 9: Staged contaminated soil.



Photo 10: Used filters staged near contaminated soil staging area.



Photo 11: Amount of used filters.



Photo 12: Improper barrel storage.

Inspector(s): Leonard Lowe

Company Rep: Bob Stewart, Elena Hofmann and David Pepper

Date: 08.27.09

Time: 8:00 - 10:40



Photo 13: Improper barrel storage.



<u>Photo 14</u>: Crushed barrel leaking contents.



Photo 15: Unbermed/curbed container.



Photo 16: Question contents of barrel.



Photo 17: Improper barrel storage.



Photo 18: Improper barrel storage.

Inspector(s): Leonard Lowe

Company Rep: Bob Stewart, Elena Hofmann and David Pepper

Date: 08.27.09

Time: 8:00 – 10:40



Photo 19: Discharge on ground.



Photo 20: Discharge on ground.



Photo 21: Discharge on ground.



Photo 22: Discharge on ground.



Photo 23: Discharge on ground.



Photo 24: Discharge on ground.

Inspector(s): Leonard Lowe

Company Rep: Bob Stewart, Elena Hofmann and David Pepper

Date: 08.27.09 Time: 8:00 – 10:40





Photo 25: Discharged covered.



<u>Photo 26</u>: Contamination exposed under clean soil.



Photo 27: Clean soil spread around.



Photo 28: Single wall BGT skimmer.



Photo 29: Amount of fluids in BGT skimmer.



Photo 30: 2 BGT, one for each compressor.

Inspector(s): Leonard Lowe

Company Rep: Bob Stewart, Elena Hofmann and David Pepper

Date: 08.27.09 Time: 8:00 – 10:40



Photo 31: BGT full of fluids.



Photo 32: Single wall BGT.



Photo 33: Discharges.



Photo 34: Discharged within unlined AST secondary containment.



Photo 35: Discharged within unlined AST secondary containment.



Photo 36: Discharged within unlined AST secondary containment.

Inspector(s): Leonard Lowe
Company Rep: Bob Stewart, Elena Hofmann and David Pepper

Date: 08.27.09 Time: 8:00 - 10:40



Photo 37: Unbermed/lined saddle tank.

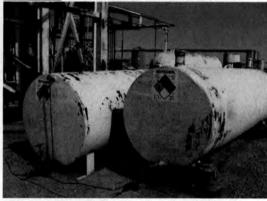


Photo 38: Unbermed/lined saddle tank.



Photo 39: Discharges within earthen unlined bermed area from AST.

#### Lowe, Leonard, EMNRD

From:

Lowe, Leonard, EMNRD

Sent:

Wednesday, August 05, 2009 4:57 PM

To:

bstewart@westtexasgas.com

Subject:

GW-048, Administratively Complete

Attachments:

GW-048, Admin Complete Letter.pdf; GW-048, Renewal Draft Permit.pdf; GW-048, OCD

PN.pdf

Mr. Stewart,

The OCD has determined your discharge plan renewal application to be administratively complete. Attached you will find:

- 1. Administratively complete letter
- 2. A DRAFT permit: addition requirements (condition 16) may be added once facility is inspected
- 3. The OCD version of the public notice.

The OCD has reviewed your submitted applicant public notice. Please verify the correct location and resubmit the notice for review. There was a discrepancy on the location in the notice and location stated within the application.

I would like to inspect your facility on Thursday August 27<sup>th</sup>. Please let me know if you or anyone within your organization can accommodate that date for inspection.

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/



#### **Bill Richardson**

Governor Joanna Prukop Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



August 5, 2009

Dear Mr. Stewart:

Re: Discharge Plan Renewal Permit GW-048

Davis Gas Processing, Inc. Denton Davis Gas Plant Lea County, New Mexico

The New Mexico Oil Conservation Division (NMOCD) has received Davis Gas Processing, Inc's request including the initial and facility fee, dated July 28, 2008 to renew GW-048 for their Davis Denton Gas Plant located in the NW/4 SW/4 of Section 2, Township 15 South, Range 37 East, NMPM, Lea County, New Mexico. The initial submittal provided the required information in order to deem the application "administratively" complete.

Therefore, the New Mexico Water Quality Control Commission regulations (WQCC) notice requirements of 20.6.2.3108 NMAC must be satisfied and demonstrated to the NMOCD. 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 <a href="leonard.lowe@state.nm.us">leonard.lowe@state.nm.us</a>. 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



#### **Bill Richardson**

Governor Joanna Prukop Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



August 5, 2009

Mr. Bob Stewart 211 N. Colorado Midland TX 79701

Re:

Renewal Discharge Permit, GW-048

Denton Davis Gas Plant

NW/4 SW/4 in Section 2, Township 15 South, Range 37 East, NMPM,

Lea County, New Mexico

Dear Mr. Stewart:

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 **Davis Gas Processing Inc.** discharge permit 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 30 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 Leonard Lowe of my staff at (505-476-3492) or E-mail leonard lowe@state.nn.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

Glenn von Gonten
Acting 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 Gas Plant is \$4000.00 and has already been paid and processed. Please submit a signed copy of the permit and return to the OCD within 30 days.
- 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 September 12, 2014 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: Rutsuant to WQCC Regulation 20.6.2.3104 NMAC, when a permit has been issued, the owner/operator prustiensure 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 July, 2009 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: WQC 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 Part 35 Waste: Pursuant to OCD Part 35 (19.15.35.8 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 apt 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 upless approved by the OCD.
- 7. **Drum Storage:** The owner/operator must store all drums, including enapty 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 Areass. 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 surfage.
- 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/operators hall retroficiall 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. Babeling: 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 nested, 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 are 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. Rhe 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

Mr. Bob Stewart Davis Gas Processing Inc. GW-048, Denton Davis Gas Plant August 5, 2009 Page 5

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 Part 29 (19.15.29 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 13 days. The OCD does not consider covering contaminated areas a remediation of the spill/release.
- **16. OCD Inspections:** The OCD performed an inspection of this facility on month, day, year. Mr. Man and Ms. Man witnessed the inspection. All photographs referenced below are located in the attachment of this permit. As a result of this, OCD inspection concluded the following:

#### 1. Photo 1:

Owner/operator shall resolve these concerns and report within **by Month**, **Day**, **Year**. The report shall be submitted, with photographs, to the Environmental Bureau Oil Conservation Division identifying the resolutions to the concerns.

- 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 20.6.23-101 NMAC of 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 QCD within 24 hours of discovery of any releases and shall take immediate corrective action(s) to stop the discharge.
- 18. Enauthorized Discharges: The owner/operator shall not allow or cause water pollution, discharge of release of any water contaminant that exceeds the WQCC standards listed in 20.6.2.3101 NVIAC or 20.6 A NMAC (Water Quality Standards for Interstate and Intrastate Streams) unless specifically listed in the permit application and approved herein. <u>An unauthorized discharge is a violation of this permit.</u>
- 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: The owner/operator shall ensure that all employees understand all permit conditions.

Mr. Bob Stewart Davis Gas Processing Inc. GW-048, Denton Davis Gas Plant August 5, 2009 Page 6

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 20,62.3107 NMA can owner/operator shall notify the OCD when any operations of the facility are to be dissontinued 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 turner 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-048) Mr. Bob Stewart, Environmental Coordinator, Davis Gas Processing Inc. 211 North Colorado, Midland Texas 79701, has submitted a renewal application for the previously approved discharge plan for their Denton Davis Gas Plant located in NW/4 SW/4 of Section 2, Township 15 South, Range 37E East, NMPM, Lea County. The facility compresses, treats, dehydrates and performs natural gas recovery. Approximately 750 gallons/day of produced water and 210 bbls/day of condensate are generated and stored in onsite. Groundwater most likely to be affected by a spill, leak or accidental discharge is at a depth of approximately 40 - 105 feet, with a total dissolved solids concentration of approximately 610 - 1600 mg/L. 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 <a href="http://www.emnrd.state.nm.us/ocd/">http://www.emnrd.state.nm.us/ocd/</a>. 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 5<sup>th</sup> day of August 2009.

### OIL CONSERVATION DIVISION

SEAL

Mark Fesmire, Director

# ACKNOWLEDGEMENT OF RECEIPT OF CHECK/CASH

| I hereby acknowledge receipt of check   | No dated _7/28/09                     |
|---|---------------------------------------|
| or cash received on in the              | amount of \$ 4100 00                  |
| from Davis GAS Proc                     | · · · · · · · · · · · · · · · · · · · |
| for <u>Ew-48</u>                        | 1                                     |
| Submitted by: LAWITERIE ,               | Romero Date: 7/31/09                  |
| /                                       | Pos-car Date: 7/31/89                 |
| Received in ASD by:                     | Date:                                 |
| Filing Fee New Facil                    | ity Renewal                           |
| Modification Other <u></u>              | Acility Frees                         |
| Organization Code521.07                 | Applicable FY 2004                    |
| To be deposited in the Water Quality Ma | nagement Fund                         |
| Full Payment or Annual                  | Increment                             |

404 Camp Craft Rd., Austin, Texas 78746 Tel: (512) 347 7588 Fax: (512) 347 8243 Internet: www.rpsgroup.com/energy

### Via Overnight Delivery

July 29, 2009

Mr. Leonard Lowe, Environmental Engineer Oil Conservation Division/EMNRD 1220 S. St. Francis Drive Santa Fe, NM 87505

Subject:

Discharge Plan Renewal, GW-048

Davis Gas Processing, Inc.

Denton Plant

Dear Mr. Lowe:

On behalf of Davis Gas Processing, Inc., RPS is submitting two copies of the enclosed discharge plan renewal application. In addition to the application, we are also submitting a check in the amount of \$4,100 for the application fee as well as draft notice language for your review. Within 30 days of approval of the application, Davis Gas Processing will post approved public notice language in the local newspaper and mail notice to landowners within 1/3 mile from the facility. The notice will be a minimum of two inches by three inches in size and will be published in both English and Spanish. Within 15 days of posting the public notice, Davis Gas Processing will submit proof of notice publication to you.

We appreciate your assistance in this matter. If you have any questions or comments regarding this submission, please call Mr. Bob Stewart of Davis Gas Processing, Inc. at (432) 682-6311 or me at (512) 347-7588.

Sincerely,

**RPS** 

Kyle Shelton Senior Consultant

c: Mr. Bob Stewart, Davis Gas Processing

Elena Hofmann, RPS

Enclosures

#### **PUBLIC NOTICE**

Davis Gas Processing, Inc., 211 N. Colorado, Midland, TX 79701, has submitted an application to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division for a discharge plan permit renewal (GW-048) for their Denton, New Mexico gas processing plant located in the SE/4 of Section 2, Township 15 South, Range 37 East in Lea County, New Mexico. The physical address of the facility is approximately 11 miles east of Lovington, New Mexico 88130 on the north site of US Highway 82.

The facility provides compression, storing, and distribution of oil and gas related material. Materials generated or used at the facility include pipeline condensate liquid, engine cooling water, and other wash down water. Approximately 4,000 gallons of wash down water are discharged to surface soil annually. All other liquids utilized at the facility are stored in dedicated above ground storage tanks prior to offsite disposal or recycling at an OCD approved site.

The aquifer most likely to be affected is 40 to 105 feet in depth, and the total dissolved solids concentration of this aquifer is approximately 610 to 1,600 mg/l.

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0034661

DESCRIPTION

INV DATE

INVOICE REF. #

AMOUNT

7/28/09

APPLICATION FOR

4,100.00

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

Revised June 10, 2003

# 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: Gas Processing Plant   |
| 2.              | Operator: <u>Davis Gas Processing, Inc.</u>  |
|                 | Address: 211 N. Colorado, Midland, TX 79701  |
|                 | Contact Person: Bob Stewart Phone: (432) 682-6311  |
|                 |  |
| 3.              | Location: <u>NW</u> /4 <u>SW</u> /4 Section <u>2</u> Township <u>155</u> Range <u>37E</u>  |
|                 | Submit large scale topographic map showing exact location. Section 3.0   |
| 4.              | Attach the name, telephone number and address of the landowner of the facility site. Section 4.0   |
| 5.<br><b>Se</b> | Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.  |
| 6.              | Attach a description of all materials stored or used at the facility. Section 6.0  |
| 7.              | Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included. <i>Section 7.0</i>               |
| 8.              | Attach a description of current liquid and solid waste collection/treatment/disposal procedures. Section 8.0   |
| 9.              | Attach a description of proposed modifications to existing collection/treatment/disposal systems. Section 9.0  |
| 10              | Attach a routine inspection and maintenance plan to ensure permit compliance. Section 10.0   |
| 11              | . Attach a contingency plan for reporting and clean-up of spills or releases. Section 11.0   |
|                 | Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included.  |
| 13              | Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders. <i>Section 13.0</i> |
|                 | 14. CERTIFICATIONI hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.                       |
|                 | Name: Bob Stewart Title: Environmental Coordinator   |
|                 | Signature: Date: 7-28-09   |
|                 | E-mail Address: Ustewart@westtexasgas.com  |



404 Camp Craft Rd., Austin, Texas 78746
Tel: (512) 347 7588 Fax: (512) 347 8243
Internet: www.rpsgroup.com/energy

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Sincerely,

**RPS** 

Kyle Shelton Senior Consultant

c: Mr. Bob Stewart, Davis Gas Processing Elena Hofmann, RPS

Enclosures

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

|           |                       |            |              |            |            |                                  |              |         | _             |                  |                    |               |
|-----------|-----------------------|------------|--------------|------------|------------|----------------------------------|--------------|---------|---------------|------------------|--------------------|---------------|
|           |                       |            |              |            | New        | Renew                            | al [         | ] м     | odification   |                  |                    |               |
| 1. '      | Туре:                 |            | Gas P        | rocessin   | g Plant    |                                  |              |         |               |                  |                    |               |
|           | Operator:             |            |              |            | cessing    | Inc.                             |              |         |               |                  |                    |               |
|           | Address:              |            | 211 1        | V. Color   | ado, Mic   | lland, TX 7970                   | <u> </u>     |         |               |                  |                    |               |
|           | Contact P             | erson:     | <u>Bob</u>   | Stewart    |            |                                  |              |         | Phone:        | <u>(432) 682</u> | <u>-6311</u>       |               |
| 3. 1      | Location:             | <u>NV</u>  | <u>V</u>     |            |            | _/4 Section _<br>scale topograph |              |         |               |                  | Range<br>etion 3.0 | <i>37E</i>    |
| 4.        | Attach the            | e name, t  | elephor      | ne numb    | er and ac  | ldress of the lan                | ndowner o    | of the  | facility site | . Section        | 4.0                |               |
| 5.<br>Sec | Attach the            | e descrip  | tion of      | the facili | ity with a | a diagram indica                 | ating loca   | tion o  | of fences, pi | its, dikes a     | and tanks on       | the facility. |
| 6.        | Attach a              | descriptio | on of all    | materia    | ds stored  | or used at the f                 | facility. S  | Section | n 6.0         |                  |                    |               |
| 7.        | Attach a o            | -          | -            |            | urces of   | effluent and wa                  | ste solids   | . Ave   | rage qualit   | y and dail       | y volume of        | waste water   |
| 8.        | Attach a              | descriptio | on of cu     | rrent liq  | uid and    | solid waste coll                 | ection/tre   | atmen   | t/disposal j  | procedure        | s. Section 8       | .0            |
| 9.        | Attach a              | descriptio | on of pr     | oposed 1   | modifica   | tions to existing                | g collection | on/trea | atment/disp   | osal syste       | ms. Section        | 9.0           |
| 10.       | Attach a              | routine i  | nspection    | on and n   | naintenai  | nce plan to ensu                 | ıre permit   | comp    | oliance. Se   | ction 10.0       | )                  |               |
| 11.       | Attach a              | continge   | ncy pla      | n for rep  | orting a   | nd clean-up of s                 | spills or re | elease  | s. Section    | 11.0             |                    |               |
|           | Attach gotion 12.0    | eological  | /hydrol      | ogical in  | nformatio  | on for the facilit               | ty. Depth    | to an   | d quality o   | f ground v       | vater must b       | e included.   |
| 13.       | Attach a rules, reg   |            |              |            |            | nformation as is<br>13.0         | necessar     | y to d  | emonstrate    | complian         | ce with any        | other OCD     |
|           | 4. CERTI<br>f my know |            |              | -          | ify that t | he information s                 | submitted    | l with  | this applica  | ation is tru     | e and correc       | t to the best |
| N         | lame:                 | Bob Sten   | vart         |            |            |                                  | Tit          | tle:    | Environn      | nental Co        | <u>ordinator</u>   | ~~ <u> </u>   |
| S         | ignature: _           | SI         | Hern         | 70         |            |                                  | Da           | nte:    | 7-2           | 8-09             |                    |               |
| Ε         | -mail Add             | ress: b    | /<br>stewart | a)westte   | xasgas.c   | com                              |              |         |               |                  |                    |               |

#### PUBLIC NOTICE

Davis Gas Processing, Inc., 211 N. Colorado, Midland, TX 79701, has submitted an application to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division for a discharge plan permit renewal (GW-048) for their Denton, New Mexico gas processing plant located in the SE/4 of Section 2, Township 15 South, Range 37 East in Lea County, New Mexico. The physical address of the facility is approximately 11 miles east of Lovington, New Mexico. 88130 on the north site of US Highway 82.

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### DAVIS GAS PROCESSING, INC. DENTON PLANT

211 NORTH COLORADO MIDLAND, TEXAS 79701-4696 (432) 682-6311

**DESCRIPTION** 

INV DATE

INVOICE REF. #

AMOUNT

7/28/09

APPLICATION FOR

4,100.00

0110103

NMED-WATER QUALITY MANAGME

THIS CHECK IS YOU WITHOUT A BLUE AND RED BACKGROUND AND AN ARTIFICIAL

0034661

4,100.00



### DAVIS GASPROCESSING, INC.

DENION PLANT

SANTON 4100 DOLLARS AND 00 CENTS

NMED WATER QUALITY MANAGMENT NEW MEXICO MINERALS & NATURAL RESOURSES FIGURES (1985)

OIL CONSERVATION DIVISION A1220 SOUTH STERANGIS DRIVE SANTA FEANM 87588

WEST TEXAS NATIONAL BA

\$35**\$4**;100:0075

DAVIS GAS:PROCESSING SINC





# **Attachment A**

# **Topographic Map**



404 Camp Craft Rd., Austin, Texas 78746 Tel: (512) 347 7588 Fax: (512) 347 8243 Internet: www.rpsgroup.com/energy

# Discharge Plan GW-048 Davis Gas Processing, Inc. Denton, NM

**July 2009** 



### **Table of Contents**

| Section 1  | Introduction                                   | 1  |
|------------|--|----|
| Section 2  | Responsible Party                              | 2  |
| Section 3  | Location of Discharge and Facility             | 3  |
| Section 4  | Landowner                                      | 4  |
| Section 5  | Facility Description                           | 5  |
| Section 6  | Materials Stored or Used                       | 6  |
| Section 7  | Sources, Quantities, and Qualities of Effluent | 7  |
| Section 8  | Liquid Waste Storage and Disposal Procedures   | 11 |
| Section 9  | Proposed Modifications                         | 13 |
| Section 10 | Inspection, Maintenance, and Reporting         | 14 |
| Section 11 | Spill/Leak Prevention and Reporting            | 15 |
| Section 12 | Site Characteristics                           | 17 |
| Section 13 | Other Information                              | 19 |

### **List of Attachments**

| Attachment A | Topographic Map                  |
|--------------|----------------------------------|
| Attachment B | Aerial Drawing                   |
| Attachment C | Process Flow Diagran             |
| Attachment D | Effluent Quality                 |
| Attachment E | Well Waste Analysis              |
| Attachment F | H <sub>2</sub> S Monitoring Plan |



# Section 1 Introduction

This Discharge Plan details the nature, extent, and quality of all fluids discharged to surface soil at Davis Gas Processing, Inc.'s Denton, New Mexico Plant (Denton Plant). This plan also provides relevant information regarding location of the site, liquid materials used at the site, and operational procedures as prescribed under New Mexico Oil Conservation Division's (OCD's) implementation of Sections 3104 and 3106 of New Mexico Water Quality Control Commission (WQCC) regulations.

The Denton Plant is a gas processing plant that consists of inlet gas compression, gas treating, gas dehydration, and a cryogenic processing unit. All process cooling is via forced air and all heating is via direct combustion of gas. Consequently, there is no cooling tower or boiler system associated with current operations.

The major source of wastewater at the facility is produced water – most of which enters with the gas as water of saturation – and it is managed off-site. The major source of water that is managed on-site via discharge to surface soil is wash water.



# Section 2 Responsible Party

The operator and legally responsible party for the facility is Davis Gas Processing, Inc. Contact information for the Denton Plant is as follows:

Name of Discharger:

Davis Gas Processing, Inc.

211 N. Colorado Midland, TX 79701

Name of Local Contact:

David Pepper Denton Plant Rt. 1, Box 510

Lovington, NM 88260 (575) 396-6022 – Plant

Official Contact:

**Bob Stewart** 

Davis Gas Processing, Inc.

211 N. Colorado Midland, TX 79701 (432) 682-6311

bstewart@westtexasgas.com



# **Section 3 Location of Discharge and Facility**

The Denton Plant is located approximately 11 miles east of Lovington, New Mexico in SE/4, Section 2, Township 15S, Range 37E, Lea County, New Mexico at longitude -103.17190 and latitude 33.04537. A topographic map and aerial photograph, which shows the site plan, of the facility are provided as Attachments A and B, respectively. The map and photograph show relevant features of the site and surrounding areas.



### Section 4 Landowner

The property on which the Denton Plant resides is owned by Davis Gas Processing, Inc. The mailing address for Davis Gas Processing, Inc. is as follows:

Name of Landowner: Davis Gas Processing, Inc.

211 N. Colorado Midland, TX 79701



# Section 5 Facility Description

Key components of production process at the Denton Plant are compression, treating, dehydration, and natural gas liquids recovery. Attachment C provides a process flow diagram showing these key elements.

Four 1,000 HP compressors are available to boost the incoming low-pressure gas to about 850 psig. The gas is treated after the second stage of compression in a 60 GPM DEA (amine) unit to remove CO<sub>2</sub> and H<sub>2</sub>S. After the DEA treatment, the gas is returned to the compressors for the third stage of compression.

Following the inlet separator and each stage of compression, condensate and water are removed from the gas stream and discharged to the condensate recovery system.

High pressure gas, after compression, is dehydrated in a molecular sieve unit and enters the processing equipment. The gas is cooled via heat exchange and supplemental refrigeration and then passes through the expander unit. The expander unit drops the gas pressure to 140 psig which cools the gas to below – 100 F and causes liquid hydrocarbons to drop out.

The residue gas is warmed in the heat exchange equipment and then compressed to 1,000 psig via the rough stage of the inlet gas compressors. The residue gas is sold, and liquid products are removed via pipeline.

An idle ammonia plant and an idle/inoperative refrigerated gas plant process unit are on the same site. These plant processes don no consume/contribute any process liquids and do not result in any wastewater discharges.



# Section 6 Materials Stored or Used

The following are the primary materials, which are described by major category, stored or used at the facility:

- Process-specific chemicals since the facility is a gas processing plant, hydrocarbon liquids may be present in the form of condensate and/or waters mixed with hydrocarbon.
   Process liquids are generally described as condensate, crude oil, and slop oil;
- Acids/caustics no significant acids/caustics are used in the process;
- Detergents/soaps minor quantities of detergents and soaps are used for personal hygiene. In addition, detergents/soaps are also used to periodically wash down process units;
- Solvents, inhibitors, and degreasers only small quantities of solvents/degreasers are used as part of maintenance activities;
- Paraffin treatment/emulsion breakers no paraffin treatment/emulsion breaking liquids are used at the facility;
- Biocides no biocides are used at the site;
- Sewage domestic sewage is generated at the site; and
- Others A water/glycol mixture is used in the engine jacket water system.

Additional detail regarding management of these materials is provided in Section 7.0 (Sources and Quantities of Effluent).



# Section 7 Sources, Quantities, and Qualities of Effluent

As detailed below, the only two sources of waste waters, which consist of wash waters associated with cleaning the amine unit and the process skid, are discharged to surface soils, and the majority of these waters are typically routed to a storage tank for off-site disposal. All other waste waters are routinely collected in storage tanks/containers and transported for off-site disposal. The following descriptions provide summaries of plant processes that are the sources of effluent at the facility.

#### Amine Unit

Except during cleaning, there are no process waters resulting from the amine unit. The amine contactor is followed by an amine regeneration unit with off gases being routed to a flare.

### Separators/Scrubbers (Produced Water)

This is low TDS water with traces of soluble/entrained hydrocarbons. The total annual volume is about 270,000 gallons based on 6 MMCFD of inlet gas. This equates to roughly 750 gallons per day. The produced water rate will be higher in the warmer months and less in the cooler months. Water removed in the dehydration unit is commingled with the produced water in the first stage separator. The separator water flows to a 9,000 gallon tank (TK-5) for oil separation and the separated water then flows to a 1,000 barrel storage tank (TK-4) for subsequent truck transport to a disposal well.

#### Slug Catchers/Condensate

There are four stages of section lines, which are each equipped with "slug catchers" that facilitate removal of condensate. In addition, condensate is also produced by the separators/scrubbers. Condensate flows into one of two tanks (TK-2A and TK-2B) with each having a capacity of 210 barrels. Condensate is pumped into trucks for subsequent transport to an authorized off-site facility.

### Crude/Slop Oil

Crude/slop oil that may result from the separators flows into a 9,000-gallon tank (TK-5) for oil separation and the separated water then flows to a 1,000 barrel storage tank (TK-4) for subsequent truck transport to a disposal well.



### Boilers/Heat Recovery/Cogeneration

There are no active boilers at the facility, and there are no heat recovery or cogeneration systems.

### Engine Cooling Water-Gylcol

There is no routine discharge from the engine jacket water system. Depending on the product used, the engine jacket water-glycol mixture may contain a corrosion inhibitor.

### Cooling Towers/Fans

There are no active cooling towers at the facility. Cooling is currently provided via forced air fans. The sump of the original cooling tower is used to collect and hold runoff rain water so as to minimize flooding during rainstorms. The runoff water typically is allowed to evaporate. Runoff water would be expected to contain trace levels of hydrocarbons (hydrocarbons from equipment wash effect). Excess rainwater runoff is pumped to the unlined pit.

### Sewage

All sanitary sewage is handled separately from the process/plant waste water and is discharged to an approved, on-site septic system.

#### Other-Wash Water

The amine treating unit is washed down with a water hose (usually once per month), and the runoff water flows to the soil surface. Detergent is typically not used in the washing, and it is estimated that about 300 gallons of wash water are used (30 min. x 10 gpm). Less than one gallon of amine solution (pump seal drips, samples, etc.), some wind-blown dirt, and trace quantities of oil are estimated to be washed off the amine equipment. This wash water is typically routed to a 1,000 barrel storage tank (TK-4) for subsequent truck transport to a disposal well but may also be discharged to surface soils.

The process skid is typically steam cleaned at six month intervals. A mixture of roughly 250 gallons water to 20 pounds of powder detergent (e.g., "Red Power") is used. There is no hose down after cleaning, but the detergent is cut off and a 30 minute steam only wash is used to finish the job. It is estimated that 125 gallons of water condense and this plus about 15 pounds of the detergent is discharged. The discharge is typically routed to a 1,000 barrel storage tank



(TK-4) for subsequent truck transport to a disposal well but may also be discharged to surface soils. Trace quantities of lube oil and hydrocarbons are anticipated to be entrained in the water.

Similar to the process skid, the compressors are typically steam cleaned once per six months. The cleaner charge is the same 250 gallons water plus about 20 lbs. of powder detergent. After steam cleaning, the compressors are hosed down over a 2 hour interval. At 10 gpm, about 1,200 gallons of wash water are used. Wash water is collected in a sump below the compressor building and transferred first to a concrete 28' x 6' x 8' (deep) skimmer pit for oil separations. The wash water will contain minute quantities of lube oil residue in addition to the detergent. After the sump, the water is pumped to a 210 barrel tank (TK-2A or TK-2B) to settle the oil and then is pumped to the 1,000 barrel tank (TK-4) for subsequent off-site disposal.

#### Effluent Quality

Attachment D provides analytical results obtained by the OCD. These results are indicative of water quality within the plant. As described above, most waste water discharges are routed to the 1,000 barrel water tank (TK-4) for subsequent removal by a commercial third party hauling company with aqueous waste ultimately being disposed of in a disposal well. The following is a summary of the results provided in Attachment D:

- The toxic pollutants per WQCC Section 3-103 address elements such as arsenic, mercury, selenium, chromium, etc., and these pollutants are found only in the process discharge water, which is collected in the 1,000 barrel storage tank (TK-4) and does not contact soil surface. Moreover, concentrations of these pollutants are reported as being well below the established toxicity limit for human health standards.
- Toxic pollutants per WQCC 1-101.UU are present in the process discharge. These are primarily benzene and benzene derivatives. There are no halomethanes reported in the process discharge water, but trace levels of halomethanes are reported in the produced well water. This stream is external to the plant; moreover, the source of the halomethanes is unknown as the plant has never used a halomethane refrigerant. The plant refrigerant system is based on propane.
- No insecticides, PCB;s or radioactive pollutants were reported.
- No detectable toxic pollutants were reported for the cooling tower basin water. The basin acts mainly as a sump for runoff rainwater. The only source of pollutants would be the rainwater "wash" of the process equipment. An oily sheen was noted for the cooling tower basin water, but again, no detectable level of pollutants were reported.



- The waste water flow rate varies mainly with respect to the inlet gas volume, temperature and pressure. Most of the process waste water is water of saturation although a small amount enters irregularly as an incoming "slug".
- The gas rate is slightly higher in winter months due to demand, but the water content is low. The slightly lower gas rates of the summer months contain the highest quantities of process waste water because of the warm gas temperature. Likewise, more water is condensed in the daylight hours than during the cooler night hours and is transported off-site for disposal. Due to the hold time in the system, there is no sudden change on a daily basis. The seasonal change is gradual. Thus, except for equipment or well problems, there is no sudden fluctuation in the discharge water rate.



# Section 8 Liquid Waste Storage and Disposal Procedures

The following are the primary elements associated with liquid waste storage and disposal procedures at the Denton Plant.

- Five primary tanks (TK-2A, TK-2B, TK-3, TK-4, and TK-5) are used for storage of liquids prior to recovery or disposal depending on the liquids.
- Aside from the wash waters associated with the amine unit and the process skid as well
  as storm water, no other waste water from the from the facility is routinely discharged to
  soil. Other waste waters are collected in the 1,000 barrel tank (TK-4) and transported
  off-site to a disposal well.
- There is one historical surface impoundment (pit) at the facility, which is reflected as the "water feature" directly east of the facility on the topographic map (Attachment A). The impoundment was an unlined waste water evaporation pit. This unit was shut down approximately November 1, 1988, and replaced by the 1,000 barrel tank (TK-4).
- There is no leach field other than an approved septic tank system for sewage.
- There are no injection wells on site.
- There are no drying beds or flare pits.
- There are no on-site disposal areas.

Produced water is the only continual source of discharge at the Denton Plant. The inlet scrubber normally collects only a minor quality of water from the gathering system and process dehydrator scrubber. The second and third stage compressor section scrubbers likewise collect only a small quantity of condensed water. Each of the preceding water sources enters the main dump line in sequence and flows to the 9,000 gallon separation tank (TK-5). The third stage discharge scrubber collects the largest quantity of water. This source has a separate line to the 9,000 gallon tank. Lines are all above grade.

The compressor room wash water, and any process fluid or jacket water spilled when equipment is opened, drains to the sump below the engine room.

The wash water from the other process units (amine and skid) drains to the soil surface.



The waste engine and compressor oils are collected in drums. This is done on the floor over the engine room pit, hence any drips would go to the skimmer pit and tanks. No waste oil would go to the soil surface.

Engine jacket water leaks would likewise to the engine room pit and not contact the soil surface.

Minor amine leaks and drips resulting from filter change-outs may eventually wash to the soil surface if not wiped up following the change out.

Due to the combination of containment of the process water and very low quantity of other liquids entering the soil surface, no preventative measures are scheduled other than good housekeeping.

There are numerous sample points available in the system via conventional valves. There is no direct measurement. A reasonably accurate measurement can be calculated via timing the rise of liquid level in the various scrubbers. When the vessels are blocked in, an overall estimation can be obtained from the temperature/pressure of the inlet gas and various scrubbers; only the inlet entrained water is immeasurable via this method.

No monitoring systems exist. Again, the discharge volume is contained and any fluid discharge to the soil surface will be minimized.



# **Section 9 Proposed Modifications**

No modifications are proposed as part of this discharge plan.



# Section 10 Inspection, Maintenance, and Reporting

Inspection, maintenance, and reporting are key components of facility operations to minimize the potential for equipment malfunction and/or operator error that could result in spills, leaks, and other releases. To this end, equipment is regularly inspected to ensure that it is safe and effective in its operation. Visual observations of the tanks and associated piping that manage liquids at the facility are made on a routine basis. If material defects and/or leaks are observed, they are reported and repaired as soon as practical.

Regular maintenance of equipment is performed to maximize its functionality and minimize the opportunity for releases. Mechanical equipment (e.g., motors, pumps, etc.) is serviced (e.g., lubricated, replace belts, etc.) regularly to ensure good operation. Filters are replaced as necessary to prevent significant back-pressure in process lines.

Any problems noted via inspection and/or maintenance are reported to operations management and repairs/resolution is implemented to address the issue.



# Section 11 Spill/Leak Prevention and Reporting

The Denton Plant does not have a written contingency plan; however, as described below, the facility has procedures in place to prevent spills. However, if a spill or leak results, it will be managed in accordance with the requirements of OCD Rule 116 and WQCC Section 1203. Specifically, the OCD Director and Field Office will be notified by telephone within 24 hours of a significant spill or release. Steps to mitigate impacts to surface and/or ground water will be taken upon initial discovery of the spill/leak followed by source removal activities to minimize impacts.

The Denton Plant has prevention procedures (inspection, maintenance, and reporting) in place to minimize the potential for spills/leaks at the facility. Accordingly, spills and leaks are not likely, but the potential for them to occur does exist. In addition to prevention procedures, other site features exist to minimize impacts of a spill at the facility, and response procedures are used to quickly and effectively manage spills/leaks.

The following specific measures are in place to address containment and cleanup of a major spill at the Denton Plant:

- There is a historical pit at the facility that was used for evaporation. The pit is situated immediately east of the operating area and is visible on the topographic map included as Attachment A. In the event of a release, the pit could serve as a hydraulic control measure.
- The primary source of hydrocarbons at the facility is the condensate that is stored in two tanks (TK-2A and TK-2B), which are each 210 barrels in capacity. The two tanks are colocated with a common secondary containment berm having an approximate total capacity of 519 barrels. Factoring in displacement from a 4-inch rainfall yields a containment capacity of roughly 175% of the largest tank.
- If the 1,000 barrel water tank (TK-4) ruptured when full and all contents were lost, the net result would be a "one-time" discharge of relatively innocuous aqueous fluid. Should any of the process vessels rupture, the net effect would be minimal, if any, with respect to the water table. If the 1,000 barrel disposal tank (TK-4) ruptures, no remedial action would be taken. This tank basically contains produced water and a single discharge would not likely be serious. The pit could be used until the leak was repaired or the tank replaced. It is estimated that repair or replacement would require no more than 5 to 10 days.



- The light hydrocarbon product storage tank (TK-3) may contain up to 30,000 gallons of high pressure product, but more normally contains 15,000 to 20,000 gallons. If this tank ruptured, the vast majority of the liquids would vaporize. A fire hazard is the prime concern should this tank rupture. Should this vessel in fact rupture and spill the contents to the soil surface, any badly saturated zone would be dug out and stored for the interim on a plastic tarp. The ultimate disposal would be decided after review of the situation.
- If either of the 210 barrel condensate/water tanks (TK-2A and TK-2B) rupture, any hydrocarbon saturated zone would be dug out, aerated and disposed of in similar fashion described above.
- If the 1,000 barrel condensate tank (TK-5) develops a leak and the leak is contained prior to drainage of the hydrocarbon layer, it is assumed that no remedial action is necessary. If the leak caused the entire tank to drain, thus releasing hydrocarbon condensate, the hydrocarbon saturated soil would be handled as described above.
- Rainwater runoff collected in the cooling tower basin is partially evaporated, then pumped to the unlined pit. This same practice is anticipated for future operations.
- All underground piping is no more than 6 to 12 inches below grade. It is buried mainly to
  facilitate vehicle and personnel traffic, and is in regularly traveled areas. Any leak would
  be immediately noticed as a seep. If a leak is detected, the leaking portion of the line
  will be dug out and replaced.



### Section 12 Site Characteristics

The following summarize the prominent geologic, hydrogeologic, and hydrologic features at and near the facility:

- There are no natural water courses or active bodies of water within one mile of the
  outside plant perimeter. However, there is a historical evaporation pond (pit) located
  east of the facility that can be used for hydraulic control/containment.
- Per the USGS topographic map, there are no wells within a one mile radius of the outside plant perimeter. However, there are two wells within the plant boundaries.
- A USGS topographical map of the area is provided as Attachment A. It reflects surrounding areas within one mile of the facility.
- As described above, there are no wells reflected on the USGS map within one mile of the facility. However, the following is geographical location, ownership, and end use of wells in the vicintiy:
  - Well situated at 14S37E35.324213, is owned by Dickenson Minor Estate, and is used for a stock tank; and
  - Well situated at 14S37E36.314, is owned by Bht. Pope, and is used for a stock tank.
- The depth to the ground water table is approximately 40 feet to the top sand and 105 feet to the main sand. The water table is the "To" aquifer of the Ogallala. This information is a composite of the plant well report L-610-AS plus the USGS Hydrologic Investigation Atlases HA-330 and HA-62.
- The TDS in groundwater ranges 610 to 1600 mgl.
- Attachment E contains well water analyses from OCD.
- The groundwater flow is to the east southeast. The groundwater flow direction is at a right angle to the base groundwater gradient. This gradient was obtained from the contours on the USGS hydrologic Investigation Atlases HA-330 and HA-62.
- The soil structure in the area of the plant site consists of about one to two feet of topsoil (sandy loam) followed by a layer of caliche that is 15 to 20 feet thick. Below the caliche is a water-bearing a zone of unconsolidated sedimentary sand cemented somewhat by lime or caliche. An irregular layer of limestone (not impervious) caps the main Ogallala formation which consist primarily of course sand and gravel. At the bottom of the Ogallala is the impervious "red bed" structure.
- The aguifer is the "To" aguifer of the Ogallala formations.

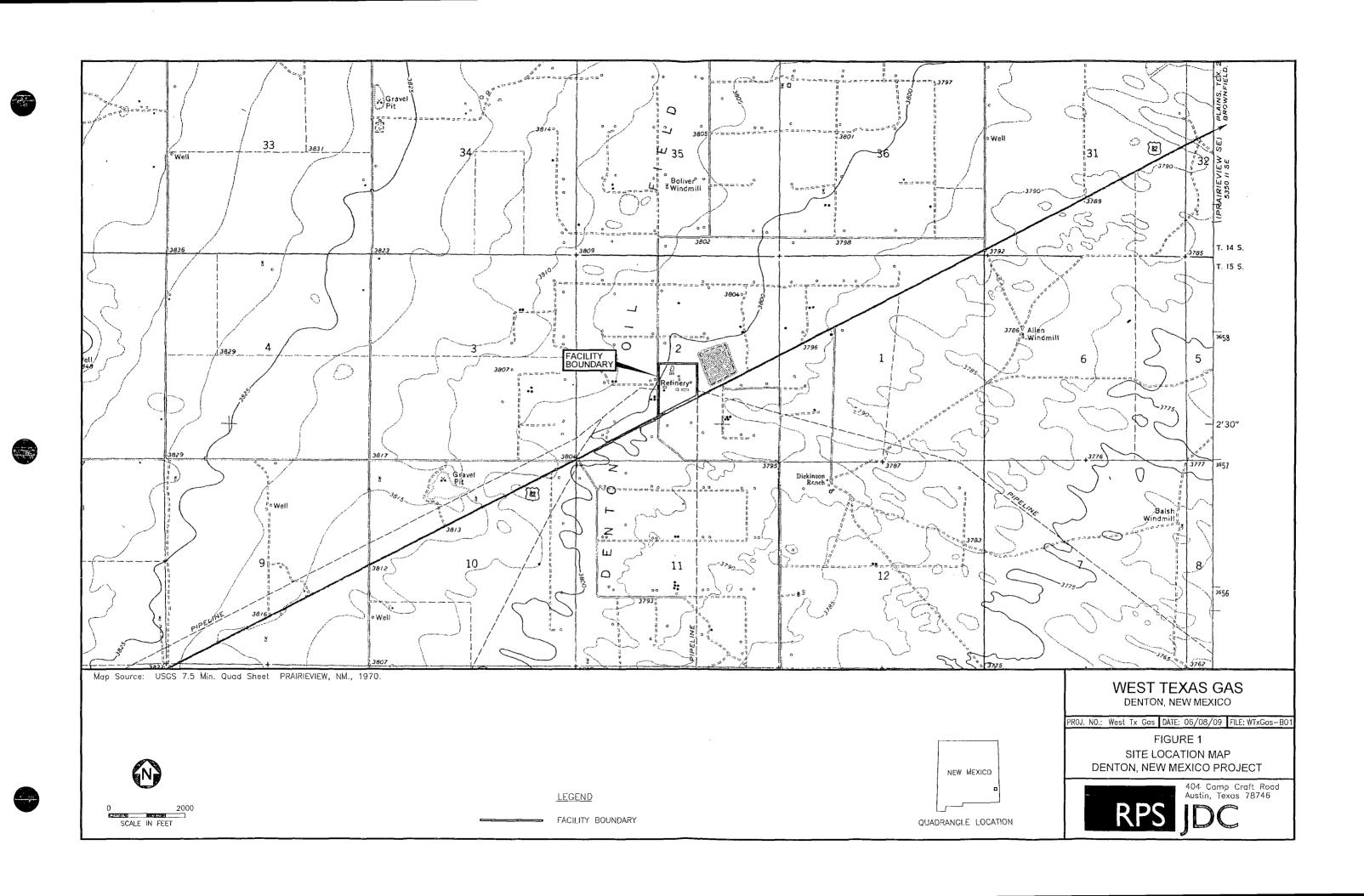


- The aquifer represents sections of the Pliocene, Tertiary, and Cenozoic Ages. It
  consists of irregularly-bedded sand, grit and local gravel conglomerate cemented by lime
  or caliche and local beds of sand, clay and limestone. It may include some re-deposited
  material from the underlying Cretaceous and Triassic ages.
- The depth to rock at the base of the alluvium is approximately 200 feet for the overall area. This was determined as the difference between the approximately 3,800 feet elevation of the soil surface (USGS Topographical Map) and the 3,600 feet elevation for the base of the Ogallala (USGS Atlas HA-330).
- A major rainfall can cause localized flooding which could involve highway 82. The old cooling tower basin at the site will intercept much of the rainwater and prevent flooding of Highway 82 in all but the worse storms.



# **Section 13 Other Information**

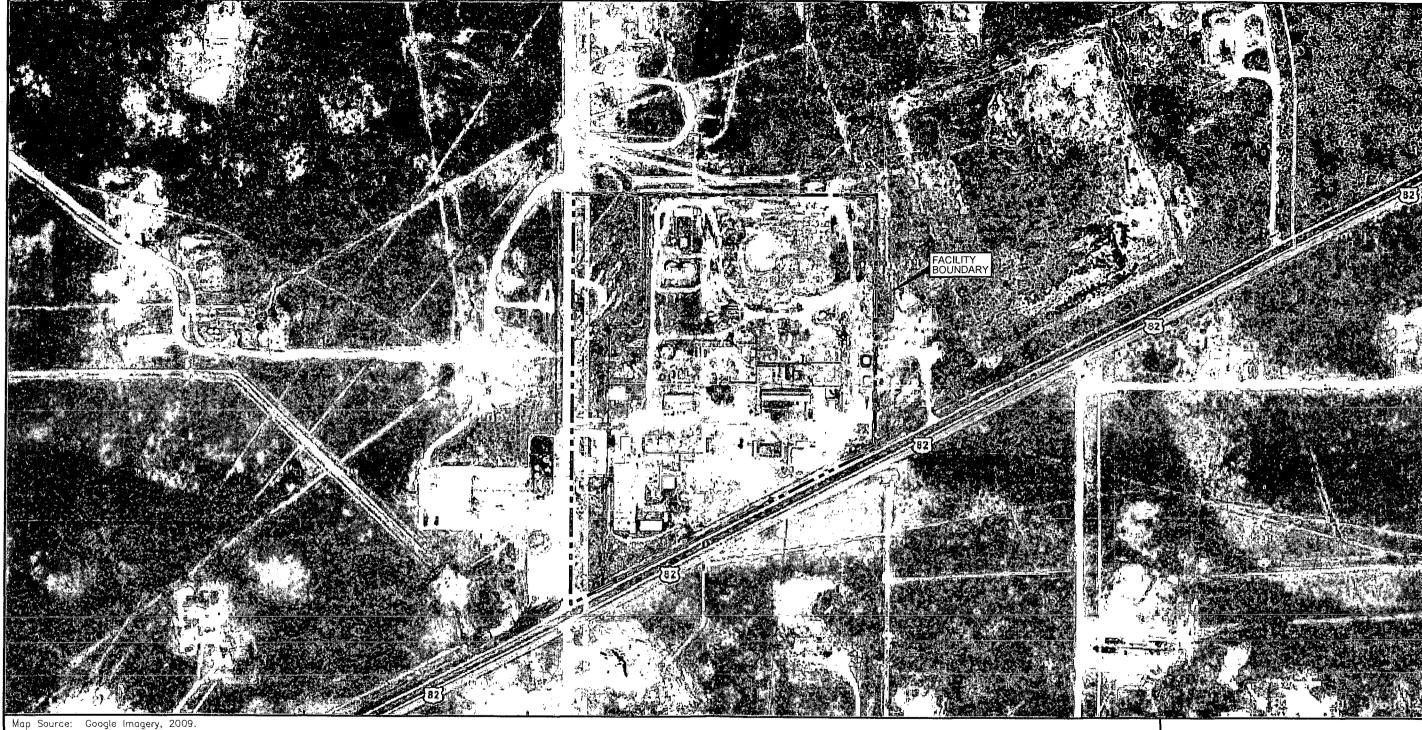
Per OCD rules (i.e., Part 11, Hydrogen Sulfide Gas) and request by OCD, a copy of the facility H<sub>2</sub>S contingency plan is provided as Attachment F.





### **Attachment B**

# **Aerial Drawing**





SCALE IN FEET

<u>LEGEND</u>

FACILITY BOUNDARY

#### WEST TEXAS GAS

DENTON, NEW MEXICO

PROJ. NO.: West Tx Gas DATE: 06/08/09 FILE: WTxGas-B01

FIGURE 2 AERIAL PHOTOGRAPH DENTON, NEW MEXICO PROJECT





### **Attachment C**

## **Process Flow Diagram**



### **Attachment D**

**Effluent Quality** 



#### SCIENTIFIC LABORATORY DIVISION PRGANIC ANALYSIS REQUEST FORM Organic Section - Phone: 841-2570

754 wpu

|  |   |   | 0403-0300-0  |
|--|---|---|--|
| REPORT TO:   | DAVID BOYER   | S.L.D. No. 01   | R  |
|  | N.M. OIL CONSERVATION DIVISION  | DATE REC.   | 6-27-89  |
| •  | P.O. Box 2088   | PRIORITY  |  |
|  | Santa Fe, NM 87504-2088   | PHONE(S):   | 827-5812   |
| COLLECTION C   | ery: horination;  | COUNTY: Le  | D.   |
| COLLECTION D   | ATE/TIME CODE: (Year-Month-Day-Hour-Minute) 81910   | 01621   | 1602   |
|  | DE: (Township-Range-Section-Tracts) $11515+31716$   |   |  |
| USER CODE: L   | 8 2 2 3 5  SUBMITTER: David Boyer   |   | CODE: 2   6   0  |
| SAMPLE TYPE:   | WATER ⊠, SOIL ∐, FOOD ∐, OTHER:   |   |  |
| NP:   P-Ice   P-AA   P-HCl   ANALYSES RE   required. Whene   (753) Aliph   (754) Arom   (765) Mass   (766) Triha   (774) SDW.   (775) SDW. | Sample stored in an ice bath (Not Frosen).  Sample Preserved with Ascorbic Acid to remove chlorine resistance in the Sample Preserved with Hydrochloric Acid (2 drops/40 ml).  QUESTED: Please check the appropriate box(es) below to indictive possible list specific compounds suspected or required.  PURGEABLE SCREENS  atic Headspace (1-5 Carbons) (751  atic & Halogenated Purgeables (758)  Spectrometer Purgeables (758)  Identify the Screen (759)  A VOC's I (8 Regulated +) (760)  A VOC's II (EDB & DBCP) (761)  r Specific Compounds or Classes (764) | idual.  Ate the type of a ATRACTABLE SC  Aliphatic Hydro  Base/Neutral Ex  Herbicides, Chlor  Herbicides, Trias  Organochlorine I  Organophosphate  Polychlorinated | nalytical screens  CREENS carbons tractables ophenoxy acid ines Pesticides Pesticides Biphenyls (PCB's) natic Hydrocarbons |
| FIELD DATA:  | onductivity=1750 umho/cm at 41 °C; Chlorine Residual  | 19  |  |
|  | , <u> </u>  |   |  |
|  | mg/l; Alkalinity=mg/l; Flow Rate  |   | ;  |
|  | on, Methods and Remarks (i.e. odors, etc.)  |   |  |
| Same   | ( Cas Processing - Coolen   | of Tarke  | I wales  |
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|  | he results in this block accurately reflect the results of my fie   |   |  |
| activities.(signatu  | re collector): Method   | d of Shipment to  | the Lab: State Car   |
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| I certify that the   | nis sample was transferred from   | to  |  |
| at (location)  | on  | '   | and that   |
| the statements i   | n this block are correct. Evidentiary Seals: Not Sealed . Ol  | R Seals Intact: Y   | es No 🗆  |
| Signatures   |   | <del></del>   |  |
|  |   |   |  |

For OCD use: Date owner notified: 8/3/87 Phone or Letter? Initials To

### ANALYSES PERFORMED

LAB. No.: OR-

#### THIS PAGE FOR LABORATORY RESULTS ONLY

| This sample was tested using the analytical scree    | ening method(s)  | checked below:                                      | ı      |
|--|------------------|---|--------|
| PURGEABLE SCREENS                                    |                  | EXTRACTABLE SCREENS                                 |        |
| [ (753) Aliphatic Headspace (1-5 Carbons)            |                  | (751) Aliphatic Hydrocarbons                        |        |
| [ (754) Aromatic & Halogenated Purgeables            |                  | (755) Base/Neutral Extractables                     |        |
| (765) Mass Spectrometer Purgeables                   |                  | (758) Herbicides, Chlorophenoxy acid                |        |
| (766) Trihalomethanes                                |                  | (759) Herbicides, Triazines                         |        |
| (774) SDWA VOC's I (8 Regulated +)                   |                  | (760) Organochlorine Pesticides                     |        |
| (775) SDWA VOC's II (EDB & DBCP)                     |                  | (761) Organophosphate Pesticides                    |        |
| Other Specific Compounds or Classes                  |                  | (767) Polychlorinated Biphenyls (PCB's)             |        |
|  |                  | (764) Polynuclear Aromatic Hydrocarbons             |        |
|  | -                | (762) SDWA Pesticides & Herbicides                  |        |
|  |                  |   |        |
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| AN   | ALTIICA          | L RESULTS   | 1      |
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| T R = DETECTED AT A LEVEL BELOW                      |                  |   |        |
|  |                  | OR WITH APPROXIMATE QUANTITATION                    |        |
| ( RESOLIS EN BRACKETS   ARE UNCON                    | FHUMED AND       | OR WITH AFFROXIMATE QUANTITATION                    |        |
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| CERTIFICA  | TE OF ANALY      | TICAL PERSONNEL                                     |        |
| Seal(s) Not Sealed Intact: Yes No                    | Seel(s) broken   | by: date:   |        |
| I certify that I followed standard laboratory proced |                  |   | i and  |
| that the statements on this page accurately reflect  |                  |   | 1 1112 |
| that the statements on this page accurately renect   | the analytical r | esuits for this sample.                             |        |
| Date(s) of analysis: Analyst's s                     | ignature:        |   |        |
| I certify that I have reviewed and concur with the   | analytical resul | its for this sample and with the statements in this | block. |
| Reviewers signature:                                 |                  |   |        |

STATE OF NEW MEXICO

#### HEALTH AND ENVIRONMENT DEPARTMENT

### NTIFIC LABORATORY DIVISION

700 Camino de Salud, NE Albuquerque, NM 87106 [505]-841-2500 ORGANIC CHEMISTRY SECTION [505]-841-2570

July 25, 1989

### ANALYTICAL REPORT SLD Accession No. OR-89-0908

中華國際的國際的

**Distribution** 

(B) Submitter

(<u>₩</u>) SLD Files

NM Oil Consv. Div. To:

State Land Office Bldg.

P. O. Box 2088

Santa Fe, NM 87504-2088

From:

Organic Chemistry Section

Scientific Laboratory Div.

700 Camino de Salud, NE

Albuquerque, NM 87106

Re: A purgeable water sample submitted to this laboratory on June 27, 1989

User:

OIL CONSERVATION DIV

State Land Office Bldg.

P. O. Box 2088

Santa Fe, NM 87504-2088

DEMOGRAPHIC DATA

COLLECTION LOCATION

On: 21-Jun-89

By: Boy . . .

At: 16:03 hrs. In/Near: Lovington

ANALYTICAL RESULTS: Aromatic & Halogenated Purgeable Screen

| Paramete                   | er       |      | Value | Note | MDL           | _Units |
|----------------------------|----------|------|-------|------|---------------|--------|
| Halogenated Pur<br>Benzene | rgeables | (33) | 0.00  | N    | 5.00<br>10.00 | ppb    |

Notations & Comments:

MDL = Minimal Detectable Level.

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified;

T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.

Evidentiary Seals: Not Sealed ; Intact: No , Yes & Broken By: \_ Date:

Laboratory Remarks: Davis Gas- Cooling Jacket Wtr

Analyst:

Michael J. Owen

Analyst, Organic Chemistry

Date

Reviewed By:

Richard F. Meyerhein 07/25/89

Supervisor, Organic Chemistry Section

MECELVED

JUL 3 1 1989

OIL CONSERVATION DIV. SANTA FE

| REPORT TO: DAVID BOYER   | Sample No. <u>890329/63</u> 0   |
|--|---|
|  |   |
| N.M. OIL CONSERVATION DIVISION   |   |
| P.O. Box 2088  | PRIORITY  |
| Santa Fe, NM 87504-2088  |   |
| COLLECTION CITY:OUIngton   |   |
| COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute)  | 15101312191/1013101   |
| LOCATION CODE: (Township-Range-Section-Tracts)   | +   +     (10N06E24342)   |
| SUBMITTER: David Bo  | over  |
| SAMPLE TYPE: WATER 💢, SOIL 🖂, POOD 🗀, OTHER:   |   |
| This form accompanies Septum Vials, Glass Jugs, and/or   |   |
| Samples were preserved as follows:   |   |
| NP: No Preservation; Sample stored at room temperature.  X P-Ice . Sample stored in an ice bath (Not Presen).                | •   |
| P-AA Sample Preserved with Ascorbic Acid to remove chlori  | ine residual.   |
| P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40  ANALYSES REQUESTED: Please check the appropriate box(es) below to | •   |
| required. Whenever possible list specific compounds suspected or required  |   |
| PURGEABLE SCREENS  | EXTRACTABLE SCREENS   |
| (753) Aliphatic Headspace (1-5 Carbons)  | (781) Aliphatic Hydrocarbons  |
| (754) Aromatic & Halogenated Purgeables  | 755) Base/Neutral Extractables (758) Herbicides, Chlorophenoxy acid                   |
| (765) Mass Spectrometer Purgeables   | (759) Herbicides, Chiorophenoxy scia  |
| (774) SDWA VOC's I (8 Regulated +)   | (780) Organochlorine Pesticides   |
| (775) SDWA VOC's II (EDB & DBCP)   | (761) Organophosphate Pasticides  |
|  | (767) Polychlorinated Biphenyls (PCB's)   |
|  | (764) Polynuciesz Aromatic Hydrocarbons   |
|  | 762) SDWA Pesticides & Herbicides   |
| Remarks:   |   |
|  |   |
| PIELD DATA:  | •   |
| pH=; Conductivity=1400umho/cm at 33 °C; Chlorine R   | enidual=mg/l  |
| Dissoived Oxygen=mg/l; Alkalinitymmg/l; Flow Rate  |   |
| Depth to waterft.; Depth of wellft.; Perforation Interva   | d ft.; Casing:  |
| Sampling Location, Methods and Remarks (i.e. odors, etc.)  |   |
| Somple Soon cooling Tacket Swan  | petant Ettluent   |
| Davis Gat Processing   | Coult   |
| I certify that the results in this block accurately reflect the results of activities (signature collector):                 | my field analyses, observations and Melylof<br>Method of Shipment to the Lab: Exposes |
| CHAIN OF CUSTODY   |   |
| I certify that this sample was transferred from  | to  |
| at (location) HCR on   | 4.5.89 - 12:25 and that   |
| the statements in this block are correct; Evidentiary Seals: Not Sealed  | OR Seals Intact: Yes No   |
| Signatures Sousk IT N/a Vanch  |   |
|  | (1) 20)   |
| For OCD use: Date owner notified: 6/19/2   | Phone or Letter? Initials   |



| DATE<br>RECEIVED!                | J. N.                                   | LB                     | Sample No.                  | 89032916                               | 27)                                     |   |                               |
|----------------------------------|---|------------------------|-----------------------------|--|---|---|-------------------------------|
|                                  |   | SITE                   | Sample location             |  |   |   | 20 10                         |
| 89103129                         |   | INFORM- >              | <u>U</u>                    | avis (sas                              | Proc                                    | <u> </u>                                | rig                           |
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| 1009                             |   |                        | effuent line                |  |   |   |                               |
| F                                | NVIRONMENT                              | TAL BUREAU             |                             |  | to                                      | grow                                    | nd                            |
| ceun N                           | M OIL CONS                              | SERVATION DI           | VISION                      |  |   | J                                       |                               |
| FINAL                            | tate Land                               | Office Bldg            | , PO Box 2088               | 3                                      |   |   |                               |
| το <sup>:</sup>                  |   | NM 87504-208           | 88                          |  |   |   |                               |
| Attn:                            | <u>David Bo</u>                         | <u>/er</u>             |                             |  |   |   |                               |
| Phon                             | e: 827 <b>-</b> 53                      | 12                     |                             |  | Station/<br>well code                   |   |                               |
|                                  |   | 112                    |                             |  | Owner                                   |   |                               |
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| ☐ Bailed<br>☐ Dipped             | ∵ Pump<br>Σ Tap                         | Water level            | •                           | Discharge                              |   | Sample ty                               | "Grab                         |
| pH (00400)                       | 260                                     | Conductivity (Unco     | orrected)                   | Water Temp. (00010)                    | 77 -                                    | Conductiv                               | rty at 25°C (00094)           |
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| Field comments                   | 1                                       |                        |                             |  |   |   |                               |
|                                  | *************************************** |                        |                             |  |   |   |                               |
|                                  |   |                        |                             |  |   |   |                               |
| SAMPLE FIELD                     | TREATMEN                                | T — Check prope        | er boxes                    |  |   |   |                               |
| No. of samples                   | 1 XNF                                   | Whole sample           | F: Filtered in              |  | 2 ml H₂SO₄/                             | L added                                 |                               |
| submitted                        | <u> </u>                                | (Non-filtered)         | <del></del>                 | mbrane filter                          |   | <del></del>                             |                               |
| ☐ NA: No aci                     | d added 🗆 C                             | Other- <i>specify:</i> | □ A:                        | 5ml conc. HNO <sub>3</sub> a           | dded 🗆 A                                | A: 4ml                                  | fuming HNO <sub>3</sub> added |
| ANALYTICAL R                     | ESULTS from                             | SAMPLES                |                             |  |   |   |                               |
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| Conductivity (C                  | corrected)                              |                        |                             | 7 (10)                                 | nn sumpre                               | ••                                      | Analyzed                      |
| 25°C (00095)                     |   |                        | µmho                        |  |   | (9                                      |                               |
| ☐ Total non-filtera              |   |                        |                             | Calcium                                |   | mg/1                                    |                               |
| residue (suspe<br>(00530)        | nded)                                   |                        | mg/l                        | Potassium .                            |   | mg/1                                    |                               |
| Konner: Las                      | p#                                      | <u> </u>               |                             | Magnesium                              |   | mg/1                                    |                               |
| ☐ Other:                         | · —                                     |                        | <del></del>                 | - Sodium                               |   | mg/1                                    |                               |
| C Other:                         |   |                        | <del></del>                 | Bicarbonat                             | e                                       | mg/1                                    | 1                             |
| A-H <sub>2</sub> SO <sub>4</sub> |   |                        |                             | Chloride _                             |   | mg/                                     |                               |
| ☐ Nitrate-N+, Ni                 | trate-N                                 |                        |                             | Sulfate                                |   |   |                               |
| total (00630)                    |   |                        | . mg/l                      |  | 4.                                      |   |                               |
| ☐ Ammonia-N tol                  |   |                        | . mg/l                      | - Total Soli                           | as                                      | mg/`                                    | '                             |
| ( ')                             |   |                        | . mg/l                      | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |   | <del></del>                             |                               |
| Chemical oxyg<br>demand (0034    |   |                        | . mg/l                      | $\square$ $R_D$                        |   |   |                               |
| ☐ Total organic c                |   |                        | -                           |  |   |   |                               |
| ()<br>□ Other:                   |   |                        | . mg/l                      | - Cation/                              | Anion Ba                                | lance                                   | <del></del>                   |
| Cother:                          |   |                        |                             | Analyst                                | Date R                                  | eported                                 | Reviewed by                   |
|                                  |   |                        |                             |  |   |   | L                             |
| Laboratory remark                | <b>'S</b>                               |                        |                             |  |   |   |                               |
|                                  | *************************************** |                        |                             |  | *************************************** | *************************************** |                               |
|                                  |   |                        |                             |  |   |   |                               |
| FOR OCD US                       | E Date (                                | Owner Notifi           | ed                          | Phone or Let                           | ter?                                    | I                                       | nitals                        |

Date Analyzed \_\_\_\_

Date Reveived

Initials:

HEAVY METAL ANALYSIS FORM

#### Accu-Labs Research, Inc.

May 9, 1989 Page 5 of 18

Mr. David Boyer NM Oil Conservation Division

RE: 9649-29859-20

Date Samples Rec'd: 4-5-89 P.O. No. 77-521.07-123

### RECEIVED

MAY 1 7 1989

OIL CONSERVATION DAY. SANTA PE

#### REPORT OF ANALYSIS

| ALR Designation<br>Sponsor Designation                                     | 9649-29859-20-4<br>8903291055<br>3-29-89 | 9649-29859-20-5<br>8903301230<br>3-30-89 | 9649-29859-20-6<br>8903291630<br>3-29-89 |
|--|--|--|--|
| Determination: μg/L  |  |  |  |
| Toluene  | 100                                      | 1300                                     | <5                                       |
| Chlorobenzene  | <5                                       | <50                                      | <5                                       |
| Ethyl benzene  | 64                                       | 170                                      | <5                                       |
| Total Dichlorobenzenes   | <5                                       | <50                                      | - <5                                     |
| Total Xylenes  | 130                                      | 370                                      | <5                                       |
| Determination: mg/L  |  |  |  |
| Aluminum, total Barium, total Boron, total Cadmium, total Calcium, total   | <1*                                      | <1*                                      | <0.1                                     |
|  | 1.4                                      | 0.4                                      | 0.10                                     |
|  | 60                                       | 49                                       | 0.2                                      |
|  | <0.05*                                   | <0.05*                                   | <0.005                                   |
|  | 4300                                     | 4400                                     | 110                                      |
| Chromium, total Cobalt, total Copper, total Iron, total Magnesium, total   | <0.05*                                   | <0.05*                                   | <0.005                                   |
|  | <0.05*                                   | <0.05*                                   | <0.005                                   |
|  | <0.05*                                   | <0.05*                                   | 0.032                                    |
|  | 2.2                                      | 0.9                                      | 1.4                                      |
|  | 6200                                     | 700                                      | 22                                       |
| Manganese, total   | 4.5                                      | 0.22                                     | 0.21                                     |
| Mercury, total   | <0.001*                                  | <0.001*                                  | <0.001*                                  |
| Molybdenum, total  | <0.05*                                   | <0.05                                    | <0.005                                   |
| Nickel, total  | <0.1*                                    | <0.1*                                    | <0.01                                    |
| Potassium, total   | 320                                      | 250                                      | 5.4                                      |
| Silver, total Sodium, total Strontium, total Zinc, total Total Alkalinity, | <0.005                                   | 0.018                                    | <0.005                                   |
|  | 72,000                                   | 43,000                                   | 120                                      |
|  | 100                                      | 460                                      | 1.0                                      |
|  | <0.05*                                   | <0.05*                                   | <0.005                                   |
| (as CaCO <sub>3</sub> to pH 4.5)   | 580                                      | 300                                      | 170                                      |

#### Accu-Labs Research, Inc.

May 9, 1989 Page 6 of 18

Mr. David Boyer NM Oil Conservation Division

RECEIVED

RE: 9649-29859-20

Date Samples Rec'd: 4-5-89 P.O. No. 77-521.07-123 MAY 1 7 1989

OIL CONSERVATION DIV.

|  | REPORT OF ANALYS                         | MA PE                                    |  |
|--|--|--|--|
| ALR Designation<br>Sponsor Designation   | 9649-29859-20-4<br>8903291055<br>3-29-89 | 9649-29859-20-5<br>8903301230<br>3-30-89 | 9649-29859-20-6<br>8903291630<br>3-29-89 |
| Determination: mg/L  |  |  |  |
| Carbonate (as CO <sub>3</sub> ) Bicarbonate (as HCO <sub>3</sub> ) pH Specific Conductance, µmhos/cm | <5                                       | <5                                       | <5                                       |
|  | 700                                      | 360                                      | 200                                      |
|  | 7.2                                      | 6.9                                      | 7.6                                      |
|  | 390,000                                  | 230,000                                  |  |
| Arsenic, total   | 0.51                                     | <0.005                                   | <0.005                                   |
| Lead, total  | 0.008                                    | 0.050                                    | <0.005                                   |
| Selenium, total  | <0.25*                                   | <0.10*                                   | <0.005                                   |
| Total Solids   | 210,000                                  | 120,000                                  | 750                                      |
| Bromide  | 270                                      | <80*                                     | <5*                                      |
| Chloride   | 130,000                                  | 70,000                                   | 250                                      |
| Sulfate (as SO <sub>4</sub> )  | 4100                                     | 1400                                     | 110                                      |
| Ion Balance  | 102                                      | 107                                      | 100                                      |

#### Accu-Labs Research, Inc.

May 9, 1989 Page 4 of 18

## RECEIVED

Mr. David Boyer NM Oil Conservation Division

MAY 1 7 1989

RE: 9649-29859-20 Date Samples Rec'd: 4-5-89 P.O. No. 77-521.07-123 OIL CONSERVATION OFF.

#### REPORT OF ANALYSIS

| ALR Designation<br>Sponsor Designation | 9649-29859-20-4<br>8903291055<br>3-29-89 | 9649-29859-20-5<br>8903301230<br>3-30-89 | 9649-29859-20-6<br>8903291630<br>3-29-89 |
|--|--|--|--|
| GC/MS VOLATILE ORGANICS, μ             | g/L:                                     |  |  |
| Chloromethane                          | <10                                      | <100                                     | <10                                      |
| Bromomethane                           | <10                                      | <100                                     | <10                                      |
| Vinyl chloride                         | <10                                      | <100                                     | <10                                      |
| Chloroethane                           | <10                                      | <100                                     | <10                                      |
| Methylene chloride                     | <5                                       | <50                                      | <5                                       |
| 1,1-Dichloroethene                     | <5                                       | <50                                      | <5                                       |
| 1,1-Dichloroethane                     | <5                                       | <50                                      | <5                                       |
| Total 1,2-Dichloroethene               | <5                                       | <50                                      | <5                                       |
| Chloroform                             | <5                                       | <50                                      | <5                                       |
| 1,2-Dichloroethane                     | <5                                       | <50                                      | <5                                       |
| 1,1,1-Trichloroethane                  | <5                                       | <50                                      | <5                                       |
| Carbon tetrachloride                   | <5                                       | <50                                      | <5                                       |
| Bromodichloromethane                   | <5                                       | <50                                      | <5                                       |
| 1,2-Dichloropropane                    | <5                                       | <50                                      | <5                                       |
| c-1,3-Dichloropropene                  | <5                                       | <50                                      | <5                                       |
| Trichloroethene                        | <5                                       | <50                                      | <5                                       |
| Benzene                                | 75                                       | 2200                                     | <5                                       |
| Dibromochloromethane                   | <5                                       | <50                                      | <5                                       |
| 1,1,2-Trichloroethane                  | <5                                       | <50                                      | <5                                       |
| t-1,3-Dichloropropene                  | <5                                       | <50                                      | <5                                       |
| 2-Chloroethylvinyl ether               | <5                                       | <50                                      | <5                                       |
| Bromoform                              | <5                                       | <50                                      | <5                                       |
| 1,1,2,2-Tetrachloroethane              | <5                                       | <50                                      | <5                                       |
| Tetrachloroethene                      | <5                                       | <50                                      | <5                                       |



New Mexico Health and ironment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87108 — (505) 841-2555

### GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

| DATE<br>RECEIVED 4/                    | 1515. N                   | 1111-1269                   | CODE 59300                             | 59600 ∰X                  | ОТНЕR: 82             | 235                          |          |
|--|---------------------------|-----------------------------|--|---------------------------|-----------------------|------------------------------|----------|
| 8818414                                |                           | SITE                        | Sample location                        | sis bad                   |                       | effing-laring                | te-      |
| Collection TIME 5                      | 1                         | INFORM- >                   | Conscion sits description              |                           |                       |                              |          |
| Collected by Person/Ac                 |                           | W /OCD                      | Conscion and description               | Dischang                  | e jing                | be from Ear                  | 1        |
| 1                                      |                           | 7                           |  |                           | pi                    | 1 to field                   |          |
| É                                      | NVIRONMENT                | TAL BUREAU                  |  |                           |                       |                              |          |
| SEND N                                 | M OIL CONS                | SERVATION DIV               | ISIUN<br>PO Roy 208                    | ·<br>8                    | \- <del></del>        |                              |          |
| REPORT                                 | State Land<br>Santa Fo. 1 | Office Bidg,<br>M 87504-208 | 3                                      | •                         |                       |                              |          |
| <b>&gt;</b>                            |                           |                             |  |                           |                       |                              |          |
| Απη; .                                 | David Boy                 | /E1                         |  |                           |                       |                              |          |
| Phon                                   | e: 827-59                 | 12                          |  |                           | Station/<br>well code |                              |          |
| SAMPLING CO                            | NDITIONS                  |                             |  |                           | Owner                 |                              |          |
| _ Bailed                               | C Pump                    | Water level                 |  | Discharge                 |                       | Sample type                  | _        |
| pH (00400)                             | □ Tap                     | Conductivity (Unco          | (rected)                               | Water Temp. (00010)       |                       | Conductivity at 25°C (00094) |          |
| p. ( (00400)                           |                           | Conductivity (Crico         | 260 µmho                               | Water lemp. (000 to)      | 19 °C                 |                              | mho      |
| Field comments                         | oil o                     | naite                       | where                                  | _                         |                       |                              |          |
|  |                           | <del>- , ,</del>            | $\overline{v}$                         |                           |                       |                              |          |
|  |                           |                             |  |                           |                       |                              |          |
|  | TREATMEN                  | Г — Check prope             |  |                           |                       |                              |          |
| No. of samples submitted               | ENF                       | (Non-filtered)              | □ F: Filtered in 0.45 μme              | field with  mbrane filter | 2 ml H₂SO₄/           | L added                      |          |
| NA: No acid                            | d added 🗆 C               | Other- <i>specify:</i>      | □ A:                                   | 5ml conc. HNO3 a          | dded 🗆                | A: 4ml fuming RNO3 ac        | dded     |
| ANALYTICAL R                           | ESULTS from               | SAMPLES                     | ······································ | ·                         |                       | ···                          |          |
| NA                                     |                           |                             | Unita Date analyze                     | From N.                   | airms2 &k             | : Date                       |          |
| Conductivity (C<br>25°C (00095)        | orrected)                 | 1020                        | mho5/23                                | T From 1/2                | IL Jempie             | Analyzed                     |          |
|  |                           |                             |  | Calcium                   | 90                    | mg/1 , 5/16                  |          |
| Total non-filtera residue (susper      |                           |                             |  | Potassium                 |                       | 4 mg/1 5/10                  | - 1      |
| (00530)<br>Cother:                     | ~1/                       | 7.41                        | mg/l                                   | -   /                     |                       | .5 mg/1 5/16                 | -        |
| Cother:                                | m ==                      |                             |  | 177                       |                       | 71 mg/1 5/13                 | - 1      |
| □ Other:                               |                           |                             |  | Sodium                    |                       | <del></del>                  | -        |
| A-H <sub>2</sub> SO <sub>4</sub>       | <del></del>               |                             |  | Bicarbonat                |                       | 4 mg/1 5/24                  | - !      |
| ☐ Nitrate-N+, Nit                      | rate-N                    | <del></del>                 | <del></del>                            | Chloride _                |                       | 29 mg/1 9/18                 | — i      |
| total (00630)                          |                           |                             | mg/l                                   | _  Sulfate _              |                       | 1. 2 mg/1 5/18               | - 1      |
| ☐ Ammonia-N tota<br>☐ Total KjeldahI-N |                           |                             | mg/l                                   | - Total Soli              | ds                    | 22 mg/1_5/20_                | <u> </u> |
| ( )                                    |                           | <u> </u>                    | mg/l                                   | -   🗆                     |                       | <del></del>                  | _        |
| Chemical oxyge demand (00340           |                           |                             | mg/l                                   |                           |                       |                              |          |
| ☐ Total organic ca                     |                           |                             |  |                           |                       | •                            | 1        |
| ( )<br>□ Other:                        |                           |                             | mg/l                                   | - Cation/A                | nion Ba               | lance                        |          |
| C Other:                               |                           |                             |  | Analyst                   |                       | eported Reviewed by          |          |
| Laboratory remarks                     | 3                         |                             |  |                           | 151                   | 29 88 Q                      |          |
| 207                                    |                           |                             |  |                           |                       |                              |          |
|  |                           |                             |  |                           | <del></del>           |                              |          |
| FOR OCD USE                            | Date 0                    | wner Notifie                | d.                                     | Phone or Lett             | er?                   | Initals                      |          |

| 7.,¥£ñu                          | CATIONS<br>DE MEQ.           | PPM                             | DET.                          | ÅNALYT                   | ANIONS<br>E MEQ.     | PPM                       | DET.                        |
|----------------------------------|------------------------------|---------------------------------|-------------------------------|--------------------------|----------------------|---------------------------|-----------------------------|
| 75<br>25<br>25<br>25             | 4.49<br>1.60<br>3.96<br>0.10 | 90.00<br>19.50<br>91.00<br>4.00 | <3.0<br><0.3<br><10.0<br><).3 | HC03<br>SO4<br>CL        | 2.85<br>1.48<br>5.90 | 174.00<br>71.20<br>209.00 | <1.0<br><10.0<br><5.0       |
| orin.<br>Day                     | 0,00<br>0,00                 | 0.00                            |                               | NO3<br>CO3<br>NH3<br>PO4 | 0.00<br>0.00<br>0.00 | 0.00<br>0.00<br>0.00      | < 0.<br>< 1.<br>< 0.<br>< 9 |
| $\operatorname{su}_{\mathbb{C}}$ | 10.15                        | 204.50                          |                               |                          | 10.23                | 454.20                    |                             |
|                                  | Dissolved<br>Mance =         | Solids=<br>99.24%               | 722                           |                          | C No.<br>out/By _    | = 8801269<br>  S/z 7      | -                           |



# HEAV METAL ANALYSIS FORM Telephone: (505)841-2553

| Date Received 4/9/5 No. ICF 17/ Cod   | <del>-</del> • •  |
|---|---|
| Received   Y /7   No. 4 (7 / Cod<br>COLLECTION DATE & TIME:   YY   mm   dd   hh | mm COLLECTION SITE DESCRIPTION  |
| 17 2 4  | Darri Gas Processino  |
| COLLECTED BY:   | East Pitte Hall   |
|   |   |
| TO:   | OWNER:  |
|   |   |
| ENVIRONMENTAL BUREAU  | SITE LOCATION:  |
| NM OIL CONSERVATION DIVISION  | County:   |
| State Land Office Bldg., PO Box 2   |   |
| SANTA FE, NM 87504-2088   | Township, Range, Section, Tract: (10N06E24342)  V 55+37 15+012+41/1/1 |
| ATTN: David Bout  | CDD:3012-014-17-17  |
|   | ION/ WELL CODE:   |
|   |   |
| LATITUDE, LON SAMPLING CONDITIONS:  | GITUDE:   |
| Bailed Pump Water Level   | : Discharge: Sample Type:   |
| Ø Dipped ☐ Tap ✓  | - brak  |
| pH(00400) Conductivity(Uncorr.) Wat   |   |
| — 860 µmho  | /9 °c (00094)   |
| FIELD COMMENTS: on on ni & SIA  |   |
|   | - Here  |
|   |   |
| SAMPLE FIELD TREATMENT Check proper boxes:                                      | LAB ANALYSIS REQUESTED:   |
| WPN: Water WPF: Water   | ICAP Scan   |
| Preserved w/HNO, Preserved w/HNO,   | Mark box next to metal if AA  |
| Non-Filtered Filtered   | is required.  |
| ANALYTICAL R  | ESULTS (MG/L)   |
| ELEMENT ICAP VALUE AA VALUE   | ELEMENT ICAP VALUE AA VALUE   |
| Aluminum <0.  | Silicon 14.   |
| Barium 40.)   | Silver 4.1  |
| Boron 0.2   | Strontium 0.7   |
| Cadmium <0.1  | Vanadium 40.  |
| Calcium 78  | Zinc 40.1   |
| Chromium 40.   10.015   | Arsenic Z Co. 005   |
| Cobalt Copper 40.05   | Selenium D < 6.005  |
| Copper 10.1 Iron 0.2.   | Mercury X (0.005  |
| Lead 40. <0:01  |   |
| Magnesium 16.   |   |
| Manganese D.14  |   |
| Molybdenum 40.1<br>Nickel 40.1  |   |
|   | <u> </u>  |
| LAB COMMENTS:   | OKEST 5/11/83   |
| For OCD Use:  | Λ. Δ.   |
| Date Owner Notified: ICAP A   | nalyst Reviewer Lake  |
| Phone or Letter?  | Flaled no Challer   |
| Initials: Date A  | nalyzed 5/3/88 Date Revelved 6/16/87                                  |

88-0488-B

#### IENTIFIC LABORATORY DIVE NO

700 Camino de Salud NE



STATE OF NEW MEXICO

Albuquerque, NM 87106 841-2570 S.L.D. No. OR- 6 4 David Boyer REPORT TO: N.M. Oil Conservation Division DATE REC. P. O. Box 2088 Santa Fe, N.M. 87504-2088 PRIORITY USER CODE: | 8 | 2 | 2 | 3 | 5 | 327-5812 PHONE(S): David Boyer CODE: 12 | 6 | 0 SUBMITTER: SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 1818 041141115 SAMPLE TYPE: WATER SOIL , FOOD , OTHER: ; CITY: LOS SPARON CODE: 1 1 1 LOCATION CODE: (Township-Range-Section-Tracts) | / | ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical acreens required. Whenever possible list specific compounds suspected or required. PURGEABLE SCREENS EXTRACTABLE SCREENS 7 (753) Aliphatic Purgeables (1-3 Carbons) (751) Aliphatic Hydrocarbons (754) Aromatic & Halogenated Purgeables (760) Organochlorine Pesticides (765) Mass Spectrometer Purgeables [ ] (755) Base/Neutral Extractables (766) Trihalomethanes (758) Herbicides, Chlorophenoxy acid Other Specific Compounds or Classes (759) Herbicides, Triazines (760) Organochlorine Pesticides (761) Organophosphate Pesticides (767) Polychlorinated Biphenyls (PCB's) (764) Polynuclear Aromatic Hydrocarbons (762) SDWA Pesticides & Herbicides pH= ; Conductivity= 650 umho/cm at 19 °C; Chlorine Residual= mg/l Dissolved Oxygen= \_\_\_\_mg/l; Alkalinity= \_\_\_\_mg/l; Flow Rate \_\_\_\_\_ Depth to water \_\_\_\_\_ft.; Depth of well \_\_\_\_\_ft.; Perforation Interval \_\_\_\_\_ ft.; Casing: Sampling Location, Methods and Remarks (i.e. odors, etc.) I certify that the results in this block accurately reflect the results of my field analyses, observations and Method of Shipment to the Lab: 50 activities.(signature collector): This form accompanies Septum Vials,
Samples were preserved as follows Lass Jugs, and/or \_ ☐ NP: No Preservation; Sample stored at room temperature. P-Ice Sample stored in an ice bath (Not Frozen). P-Na SO Sample Preserved with Sodium Thiosulfate to remove chlorine residual. CHAIN OF CUSTODY I certify that this sample was transferred from SANTA FEnd that at (location) the statements in this block are correct. Evidentiary Seals: Not Sealed Seals Intact: Yes No

For OCD Use: Date Owner Notified More Phone or Letter?

\_\_\_\_\_Initials





#### THIS PAGE FOR LABORATORY RESULTS ONLY

| 7 7           | This sample was tested using the analytical screer   | ning method(s)   | checked below:  |        |
|---------------|--|------------------|---|--------|
| 1             | PURGEABLE SCREENS  |                  | EXTRACTABLE SCREENS   |        |
| 1 1           | (753) Aliphatic Purgeables (1-3 Carbons)   |                  | (751) Aliphatic Hydrocarbons  |        |
| ) i           | (754) Aromatic & Halogenated Purgeables  |                  | (760) Organochlorine Pesticides   |        |
|               | (765) Mass Spectrometer Purgeables   |                  | (755) Base/Neutral Extractables   |        |
| 1 1           | (766) Trihalomethanes  |                  | (758) Herbicides, Chlorophenoxy acid  |        |
| '             | Other Specific Compounds or Classes  |                  | (759) Herbicides, Triazines   |        |
| } ,           |  |                  | (760) Organochlorine Pesticides   |        |
|               |  |                  | (761) Organophosphate Pesticides  |        |
|               | ''   |                  | (767) Polychlorinated Biphenyls (PCB's)   |        |
| 1             |  |                  | (764) Polynuclear Aromatic Hydrocarbons   |        |
|               |  |                  | (762) SDWA Pesticides & Herbicides  |        |
|               | AN   | ALYTICA          | L RESULTS   |        |
|               | COMPOUND(S) DETECTED   | CONC.<br>[PPB]   | COMPOUND(S) DETECTED  | CONC.  |
|               | halogenated surgeafler   | N.Di             | ·   |        |
|               | artmatic publicables   |                  | <u> </u>  |        |
|               | benzene!   | 492              |   |        |
|               | Toluene  | 12.5             |   |        |
|               | f+ m-sigline   | 20               |   |        |
|               | 0-xylene   | 15               |   |        |
| *.            | The land of the second   | T.R.             |   | -      |
|               | - sugerny cax  | 1                |   |        |
|               |  |                  |   |        |
|               |  |                  |   |        |
|               |  |                  | _   |        |
|               | · DETECTION LIMIT · *  | 12.549/4         | + DETECTION LIMIT +   |        |
|               | ABBREVIATIONS USED:  |                  |   |        |
|               | N D = NONE DETECTED AT OR ABOVE  | THE STATE        | DETECTION LIMIT   |        |
| -             | T R = DETECTED AT A LEVEL BELOW  |                  |   |        |
|               | [ RESULTS IN BRACKETS ] ARE UNCONF   | IRMED AND/       | OR WITH APPROXIMATE QUANTITATION  |        |
| स्टाइट स्टाइट |  |                  |   |        |
| 1             | BORATORY REMARKS:  |                  |   |        |
|               |  | -                |   |        |
| _             |  |                  |   |        |
|               |  |                  |   |        |
|               |  |                  | <u> </u>  |        |
|               |  |                  | TICAL PERSONNEL   |        |
| 1             | l(s) Intact: Yes No Seal(s) broken by  |                  | Alales date:  |        |
|               | ertify that I followed standard laboratory procedu<br>t the statements on this page accurately reflect t |                  | ; and analysis of this sample unless otherwise noted<br>esults for this sample. | and    |
| Dat           | te(s) of analysis: 4/20/38. Analyst's significant  | gnature:         | Harry C. Elen   |        |
| Ιc            | ertify that I have reviewed and concup with the  | analytical resul | ts for this sample and with the statements in this                              | block. |
| Rev           | riewers signature: Kmeyerhelm  |                  | · · ·   |        |
| ι             |  |                  |   |        |



New Mexico Health and Environment Department SCIENTIFIC LABORATO VISION 700 Camino de Salud NE Albuquerqua, NM 87108 — (505) 841-2555

# GERAL WATER CHEMISTRY and NITROGEN ANALYSIS

| '   '                            |                    |                            |                            |                     |                       | -             |  |               |
|----------------------------------|--------------------|----------------------------|----------------------------|---------------------|-----------------------|---------------|--|---------------|
| PECEIVED 4                       | 179 188 H          | WC-1267                    | CODE 5930                  | 59600               | - VIII.               | 235           |  |               |
| Collection TIME                  | 7                  | SITE<br>INFORM- ><br>ATION | Sample location            | eris Gas            | Proce                 | ssin          | on plan                                | <del>Ja</del> |
| 1050                             |                    | AIIUN                      | Collection are description | 1201021             | inday                 |               |  |               |
| Collected by - Person            | 1 Seas             | /0CD                       |                            | norear              | Servery               | /             |  |               |
| 7                                |                    |                            | -                          |                     | ore                   | Wale          | y depara                               | 25            |
| 2518                             | ENVIRONMENT        | TAL BUREAU<br>SERVATION DI | VISTON                     |                     | 73 6                  | . oft         | 9-1                                    |               |
| SEND                             | State Land         | Office Bldg                | , PO Box 208               | 3 .                 |                       |               |  |               |
| REPORT<br>10                     | Santa Fe,          | NM 87504-208               | 38                         |                     |                       |               | ·                                      |               |
| Atti                             | n: <u>David Bo</u> | yer                        | •                          |                     |                       |               |  |               |
| Pho                              | one: 827-58        | 112                        |                            |                     | Station/<br>well code |               |  |               |
| SAMPLING C                       |                    |                            |                            |                     | Owner                 |               | ······································ |               |
| Bailed<br>Dipped                 | □ Pump<br>□ Tap    | Water level                |                            | Discharge           |                       | Sample typ    | 0/00/                                  |               |
| pH (00400)                       | <u> </u>           | Conductivity (Unc          | orrected)                  | Water Temp. (00010) |                       | Conductivit   | ty at 25°C (00094)                     |               |
|                                  |                    | 2                          | 675 µmho                   |                     | 27.0                  | <u> </u>      | <u> </u>                               | ımho          |
| Field comments                   | oily               | Kheen.                     | dark                       | color.              |                       |               |  |               |
|                                  | <b>Y</b>           | · ,                        |                            | /                   |                       |               |  |               |
| AND E FIEL                       | DYDEATMEN          | T Charles                  |                            |                     |                       |               |  |               |
| No. of samples                   |                    | T — Check prop             | F: Filtered in             | field with          |                       |               |  |               |
| submitted                        | / J&N              | (Non-filtered)             | □ F: 0.45 μme              | mbrane filter       | 2 ml H₂SO₄/           | L added       |  |               |
| NA: No a                         | cid added 🛚 🔾      | Other-specify:             | □A:                        | 5ml conc. HNO3      | added 🗆               | A: 4ml        | fuming HNO, a                          | dded          |
| ANALYTICAL                       | RESULTS from       | SAMPLES                    |                            |                     | <u></u> -             | · · · · ·     | <del></del>                            |               |
| NA                               |                    |                            | Unita Date analyze         | Sam We              | , NA Sample           |               | Date                                   |               |
| Conductivity<br>25°C (00095      | (Corrected)        | 2641                       | umho 5/23                  | 1 1.00 1.7          | _, MX 3@MP14          | •             | Analyzed                               | •             |
| :<br>☐ Total non-filti           | erable             |                            | ,                          | <b>⊠</b> Calcium    | 15                    | 2 mg/1        | 5/11                                   |               |
| residue (sus<br>(00530)          |                    |                            | mg/i                       | Potassium           | ıı                    | 2_mg/1        | 5/10                                   |               |
| ∠ Other: ()                      | H-lab_             | 7.24                       | 5/24                       | Magnesi ur          | n                     | <u>4</u> mg/1 | ,5/16                                  |               |
| C Other:                         | ,,                 |                            |                            | - Sodium _          |                       | mg/1 ص        | 5/10                                   |               |
| C Other:                         | <del></del>        |                            |                            | Bicarbon            |                       | 04 mg/1       | 5/24                                   | - <del></del> |
| A-H <sub>2</sub> SO <sub>4</sub> |                    |                            |                            | Chloride            |                       | 70 mg/1       | 5/17                                   |               |
| ☐ Nitrate-N+, total (00630)      |                    |                            |                            | Sulfate             |                       | <u>2mg/1</u>  |  |               |
| ☐ Ammonia-N                      | total (00610)      |                            | mg/l                       | Total So            |                       | 6 mg/1        | 5/17                                   |               |
| C Total Kjeldar                  |                    |                            | mg/l                       | 17                  |                       |               |  |               |
| ☐ Chemical ox                    | ygen               |                            | -                          | 15                  |                       |               |  | - <del></del> |
| demand (00)                      |                    |                            |                            |                     |                       | <del></del> . |  |               |
| ( )                              |                    |                            | mg/l                       | - Cation            | /Anion Ba             | lance         |  |               |
| ☐ Other:                         |                    |                            |                            | Analyst             | Date F                | eported       | Reviewed by                            |               |
|                                  | nctes              |                            |                            | <u> </u>            | [5]                   | 26 58         | (2)                                    |               |
| Laboratory remi                  | 14 KS              |                            |                            |                     |                       |               | ·                                      |               |
| ,<br>                            | <del></del>        |                            |                            |                     |                       |               |  |               |
|                                  |                    |                            |                            |                     |                       |               |  |               |
| FOR OCD U                        | 5E Date (          | Owner Notifi               | ed                         | Phone or Le         | tter?                 | Ir            | itals                                  |               |



New Mexico Health and Environment Department SCIENTIFIC LABORATORY DIVISION 700 Camino de Saluc Albuquerque, NM 87105

# HEAV METAL ANALYSIS FORM Telephone: (505)841-2553

|                         |                       |                 |                  |              | ·                |           |                                       |                      |
|-------------------------|-----------------------|-----------------|------------------|--------------|------------------|-----------|---------------------------------------|----------------------|
| Date<br>Received        | 41/9188               | No. I           | 1-123            | User<br>Code | 82               | 235       | □ other                               |                      |
| COLLECTION              |                       |                 | 判罚增              | 10 3         |                  | COLLE     |                                       | Processintion        |
| COLLECTED               | BY                    | 1.              | 00.171           | ~ e          | 7                | Hase      | Acreba                                | ree Cham             |
|                         | 18049                 | 1/sea           | 34 O             | <u> </u>     |                  | pla       | s Jese                                | drato to             |
| TO:                     | V                     | · ·             | L                |              |                  | OWNER     |                                       |                      |
|                         |                       |                 |                  |              |                  |           |                                       |                      |
|                         | NMENTAL B             |                 |                  |              |                  | SITE      | LOCATION:                             |                      |
|                         | CONSERVA<br>Land Offi |                 |                  |              | •                | Count     | λ:                                    |                      |
|                         |                       | 87504-2         |                  | OX 208       | 0                | Township, | Ranga, Section.                       | Tract: (10N06E24342) |
| a memata                | 1 :06                 | Parel           |                  |              |                  |           |                                       | 100+411 N            |
| ATTN:<br>TELEPH         | ONE: 827-             | 5812            | •                | STATIO       | N/ WELL (        | CODE:     | 1111                                  |                      |
| _                       |                       | /               |                  |              | •                |           |                                       |                      |
| SAMPLING C              | ONDITIONS             |                 | TITUDE,          | LONGI        | LODE:            |           |                                       |                      |
| D Bail                  |                       | - 1             | Water I          | evel:        | Discha           | arge:     | Sa                                    | mple Type;           |
| Dipp<br>pH(00400)       |                       | ap  <br>vitv(Ur | corr.)           | Water        | Temp. (0)        | 00101     | Conduct                               | ivity at 25°C        |
| -                       |                       | -167            | _                | "LOCE        | _ ~ 0            | 0010,     | (00094)                               | 1120                 |
| FIELD COMM              | FNTS . A              | 2615            | umho             | - Oai        | 02/09            | <u> </u>  | 1                                     | umho                 |
|                         |                       | Ug !            | Theen,           | - CAS        |                  | 7         | · · · · · · · · · · · · · · · · · · · |                      |
| SAMPLE FIE              | T.D TREATM            | ENT             |                  | <del></del>  | TAR AVA          | LVSTS     | REQUESTED                             | •                    |
| Check pro               | per boxes             | :               |                  |              |                  |           |                                       |                      |
| WPN:<br>Preserved       |                       |                 | PF: Waterved w/H |              | IV IC            | AP Sca    | n<br>ext to met                       | 27 10 XX             |
| Non-Filte               | red 3                 | Filter          | ed               | 3            |                  | quired    |                                       | ar ii aa             |
|                         |                       | ANA             | LYTICA           | L RES        | ULTS (           | MG/L      | )                                     | <del></del>          |
| ELEMENT                 | ICAP VAL              |                 | AA VALU          |              | ELEMEN           | r I       | CAP VALUE                             | AA VALUE             |
| Aluminum<br>Barium      | 0.1                   |                 |                  | -            | Silico<br>Silver | _         | 12.                                   |                      |
| Beryllium               | 40.1                  | <del></del>     |                  | -            | Stront           |           | 1.4                                   | Ц                    |
| Boron                   | 0.3                   | <b>_</b>        |                  | _            | Tin              | _         | 40.1                                  |                      |
| Cadmium                 | 40.1                  |                 |                  | <del>/</del> | Vanadi           | _         | <u> </u>                              |                      |
| Calcium<br>Chromium     | 150.                  | _( k            | 0,012            | ત            | Zinc<br>Arsenio  |           | 0.1                                   | A 0.007              |
| Cobalt                  | 40.                   | \ <u></u>       | 0,010            | 7            | Seleni           |           |                                       | 20,005               |
| Copper                  | 40.1                  |                 |                  | <del>/</del> | Mercur           |           |                                       | ₹ <0,0005            |
| Iron                    | 1.8                   |                 |                  |              |                  |           |                                       |                      |
| Lead                    | ₹0.1                  | 🌣               | (0.01            |              |                  |           |                                       | <u></u>              |
| Magnesium               | 36,                   |                 |                  | -            |                  |           | <del></del>                           | <u> </u>             |
| Manganese<br>Molybdenum | 40.0                  | <u> </u>        |                  | -            | <del></del>      |           |                                       | \ \ <del>\</del>     |
| Nickel                  | 40.1                  | <del></del>     |                  | _            |                  |           |                                       | H                    |
| LAB COMMEN              | mc •                  |                 |                  |              |                  |           |                                       | Olc Co               |
|                         |                       |                 |                  |              |                  |           |                                       | DIGEST               |
| For OCD Us              |                       | l•              | TC               | TAD An-      | lyst W           |           | Reviewer                              | (1. 12 LOV           |
|                         | or Letter             |                 |                  | are uniq     | 7                | 1.1.      | V= A TEAGT                            | Chilles              |

NTIFIC LABORATORY DIVIDION 700 Camino de Salud NE Albuquerque, NM 87106 841-2570



STATE OF NEW MEXICO

| REPORT TO:          | David Boyer   | S.L.D. No. OR                                  | 493 AYB                  |
|---------------------|---|--|--------------------------|
| 3 10.               | N.M. Oil Conservation Division                                    | DATE REC.                                      | 4-19-88                  |
| •                   | P. O. Box 2088  |  |                          |
|                     | Santa Fe, N.M. 87504-2088   | PRIORITY .                                     | 3                        |
| PHONE(S):           | 327-5812 USE  | CODE:   8   2   2                              | 13151                    |
| SUBMITTER:          | David Boyer   | CODE: 12   6                                   |                          |
|                     | CCTION CODE: (YYMMDDHHMMIII) 18181014111                          |  | Delle                    |
|                     | WATER ( SOIL , FOOD , OTHER:                                      | •  | <br>                     |
|                     | cory: Lornaton  |  | <del></del>              |
|                     |   | C+012+411                                      | <del></del>              |
|                     | QUESTED: Please check the appropriate box(es) below to indic      |  | <del></del>              |
|                     | er possible list specific compounds suspected or required.        |  | •                        |
|                     |   | XTRACTABLE SCREE                               | <del></del>              |
| 1 <sub>200</sub>    | ,   | Aliphatic Hydrocarbo                           |                          |
|                     |   | ) Organochlorine Pesti<br>Base/Neutral Extract |                          |
| (768) Trihal        |   | Herbicides, Chlorophe                          |                          |
| <u> </u>            | · = ·   | Herbicides, Triazines                          |                          |
|                     |   | Organochlorine Pestic                          | ides                     |
|                     | · · · · · · · · · · · · · · · · · · ·                             | Organophosphate Per                            |                          |
|                     | [ (767  | Polychlorinated Biph                           | enyls (PCB's)            |
|                     | . [764  | ) Polynuclear Aromatic                         | Hydrocarbons ·           |
|                     |   | SDWA Pesticides &                              | Herbicides               |
| Remarks:            |   |  |                          |
|                     |   |  |                          |
| FIELD DATA:         |   |  | •                        |
| рН=; С              | onductivity=2655umho/cm at 27_°C; Chlorine Residual               | =mg/l  |                          |
| Dissolved Oxyger    | n=mg/l; Alkalinity=mg/l; Flow Rate                                |  |                          |
| Depth to water      | ft.; Depth of wellft.; Perforation Interval                       | ft.; Casing:_                                  |                          |
| Sampling Location   | on, Methods and Remarks (i.e. odors, etc.)                        | A -  |                          |
| Bayrs               | Coas moressing-Hose disc  | harage 852                                     | om plant                 |
| olf u               | outer separator to sield-c  | Tily Shee                                      | n, dark colo             |
|                     | ne results in this block accurately reflect the results of my fie |  |                          |
| activities.(signatu | re collector): Metho  |  | Lao: UURA CUL            |
|                     | reserved as follows:  | -;   | _ <del></del>            |
| NP:                 | No Preservation; Sample stored at room temperature.               | اسا استا (را                                   |                          |
| P-Ice               | Sample stored in an ice bath (Not Frozen).                        |  |                          |
|                     | Sample Preserved with Sodium Thiosulfate to remove chlorin        | e residual                                     |                          |
| CHAIN OF CU         | į   | <u> </u>                                       | 8 1984                   |
| I certify that t    | his sample was transferred from                                   | 10 6 L   | - Viril                  |
| at (location)       | on  |  | vation division<br>Thate |
| the statements      | in this block are correct. Evidentiary Seals: Not Sealed 🔲        |  | No 🗍                     |
| Signatures          |   | · · · · · · · · · · · · · · · · · · ·          | <del></del> -            |
| For OCD L           | se: Date Owner Notified 7   | or detter?                                     | Initials                 |
| וטו טכט נ           | 135. Page owiser notified N. N. V. V. V. Linglie                  | v,   | 11161415                 |



LAB. No.: OR- 493-

### THIS PAGE FOR LABORATORY RESULTS ONLY

| This sample was tested using the analytical screen   | ning method(s)   | checked below:                                     |              |
|--|------------------|--|--------------|
| PURGEABLE SCREENS  |                  | EXTRACTABLE SCREENS                                |              |
| [753] Aliphatic Purgeables (1-3 Carbons)   |                  | (751) Aliphatic Hydrocarbons                       |              |
| (754) Aromatic & Halogenated Purgeables  |                  | (760) Organochlorine Pesticides                    |              |
| (765) Mass Spectrometer Purgeables   |                  | (755) Base/Neutral Extractables                    |              |
| (766) Trihalomethanes  |                  | (758) Herbicides, Chlorophenoxy acid               |              |
| Other Specific Compounds or Classes  |                  | (759) Herbicides, Triazines                        |              |
|  |                  | (760) Organochlorine Pesticides                    |              |
| , I_J  |                  | (761) Organophosphate Pesticides                   |              |
|  |                  | (767) Polychlorinated Biphanyls (PCB's)            |              |
|  |                  | (764) Polynuclear Aromatic Hydrocarbons            |              |
|  | <del></del>      | (762) SDWA Pesticides & Herbicides                 |              |
|  |                  |  |              |
| AN   | AL VTICA         | L RESULTS  |              |
| 714  | VE I LICA        | L KLOULIO  |              |
| COMPOUND(S) DETECTED   | CONC.            | COMPOUND(S) DETECTED                               | CONC.        |
|  | [PPB]            |  | [PPB]        |
| halagene to L Duranalle  | N.D.             | <u> </u>   | į            |
| Num ropina se de simavarres  | see              |  |              |
| gramatiet spera cable  | romento          |  |              |
| hence la   | 7525             |  | į            |
| The same of the sa | 1000             |  |              |
| Coliene  | 1875             |  |              |
| The lange  | 50               | 1  |              |
| engenizer.   | 1                |  |              |
| Atm-valence  | 225              |  |              |
| a- victorle  | 135              |  |              |
| 1.   |                  |  |              |
|  | <del>  </del>    |  |              |
|  | 1 1              |  |              |
|  |                  |  |              |
|  | <del> </del>     |  |              |
| * DETECTION LIMIT * *  | 12.54            | + DETECTION LIMIT +                                | (            |
| ADDREWATIONS MODD.   |                  |  |              |
| ABBREVIATIONS USED:  | 77772 C774/0727  | - Democratical Lines                               |              |
| N D = NONE DETECTED AT OR ABOVE  |                  |  |              |
| T R = DETECTED AT A LEVEL BELOW  |                  |  |              |
| RESULTS IN BRACKETS ] ARE UNCONF   | TIRMED AND/      | OR WITH APPROXIMATE QUANTITATION                   |              |
|  |                  |  |              |
| LABORATORY REMARKS: Jane Dank  | 1 11.7           | ing unsaturated compound                           | 1 1          |
|  | g exusi          | my unissuraces compound                            | 100          |
| 10-50 pp and & six 1   | late e           | Saling compounds in The                            | 3            |
| my little of land  | rains a          | tiles of and detected                              | 11           |
| Jasonamie penint   | gara - 6         | 2 1000 Agen Consecutor                             | <del>~</del> |
| The photoworkeralions  | delecto          | a full how identified                              | 1-           |
|  |                  |  |              |
|  | <del></del>      | <del></del>  |              |
| CERTIFICA  | TE OF ANALY      | TICAL PERSONNEL                                    |              |
| Seal(s) Intact: Yes No T. Seal(s) broken by  | y: Mar           | Tropled date:                                      |              |
| I certify that I followed standard laboratory procedu  |                  |  | and          |
| that the statements on this page accurately reflect t  |                  |  |              |
| / / /  |                  |  |              |
| Date(s) of analysis: 4/70/88 . Analyst's si  | gnature:         | Hay ( caler  |              |
| I certify that I have reviewed and concur with the   | analytical resul | ts for this sample and with the statements in this | block.       |
| 1 // 5 /   |                  |  |              |
| Reviewers signature: Ronayenhun  |                  |  |              |
| ·  |                  | <del></del>  |              |



# New Mexico Health and pronment Department SCIENTIFIC LABORATORY DIVISION 700 Camino de Salud NE Albuquerque, NM 87106 — (505) 841-2555

# GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

| 111                                   | 8/100 - (303) 041-2333     |                                |                       |                                       |
|---------------------------------------|----------------------------|--------------------------------|-----------------------|---------------------------------------|
| RECEIVED 7 / NO                       | USER<br>CODE               | ☐ 59300 ☐ 59600 🕅              | OTHER: 82             | 235                                   |
| Schedipp Time                         | SITE INFORM-               | Garis Co                       |                       | assing-large                          |
| Collected by Parean/Agency            | <del></del>                | one description Coolina        | TALLY                 | , drain hos                           |
| Roys / Sea.                           | 4 10CD                     |                                |                       | , , , , , , , , , , , , , , , , , , , |
| ENVIRONMENT                           | AI DIIDEAII                |                                | 121                   | archit.                               |
| SEND NM OTL CONS                      | FRVATION DIVISION          |                                |                       |                                       |
| FINAL State Land                      | Office Bldg, PO B          | ox 2088                        |                       |                                       |
| Santa Fe, N                           | M 87504-2088               |                                |                       |                                       |
| Attn: David Boy                       | er                         |                                |                       | · · · · · · · · · · · · · · · · · · · |
| Phone: 827-58                         | 12                         |                                | Station/<br>well code |                                       |
| SAMPLING CONDITIONS                   | 14                         |                                | O <del>wner</del>     | <del></del>                           |
| ☐ Bailed ☐ Pump                       | Water level                | Discharge                      |                       | Sample type / 0 - 4                   |
| ∑ Dipped □ Tap                        | <u> </u>                   |                                | ·                     | GRAR                                  |
| pH (00400)                            | Conductivity (Uncorrected) | Water Temp. (00010)            | 14 00                 | Conductivity at 25 °C (00094)  µmho   |
| Field comments                        | 2 ( /                      | - <del>'</del>                 | ·                     | μ                                     |
| 0000                                  | A Surples                  | 2                              | <del></del>           |                                       |
|                                       | U                          |                                |                       |                                       |
| AMPLE FIELD TREATMENT                 | - Check proper boxes       |                                |                       | · · · · · · · · · · · · · · · · · · · |
| No. of samples / XNF                  |                            | Character to the transfer      | 2 ml H₂SO₄/           | L added                               |
| NA: No acid added                     | other-specify:             | ☐A: 5ml conc. HNO <sub>3</sub> | added . □ A           | A: 4ml fuming HNO <sub>3</sub> added  |
| ANALYTICAL RESULTS from               |                            |                                |                       |                                       |
| NA NA                                 | Units Da                   | te analyzed From W.            | NA Sample             | : Date                                |
| Conductivity (Corrected) 25°C (00095) | <u> </u>                   | 5/23                           |                       | Analyzed                              |
| ☐ Total non-filterable                | ·                          | Calcium                        | 78                    | 3 mg/1 5/16                           |
| residue (suspended)                   |                            | ▼ Potassium                    |                       | 4 mg/7 5/10                           |
| (00530)<br>X Other: 1                 | 7.41 mg/l —                | 504 Magnesium                  |                       | 2 mg/1 5/16                           |
| COther:                               |                            |                                | 95                    |                                       |
| Cother:                               | <del></del>                | Bicarbonal                     |                       | 5 mg/1 5/24                           |
| A-H-SO4                               |                            |                                |                       | <del></del>                           |
| ☐ Nitrate-N + , Nitrate-N             |                            | Chloride _                     |                       |                                       |
| total (00630)                         | mg/l                       | Sulfate _                      |                       | 5 mg/1 5/17                           |
| Total Kieldahi-N                      | mg/l                       | Total Sol                      | 05090                 | mg/1                                  |
| C Chamical avenue                     | mg/l                       |                                |                       | · · · · · · · · · · · · · · · · · · · |
| Chemical oxygen demand (00340)        | mg/l                       |                                |                       | `~ <u></u>                            |
| C Total organic carbon                | mg/l                       |                                |                       |                                       |
| ( )                                   |                            | Cation/                        |                       |                                       |
| C Other:                              |                            | Analyst                        |                       | Perported Reviewed by                 |
| Laboratory remarks                    |                            |                                | 13 4                  | 0188100                               |
| 176                                   |                            |                                | <del></del>           |                                       |
|                                       |                            | <del></del>                    |                       |                                       |
|                                       |                            |                                |                       |                                       |

FOR OCD USE -- Date Owner Notified Phone or Letter? Initals\_



New Mexico Health and Environment Department SCIENTIFIC LABORATORY DIVISION 700 Camino de Saludo Albuquerque, NM 87

Initials:

## HEAV METAL ANALYSIS FORM Telephone: (505)841-2553

Date Revelved

Date Lab User 82235 No.-Received Code Other: COLLECTION SITE DESCRIPTION COLLECTION DATE & TIME: mm dd hh mm COLLECTED BY: TO: OWNER: ENVIRONMENTAL BUREAU SITE LOCATION: NM OIL CONSERVATION DIVISION County: Led State Land Office Bldg., PO Box 2088 SANTA FE, NM 87504-2088 Township, Range, Section, Tract: (10N08E24342) 1/1515+31716+012+41/1/ ATTN: [ STATION/ WELL CODE: | | | TELEPHONE: 827-5812 LATITUDE, LONGITUDE: | | | | SAMPLING CONDITIONS: Pump Tap Bailed Water Level: Discharge: Sample Type: Dipped 25°C pH(00400) Conductivity (Uncorr.) Water Temp. (00010) Conductivity at (00094)nmpo nwpo FIELD COMMENTS: SAMPLE FIELD TREATMENT LAB ANALYSIS REQUESTED: Check proper boxes: WPN: Water Preserved w/HNO3 WPF: Water ICAP Scan Preserved w/HNO, Mark box next to metal if AA Non-Filtered Filtered is required. ANALYTICAL RESULTS (MG/L) ELEMENT ICAP VALUE AA VALUE **YY AYINE** ELEMENT ICAP VALUE Aluminum Silicon 4D. Barium Silver **حمہ** Beryllium ۲۵. Strontium Boron Tin Cadmium 40. Vanadium <0. Calcium Zinc <0. Chromium 40. X 0.013 Arsenic Cobalt Z0,05 Selenium Copper 407 Mercury Iron 40.I Lead Magnesium Manganese 0.05 Molybdenum 40.1 Nickel 40. LAB COMMENTS: DIGGST For OCD Use: Date Owner Notified: ICAP Analyst Reviewer Phone or Letter?

Date Analyzed



STATE OF NEW MEXICO

88-0490-C CIENTIFIC LABORATORY DIVON
700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

| REPORT TO:   | David Boyer   | S.L.D. No. OR- 490 77 VD  |
|--|---|---|
|  | N.M. Oil Conservation Division  | DATE REC. 4-19-88   |
| • .  | P. O. Box 2088  |   |
|  | Santa Fe, N.M. 87504-2088   | PRIORITY 3  |
| PHONE(S):  | 327-5812  | SER CODE:   8   2   2   3   5   |
| SUBMITTER:   | David Boyer   | CODE:  2   6   0  |
| SAMPLE COLLEC  | ction code: (YYMMDDHHMMIII) $ B B O A $   | 14103048  |
| SAMPLE TYPE:   | WATER SOIL , FOOD , OTHER:  | CODE:   |
| COUNTY:  | 7/  |   |
| LOCATION CODE  | E: (Township-Range-Section-Tracts) 1159+31  | (10006E24342)   |
|  | UESTED: Please check the appropriate box(es) below to i   | ndicate the type of analytical screens  |
|  | r possible list specific compounds suspected or required. PURGEABLE SCREENS   | EXTRACTABLE SCREENS   |
| •  | <del></del>   | (751) Aliphatic Hydrocarbons  |
| · ·  | ·   | (760) Organochlorine Pesticides   |
| ·  |   | 755) Base/Neutral Extractables  |
| [ (766) Trihalo  |   | 758) Herbicides, Chlorophenoxy acid   |
| Other  |   | 759) Herbicides, Triazines  |
| <u></u>  |   | 760) Organochlorine Pesticides (761) Organophosphate Pesticides   |
| <u> </u>   |   | 767) Polychlorinated Biphenyls (PCB's)  |
| <u> </u>   |   | 764) Polynuclear Aromatic Hydrocarbons  |
| <u> </u>   |   | 762) SDWA Pesticides & Herbicides   |
| ·  | ······································  | 102) DD 1112 1 CBNICIGES & MELDICIGES   |
| Remarks:   |   |   |
| Remarks:   |   |   |
| Remarks:   |   |   |
| PIELD DATA:  | nductivity= <u>750</u> umho/cm at <u>14</u> °C; Chlorine Resid  |   |
| FIELD DATA: pH=; Co  |   | dual=mg/l   |
| FIELD DATA: pH=; Co. Dissolved Oxygen=   | nductivity= 750 umho/cm at 14°C; Chlorine Resid   | dual=mg/l   |
| PIELD DATA:  pH=; Co.  Dissolved Oxygen=  Depth to water   | nductivity= 750 umho/cm at 4°C; Chlorine Resident mg/l; Alkalinity= mg/l; Flow Rate ft.; Depth of well ft.; Perforation Interval no Methods and Remarks (i.e. odors, etc.)  | dual=mg/lft.; Casing:   |
| PIELD DATA:  pH=; Co.  Dissolved Oxygen=  Depth to water   | nductivity= \( \frac{750}{250}\) umho/cm at \( \frac{14}{4}\)^\circ C; Chlorine Resides \( \frac{1}{250}\) mg/l; Flow Rate \( \frac{1}{250}\) ft.; Depth of well \( \frac{1}{250}\) ft.; Perforation Interval   | dual=mg/lft.; Casing:   |
| FIELD DATA:  pH=; Co.  Dissolved Oxygen:  Depth to water  Sampling Location  | nductivity= 750 umho/cm at 14°C; Chlorine Reside=mg/l; Alkalinity=mg/l; Flow Rateft.; Depth of wellft.; Perforation Intervaln, Methods and Remarks (i.e. odors, etc.)   | dual=mg/1ft.; Casing: ng lower drain hose To east pil   |
| PIELD DATA:  pH=; Co.  Dissolved Oxygens  Depth to water  Sampling Location  O'L  I certify that the   | nductivity= 750 umho/cm at 14°C; Chlorine Resides mg/l; Alkalinity= mg/l; Flow Rate ft.; Depth of well ft.; Perforation Interval no Methods and Remarks (i.e. odors, etc.)  The Collagory - Cooler of the few after the results of my series in this block after the results of my  | dual=mg/lft.; Casing:  ng tower drain hose  To east pit  field analyses, observations and pro-  |
| PIELD DATA:  pH=; Co  Dissolved Oxygens  Depth to water  Sampling Location  Location  John  I certify that the activities (signature)  | nductivity= 750 umho/cm atC; Chlorine Resident  | dual=mg/lft.; Casing:  ng tower drain hase  To east pit  field analyses, observations and ethod of Shipment to the Lab: State Car                                 |
| PIELD DATA:  pH=; Co.  Dissolved Oxygen:  Depth to water  Sampling Location  O'al  I certify that the activities (signature This form accomptions)   | nductivity= 750 umho/cm at 14°C; Chlorine Resident and Remarks (i.e. odors, etc.)  The property of the property of the results of the results in this block accurately reflect the results of my to collector):  Septum Vials, Glass Jugs, and/or   | dual=mg/lft.; Casing:  ng tower drain hase  To east pit  field analyses, observations and ethod of Shipment to the Lab: State Car                                 |
| PIELD DATA:  pH=; Co.  Dissolved Oxygen:  Depth to water  Sampling Location  O'al  I certify that the activities (signature This form accomptions)   | nductivity= 750 umho/cm atC; Chlorine Resident  | dual=mg/lft.; Casing:  ng tower drain hase  To east pit  field analyses, observations and ethod of Shipment to the Lab: State Car                                 |
| PIELD DATA:  pH=; Co.  Dissolved Oxygen:  Depth to water  Sampling Location  I certify that the activities (signature)  This form accomplishing form accomplishing the samples were presented.                                       | nductivity= 750 umho/cm at  | dual=mg/lft.; Casing:  ng tower drain hase  To east pit  field analyses, observations and ethod of Shipment to the Lab: State Car                                 |
| PIELD DATA:  pH=; Co.  Dissolved Oxygen:  Depth to water  Sampling Location  I certify that the activities (signature)  This form accommy Samples were presented by P-Ice  P-Na_S_O_3  | mductivity= 750 umho/cm atC; Chlorine Resident for the control of the cont | dual=mg/lft.; Casing:ft.; Casing:ft.; Casing:ft.; Casing:ft.; Casing:ft.; Casing:   |
| PIELD DATA:  pH=; Co.  Dissolved Oxygen=  Depth to water  Sampling Location  I certify that the activities (signature)  This form accomplished were presented by P-Ice   | mductivity= 750 umho/cm atC; Chlorine Resident for the control of the cont | dual=mg/lft.; Casing:ft.; Casing:ft.; Casing:ft.; Casing:ft.; Casing:ft.; Casing:   |
| PIELD DATA:  pH=; Co.  Dissolved Oxygen:  Depth to water  Sampling Location  I certify that the activities (signatur. This form accom. Samples were pre  | mductivity= 750 umho/cm atC; Chlorine Resident to the collection of the colle | dual=mg/lft.; Casing:ft.; Casing: ft.; Casing:  field analyses, observations and gethod of Shipment to the Lab: Staticas  orine residual.  totows.wation.division |
| PIELD DATA:  pH=; Co.  Dissolved Oxygen:  Depth to water  Sampling Location  I certify that the activities (signatur. This form accom. Samples were pre  | nductivity= 750 umho/cm atC; Chlorine Residentmg/l; Alkalinity=mg/l; Flow Rateft.; Depth of wellft.; Perforation Interval, Methods and Remarks (i.e. odors, etc.)  A  | orine residual. mg/l ft.; Casing: ft.; Casing:  |
| PIELD DATA:  pH=; Co.  Dissolved Oxygens  Depth to water  Sampling Location  I certify that the activities (signature This form accompany Samples were presented by P-Ice  P-Na 2 2 3 CHAIN OF CUS  I certify that the at (location) | mductivity= 750 umho/cm atC; Chlorine Resident to the collection of the colle | dual=mg/lft.; Casing:ft.; Casing:   |

For OCD Use: Date Owner Notified

Phone or Letter?

Initials



LAB. No.: OR- 490

#### THIS PAGE FOR LABORATORY RESULTS ONLY

| PURGEABLE SCREENS  [ (753) Aliphatic Purgeables (1-3 Carbons)  [ (754) Aromatic & Halogenated Purgeables [ (765) Mass Spectrometer Purgeables [ (766) Trihalomethanes  | 3  | EXTRACTABLE SCREENS  (751) Aliphatic Hydrocarbons (760) Organochlorine Pesticides (755) Base/Neutral Extractables (758) Herbicides, Chlorophenoxy acid (759) Herbicides, Triazines (760) Organochlorine Pesticides (761) Organophosphate Pesticides (767) Polychlorinated Biphenyls (PCB's) (764) Polynuclear Aromatic Hydrocarbons (762) SDWA Pesticides & Herbicides |       |
|--|--|--|-------|
| COMPOUND(S) DETECTED   | CONG.  | COMPOUND(S) DETECTED   | CONC. |
| aromatic susquables salogenatad spurgeables  | N.D.<br>N.D  |  |       |
|  |  |  | ·     |
|  |  |  |       |
| • DETECTION LIMIT • *  | 548/   | + DETECTION LIMIT + +  |       |
| ABBREVIATIONS USED:  N D = NONE DETECTED AT OR ABOVE T R = DETECTED AT A LEVEL BELO [ RESULTS IN BRACKETS   ARE UNCO   | W THE STATED   | DETECTION LIMIT (NOT CONFIRMED)  |       |
| ,  | 4  | ICAL PERSONNEL   |       |
| eal(s) Intact: Yes No Seal(s) broken certify that I followed standard laboratory procent the statements on this page accurately reflect ate(s) of analysis: 4/2/88. Analyst's certify that I have reviewed and concur with the eviewers signature: | dures on handling the analytical results analytical results analytical results | Sang G. Elen   |       |



New Mexico Health an ironment Department SCIENTIFIC LABORAL DIVISION 700 Camino de Salud NE
Albuquerque, NM 87108 — (505) 841-2555

457 WIL

# NERAL WATER CHEMISTRY and NITROGEN ANALYSIS

| <u>'   '</u>  | 7 0 4 4 0 0 . 4 - 0 1                  |                               |                             | وروي والمساور والمساد كالي            |                                     |                |                               |
|---|--|-------------------------------|-----------------------------|---------------------------------------|-------------------------------------|----------------|-------------------------------|
| DATE<br>RECEIVED 4                                  | 1/98: N                                | 11x-1265                      | USER 59300                  | 59600 <b>XX</b> C                     | тнен: 82                            | 235            |                               |
| CONFIGURATIME                                       |  | SITE<br>INFORM- ><br>ATION    | Sample location             | evis Gas                              | 1100                                | exteri         | 4-Lorington                   |
| College Second                                      | 1                                      |                               | Collection site description | Cooling                               |                                     |                |                               |
| 130497  | Tray                                   | /ncd                          |                             |                                       |                                     |                |                               |
| / ( /   | T                                      |                               |                             |                                       |                                     |                |                               |
| 1   | ENVIRONMENT                            | TAL BUREAU                    | TCTON                       | · ·                                   | ļ                                   |                |                               |
| SEND :  | NM OIL CONS<br>State Land              | SERVATION DIV<br>Office Bldg, | PO Box 2088                 | <b>3</b> "                            |                                     |                |                               |
| REPORT  | Santa Fe, 1                            | NM 87504-2088                 | 3                           |                                       |                                     |                |                               |
| <b>&gt;</b>   | _David_Boy                             | •                             |                             |                                       |                                     |                |                               |
| ,   |  | , <del>,,</del> ,_,,_,        |                             |                                       | Station/                            | <del></del>    | <del></del>                   |
| Phor  | ne: 827-59                             | 112                           |                             | •                                     | well code                           |                |                               |
| SAMPLING CO   | NDITIONS                               |                               |                             |                                       | Owner                               |                |                               |
| ☐ Bailed<br>☐ Dipped                                | □ Pump<br>□ Tap                        | Water level                   |                             | Discharge                             |                                     | Sample typ     | "CRBB                         |
| pH (00400)  | _                                      | Conductivity (Uncor           | rrected)<br>μmho            | Water Temp. (00010)                   | 45°C                                | Conductivit    | ly at 25°C (00094)<br>μmho    |
| Field comments                                      |  |                               |                             |                                       |                                     |                |                               |
| ······································              | ······································ |                               |                             |                                       |                                     | ·····          |                               |
| <del></del>   | ····                                   |                               |                             | <del></del>                           |                                     |                | <del></del>                   |
| SAMPLE FIELD  | TREATMEN                               | T — Check prope               |                             |                                       |                                     |                |                               |
| No. of samples                                      | / ZN                                   | . Whole sample                | ☐ F: Filtered in            | field with                            | ml H₂SO₄/                           | L added        |                               |
| submitted   | <u> </u>                               | (Non-filtered)                |                             | morane mier                           |                                     |                | <del> </del>                  |
| NA: No aci  | id added 🖸 C                           | Other- <i>specify:</i>        | □A:                         | 5ml conc. HNO <sub>3</sub> ad         | ded 🗀                               | A: 4ml f       | iuming HNO <sub>3</sub> added |
| ANALYTICAL P  | RESULTS from                           | SAMPLES                       |                             |                                       |                                     |                |                               |
| NA NA   |  | ·                             | Units Date analyze          | From NF.                              | VA Sample                           |                | Date                          |
| Conductivity (0 25 °C (00095)                       | Corrected) ——                          | 1227                          | ımho <u>5/23</u>            | -1.                                   | • • • • • • • • • • • • • • • • • • | . •            | Analyzed .                    |
| ☐ Total non-filters                                 | thle                                   |                               | •                           | Calcium                               | 8                                   | <u>8</u> _mg/1 | 5/16                          |
| residue (suspe                                      |  |                               |                             | Potassium                             |                                     | mg/1           | 5/10                          |
| (00530)<br><b>X</b> Other:                          | 1-106                                  | 8.22                          | mg/1 - 5/24                 | Magnesium                             |                                     | .4 mg/1        | 5/16                          |
| COther:   |  |                               | 7                           | Sodium                                |                                     | 8 mg/1         | 5/13                          |
| ☐ Other:  | -                                      |                               |                             | Bicarbonate                           |                                     | 3 7 mg/1       | 5/24                          |
| A-H <sub>2</sub> SO <sub>4</sub>                    |  | <del></del>                   | <del> </del>                | 7 7                                   |                                     |                | 5/18                          |
| ☐ Nitrate-N+, Ni                                    | trate-N                                |                               | <del></del>                 | Chloride _                            |                                     | 71mg/1         |                               |
| total (00630)                                       |  |                               | mg/l                        | Sulfate                               |                                     | mg/1           |                               |
| Ammonia-N tot Total Kjeldahl-N                      |  |                               | mg/1                        | - 🗷 Total Solid                       | s <u>80</u>                         | <u>9_mg/1</u>  | 5/20                          |
| ( )   | <b>`</b>                               |                               | mg/l                        | -                                     |                                     |                |                               |
| <ul> <li>Chemical oxyg<br/>demand (0034)</li> </ul> |  |                               | mg/l                        |                                       |                                     |                | •                             |
| ☐ Total organic c                                   |  | <del></del>                   | 9/1                         |                                       |                                     |                |                               |
| ( )   |  |                               | mg/l                        | - 🛛 Cation/Ar                         | nion Ba                             | lance          |                               |
| ☐ Other:<br>☐ Other:                                |  | <del></del>                   | <del></del>                 | Analyst                               | Date R                              | eported        | Reviewed by                   |
|   |  |                               |                             |                                       | 5                                   | 27/88          | 9                             |
| Laboratory remark                                   | s                                      |                               |                             |                                       |                                     |                |                               |
| 232   |  |                               |                             | · · · · · · · · · · · · · · · · · · · |                                     |                |                               |
|   | <del></del>                            |                               |                             |                                       |                                     |                | <del></del>                   |
| FOR OCD USE   | E Date C                               | Wner Notifie                  | d                           | Phone or Lette                        | er?                                 | In             | itals                         |
|   |  |                               |                             |                                       |                                     |                |                               |

| ANALY               | CATIONS<br>TE MEQ.           | PP <b>M</b>                      | DET.                          | ANALYT                   | ANIONS<br>E MEQ.             | PPM                        | DET.                         |
|---------------------|------------------------------|----------------------------------|-------------------------------|--------------------------|------------------------------|----------------------------|------------------------------|
| Ca<br>Mg<br>Na<br>K | 4.39<br>2.00<br>5.13<br>0.10 | 88.00<br>24.40<br>118.00<br>4.00 | <3.0<br><0.3<br><10.0<br><0.3 | HC03<br>SO4<br>CL        | 2.25<br>2.33<br>7.64         | 137.00<br>112.00<br>271.00 | <1.0<br><10.0<br><5.0        |
| Mn<br>Fe            | 0.00                         | 0.00                             | <br> <br>                     | NO3<br>CO3<br>NH3<br>PO4 | 0.00<br>0.00<br>0.00<br>0.00 | 0.00<br>0.00<br>0.00       | < 0.<br>< 1.<br>< 0.<br>< 0. |
| SUMS                | 11.63                        | 234.40                           | !                             |                          | 12.22                        | 520.00                     |                              |
|                     | Dissolved<br>alance =        | Solids=<br>95.15%                | 809                           |                          |                              | 8801268                    |                              |

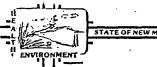


New Mexico Health and Environment Department SCIENTIFIC LABORATORY DIVISION 700 Camino do Salud N Albuquerque, NM 87106

# HEAV METAL ANALYSIS FORM Telephone: (505)841-2553

| Date               | 11.161.05  | No. Fit 1      | User Code   | Mr. 00005           | Other:                                   |  |
|--------------------|------------|----------------|-------------|---------------------|--|--|
| Received           | 7 17 5°    |                |             | 82235               | LLECTION SITE                            | DESCRIPTION  |
| COMMECTION         | DATE & II  | 600            | 474         | 1                   | Davis Ged                                |  |
| COLLECTED          | BY: ←      | 101.510        | 47 -110     | 1 7                 | or in Tack                               |  |
|                    | Sper       | 1/Eses         | ock .       | 1                   | or my war                                | and the state of t |
|                    |            | 1              |             | <del></del>         |  |  |
| TO:                | •          | ,              |             | OW                  | NER:                                     |  |
|                    |            |                |             |                     |  |  |
|                    |            |                |             |                     |  |  |
|                    | nmental bu |                |             |                     | TE LOCATION:                             |  |
|                    |            | CION DIVIS     |             |                     | unty: <u>led</u>                         | <del></del>  |
|                    |            | 37504-2088     | PO Box 2088 |                     | Danie Gradan (                           | T (10)10070 (0.0)  |
| SANTA              | re, mm c   |                |             | Town                | uship, Range, Section,                   |  |
| Filelal C          | ALUA!      | RAMOR          |             |                     | (1010 1010 10 10 10 10 10 10 10 10 10 10 | 28 111/1/  |
| TELEPH             | ONE: 827-  | 5812           | STATION     | / WELL COD          | R:IIII                                   | 11111  |
|                    |            | <del>-</del> - |             | ,                   |  |  |
| _                  |            | LATIT          | DE, LONGIT  | UDE:                | 111111                                   |  |
| SAMPLING C         |            |                |             |                     |  |  |
| ☐ Bail             |            | - 1            | er Level:   | Discharg            | e: Sam                                   | ple Type:  |
| Dipp               |            | ap q           |             | <u> </u>            | - 6                                      | RAR  |
| pH(00400)          | Conductiv  | vity(Uncor     | r.)   Water | Temp. (0001         |  | vity at 25°C   |
|                    | 1          | 1680 jumi      |             | 45 °c               | (00094)                                  |  |
| FIELD COMM         | Trume.     | 1600 pm        | 10          | 1) 6                |  | umho   |
| FIRM COMP          | ENIS.      |                |             |                     |  |  |
| <del></del>        |            |                |             | ·                   |  | ·  |
| SAMPLE FIE         | LD TREATM  | ENT            |             | LAB ANALYS          | IS REQUESTED:                            | · · · · · · · · · · · · · · · · · · ·  |
|                    | per boxes  | <b>:</b>       |             |                     |  |  |
|                    | Water      | ☐ WPF:         |             | ICAP                |  |  |
| Preserved          | W/HNO3     | Preserved      | W/HNO3      |                     | next to meta                             | l if AA  |
| Non-Filte          | red        | Filtered       |             | is requi            | red.                                     |  |
|                    |            | ΔΝΔΙΥΤ         | ICAL RESI   | HTS (MC             | :/1)                                     |  |
| ELEMENT            | ICAP VAL   | TR AA          | VALUE 1     | ELEMENT             | ICAP VALUE                               | AA VALUE   |
| Aluminum           | 40.1       | <u> </u>       |             | Silicon             | 20,                                      | M VALOE  |
| Barium             | 0.1        |                |             | Silver              | 40.1                                     | П  |
| Beryllium          | 40.1       |                |             | Strontium           | 0.9                                      | <u> </u>   |
| Boron              | 0,3        |                | X\langle [] | Tin                 | 40.                                      |  |
| Cadmium            | 40.1       | _ 9            | 7           | Vanadium            | 40.1                                     |  |
| Calcium            | 80.        | _ (            | X-1         | Zinc                | 0.1                                      |  |
| Chromium<br>Cobalt | Z0.0       | _ ( <u>8 o</u> | 02 / B      | Arsenic<br>Selenium |  | <u> </u>   |
| Copper             | <u> </u>   | ~ \ -          |             | Mercury             | 4  | 片  |
| Iron               | 0.5        |                |             | nercarl             |  | H  |
| Lead               | 40.1       | 12 60          | 0)          |                     |  | H  |
| Magnesium          | 22.        |                |             | <del></del>         |  | <u> </u>   |
| Manganese          | 40,0       | <u> </u>       |             |                     |  |  |
| Molybdenum         |            |                |             |                     |  |  |
| Nickel             | <u> </u>   | <del></del>    |             | ·····               |  |  |
| LAB COMMEN         | me.        |                |             |                     | · · · · · · · · · · · · · · · · · · ·    | 0.0. = = = = = = = = = = = = = = = = = =   |
| THE COMMEN         |            |                | <del></del> |                     |  | DIGEST 5/1/88  |
| For OCD Us         | ie:        | <del> </del>   |             |                     |  | A A A  |
| Date Owner         |            | :              | ICAP Anal   | lyst 🖟              | Reviewer                                 | RAA  |
|                    | or Letter  |                | }           | S(2)                |  | 111100   |
|                    |            |                |             |                     |  |  |

88-0492-C PITIFIC LABORATORY DIV ON 700 Camino de Salud NE Albuquerque, NM 87106 841-2570



| REPORT TO:  | David Boyer   | S.L.D. No. OR- 492 AYB   |
|---|---|--|
| REPORT 10.  | N.M. Oil Conservation Division  | DATE REC. 4-19-88  |
|   | P. O. Box 2088  |  |
|   | Santa Fe, N.M. 87504-2088   | PRIORITY 3   |
| PHONE(S):   |   | R CODE: 8 2 2 3 5  |
| SUBMITTER:  | David Boyer   | CODE: 12   6   0   |
|   | CTION CODE: (YYMMDDHHMMII)   B B  0 4 1   | 410051212  |
|   | WATER K, SOIL , FOOD , OTHER:   | CODE: L  |
| COUNTY: Le  | o : CITY: Lovington   | CODE:  |
| LOCATION COD  | E: (Township-Range-Section-Tracts) 1/15/543/7/  | E+012+41/1/1(10N06E24342)  |
| ANALYSES REQ  | UESTED: Please check the appropriate box(es) below to indi  | icate the type of analytical screens                               |
| •   | er possible list specific compounds suspected or required. PURGEABLE SCREENS  | EXTRACTABLE SCREENS  |
|   | <del></del>   | 1) Aliphatic Hydrocarbons  |
| `   | · · · · · · · · · · · · · · · · · · ·   | 0) Organochlorine Pesticides                                       |
| (765) Mass 5  | Spectrometer Purgeables [75]  | 5) Base/Neutral Extractables                                       |
| (766) Trihalo   | methanes [75]   | B) Herbicides, Chlorophenoxy acid                                  |
| Other   | Specific Compounds or Classes (759  | 9) Herbicides, Triazines   |
|   | (780  | D) Organochlorine Pesticides                                       |
| <u> </u>  |   | 1) Organophosphate Pesticides                                      |
| <u> </u>  |   | 7) Polychlorinated Biphenyls (PCB's)                               |
| <u> </u>  |   | 4) Polynuclear Aromatic Hydrocarbons                               |
| Remarks:  |   | 2) SDWA Pesticides & Herbicides                                    |
|   |   |  |
| FIELD DATA:   |   | ·  |
| pH=; Co   | onductivity=1680 umho/cm at 45°C; Chlorine Residua  | al=mg/l  |
| Dissolved Oxygen  | mg/l; Alkalinity= mg/l; Flow Rate   | /  |
| Depth to water  | ft.; Depth of wellft.; Perforation Interval   | ft.; Casing:   |
| Sampling Locatio  | n, Methods and Remarks (i.e. odors, etc.)   | 7 4T 0   |
| Bauis   | Cost Processing - Cooling   | Jackel Pump  |
|   | <b>~</b> √  | <u> </u>   |
| ı   |   | l l  |
| I certify that th   | e results in this block secretately reflect the results of my f   | ield analyses, observations and                                    |
| I certify that the activities (signature)   | re collector); Meth   | ield analyses, observations and sold of Shipment to the Lab: State |
| activities.(signatu   |   | od of Shipment to the Lab: Stale (20)                              |
| activities.(signatu<br>This form accom  | re collector): Meth   | od of Shipment to the Lab: Stale (20)                              |
| activities.(signatu<br>This form accom<br>Samples were pr   | re collector]:  Septum Vials, Glass Jugs, and/or eserved as follows:  No Preservation; Sample stored at room temperature.   | od of Shipment to the Lab: Stale (20)                              |
| activities (signatu This form accom Samples were pr NP: P-Ice   | re collector):  Septum Vials, Glass Jugs, and/or eserved as follows:  No Preservation; Sample stored at room temperature.  Sample stored in an ice bath (Not Frozen).   | DECEN  |
| activities.(signatu<br>This form accom<br>Samples were pr   | Methopanies Septum Vials, Glass Jugs, and/or esserved as follows:  No Preservation; Sample stored at room temperature.  Sample stored in an ice bath (Not Frozen).  Sample Preserved with Sodium Thiosulfate to remove chloric                                      | DECEN  |
| activities.(signatu This form accom Samples were pr NP: P-Ice P-Na S O 2 2 3                            | Methopanies Septum Vials, Glass Jugs, and/or esserved as follows:  No Preservation; Sample stored at room temperature.  Sample stored in an ice bath (Not Frozen).  Sample Preserved with Sodium Thiosulfate to remove chlorismody                                  | ine residual.  |
| activities.(signatu This form accom Samples were pr NP: P-Ice P-Na S O 2 2 3                            | Methopanies Septum Vials, Glass Jugs, and/or esserved as follows:  No Preservation; Sample stored at room temperature.  Sample stored in an ice bath (Not Frozen).  Sample Preserved with Sodium Thiosulfate to remove chloristody  ins sample was transferred from | ine residual.  |
| activities.(signatu: This form accom Samples were pr NP: P-Ice P-Na S O CHAIN OF CU: I certify that the | Methopanies Septum Vials, Glass Jugs, and/or esserved as follows:  No Preservation; Sample stored at room temperature.  Sample stored in an ice bath (Not Frozen).  Sample Preserved with Sodium Thiosulfate to remove chloristody  ins sample was transferred from | ine residual.  OIL CONCERVATION DIMINION  SANTANGE that            |
| activities.(signatu: This form accom Samples were pr NP: P-Ice P-Na S O CHAIN OF CU: I certify that the | Methopanies Septum Vials, Glass Jugs, and/or eserved as follows:  No Preservation; Sample stored at room temperature.  Sample stored in an ice bath (Not Frozen).  Sample Preserved with Sodium Thiosulfate to remove chloristody  in sample was transferred from   | ine residual.  OIL CONCERVATION DIMINION  SANTANGE that            |

For OCD Use: Date Owner Notified \_\_\_\_\_\_

#### THIS PAGE FOR LABORATORY RESULTS ONLY

| This sample was tested using the analytical scre    | ening method(s)    | checked below:                                       |                |
|---|--------------------|--|----------------|
| PURGEABLE SCREENS                                   |                    | EXTRACTABLE SCREENS                                  |                |
| (753) Aliphatic Purgeables (1-3 Carbons)            |                    | (751) Aliphatic Hydrocarbons                         |                |
| (754) Aromatic & Halogenated Purgeables             |                    | (760) Organochlorine Pesticides                      |                |
| (765) Mass Spectrometer Purgeables                  |                    | (755) Base/Neutral Extractables                      |                |
| (766) Trihalomethanes                               | •                  | (758) Herbicides, Chlorophenoxy acid                 |                |
| Other Specific Compounds or Classes                 |                    | (759) Herbicides, Triazines                          |                |
|   |                    | (760) Organochlorine Pesticides                      |                |
|   |                    | (761) Organophosphate Pesticides                     |                |
|   |                    | (767) Polychlorinated Biphenyls (PCB's)              | :              |
|   |                    | (764) Polynuclear Aromatic Hydrocarbons              |                |
|   |                    | (762) SDWA Pesticides & Herbicides                   |                |
| 14  | NALYTICA           | AL RESULTS   |                |
| COMPOUND(S) DETECTED                                | CONC.              | COMPOUND(S) DETECTED                                 | CONC.<br>[PPB] |
| halagerated ourseables.                             | N.D.               |  |                |
| untimatic non anobles                               |                    |  |                |
| henrilar  | 73                 |  |                |
| I toluono.  | 35                 |  |                |
| 1+ m- rulane.                                       | 9                  |  |                |
| 2-sellene   | 6                  |  |                |
| # //  | 14 12              |  |                |
| elaytoenzene  | 10.60              |  |                |
| 0 .   |                    | · ·  |                |
|   |                    |  |                |
|   | 1                  |  |                |
|   |                    |  |                |
| • DETECTION LIMIT • *                               | 548/2              | + DETECTION LIMIT +                                  |                |
| ABBREVIATIONS USED:                                 |                    |  |                |
| N D = NONE DETECTED AT OR ABOV                      | E THE STATE        | D DETECTION LIMIT                                    |                |
|   |                    | D DETECTION LIMIT (NOT CONFIRMED)                    |                |
|   |                    | OR WITH APPROXIMATE QUANTITATION                     |                |
|   |                    |  |                |
|   |                    | <del></del>  | <del></del>    |
| LABORATORY REMARKS:                                 | <del></del>        |  |                |
|   |                    |  |                |
|   |                    |  |                |
|   |                    |  |                |
|   |                    |  |                |
|   |                    |  |                |
|   |                    |  |                |
| CERTIFIC  | ATE OF ANAL        | YTICAL PERSONNEL                                     |                |
| Seal(s) Intact: Yes No Seal(s) broken               | by:                | Trealer date:  |                |
|   |                    | ng and analysis of this sample unless otherwise note | d and          |
| that the statements on this page accurately reflect | the analytical     | 11   |                |
| Date(s) of analysis: 4/20/88 . Analyst's            | signature:         | Kary Leller  |                |
|   | ne analytical resu | ults for this sample and with the statements in thi  | B block.       |
| Reviewers signature:                                | )                  |  |                |
|   |                    |  |                |



### **Attachment E**

## **Well Water Analysis**



New Mexico Health and Environment Department SCIENTIFIC LABORATO DIVISION 700 Camino de Salud Na Albuquerque, NM 87108 — (505) 841-2555 / CER/

THE STATE OF THE STREET OF THE

|  |              | (000)0110               |  |  |                                       |                     |                  |  |  |
|--|--------------|-------------------------|--|--|---------------------------------------|---------------------|------------------|--|--|
| RECEIVED 5   | 419188 14    | 8 WC-67/                | CODE 5930                              | o 🗆 59600 👯                            | OTHER: 82                             | 235                 |                  |  |  |
| Sollection DATE 14<br>SOLD 4114<br>Collection TIME |              | SITE<br>INFORM<br>ATION | Sample location                        | etra Gos                               | 77                                    |                     | orington         |  |  |
| 1120   | <u> </u>     | AIIA                    | Carlecton site description             | 610111                                 | 9 1                                   | 12                  | <del></del>      |  |  |
| Collected by - Person/                             | Agency Ko    | ALL TOCD                | -                                      | East Wat                               | es une                                | er                  |                  |  |  |
|  |              | 7                       |  |  | 7                                     |                     |                  |  |  |
|  | ENVIRONMENT  | TAL BLIDEALL            |  |  | \                                     |                     |                  |  |  |
| CEND   | NM OTI CON   | SERVATION DIV           | ISTON                                  |  |                                       |                     |                  |  |  |
| FINAL  | State Land   | Office Bldg             | PO Box 208                             | 8.                                     |                                       |                     |                  |  |  |
| REPORT<br>TO                                       | Santa Fe. i  | NM 87504-208            | 3                                      |  |                                       |                     |                  |  |  |
| -  | David Boy    |                         |  |  |                                       |                     |                  |  |  |
| . Aun  |              | y. <del>c.</del>        | ······································ |  |                                       |                     |                  |  |  |
| Phone: 827-5312                                    |              |                         |  |  | Station/<br>well code                 |                     |                  |  |  |
| SAMPLING CO  |              |                         |  |  | Owner                                 |                     |                  |  |  |
| ☐ Bailed   | X Pump       | Water level             |  | Discharge                              |                                       | Sample type         |                  |  |  |
| ☐ Dipped   | Tap          |                         | •                                      |  |                                       | Sumple type         | GRAR             |  |  |
| pH (00400)   |              | Conductivity (Uncor     | rected)                                | Water Temp. (00010)                    | . 1                                   | Conductivity        | at 25°C (00094)  |  |  |
|  |              | 1                       | 180 µmho                               |  | 18-5°C                                |                     | μmho             |  |  |
| Field comments                                     | Soot o       | 20 1140                 | tunly                                  | nepunk                                 | <b>-</b>                              |                     |                  |  |  |
|  | -13-2 P      | / LL LEA                | J Carro                                | ice factorist                          | <i>t</i>                              |                     |                  |  |  |
| l  | <del></del>  | ·                       | <del></del>                            | ······································ |                                       |                     |                  |  |  |
| SAMPLE FIELD                                       | D TREATMEN   | T — Check prope         | r boxes                                | <del></del>                            |                                       |                     |                  |  |  |
| No. of samples                                     | / PNF        |                         | ☐ F: Filtered in                       | field with                             |                                       |                     | <del></del>      |  |  |
| submitted  | 1            | (Non-filtered)          | □ F: 0.45 μmei                         | mbrane filter                          | 2 ml H₂SO₄/l                          | L added             |                  |  |  |
| YZ/NA: No ac                                       | id added 🗆 C | Other-specify:          | □A:                                    | 5ml conc. HNO, a                       | dded 🗔                                | : 4m1 f             | uming HNO, added |  |  |
| <u> </u>   |              |                         |  | 3 2 2012. 12103                        |                                       |                     | and added        |  |  |
| ANALYTICAL I                                       | RESULTS from |                         |  |  |                                       |                     |                  |  |  |
| NA NA  | -            |                         | Jnits Date analyze                     | From N/,                               | NA Sample                             | :                   | Date :           |  |  |
| 25°C (00095)                                       | Corrected)   | 1339                    | mho 5/23                               |  | •                                     |                     | Analyzed .       |  |  |
| 25 0 (00005)                                       |              | /                       |  | 7                                      | 174                                   | /3                  | 5/16             |  |  |
| Total non-filter                                   |              |                         |  | Calcium _                              | 120                                   | <del></del>         |                  |  |  |
| residue (suspi<br>(00530)                          | enaea)       |                         | mg/l                                   | Potassium .                            |                                       | <u>4</u> mg/7_      | 5/10             |  |  |
| Other: Let   | ont _        | 792                     | 5 )4                                   | Magnesium                              | 30.                                   | 5 mg/1              | 5/16             |  |  |
| Cother:  |              |                         | - 1                                    | Sodium                                 |                                       | 17 mg/1             | 5/10             |  |  |
| Cother:  |              |                         |  |  |                                       |                     | < 24             |  |  |
| A-H <sub>2</sub> SO <sub>4</sub>                   |              | <del></del>             | <del></del>                            | Bicarbonat                             |                                       | ,                   |                  |  |  |
|  | litrato M    |                         |  | Chloride _                             |                                       | mg/1_               | <u> </u>         |  |  |
| ☐ Nitrate-N+, N<br>total (00630)                   | aitriv       |                         | mg/l                                   | Sulfate _                              | 12/                                   | mg/1_               | <u> </u>         |  |  |
| ☐ Ammonia-N to                                     | otal (00610) |                         | mg/l                                   | Total Soli                             | ds 88                                 | <pre> √ mg/1 </pre> | 5ko              |  |  |
| Total Kjeldah                                      | N .          |                         |  |  |                                       | <del></del>         |                  |  |  |
| ( )  Chemical oxyg                                 |              |                         | mg/(                                   | -   └──                                |                                       |                     |                  |  |  |
| demand (0034                                       |              |                         | mg/l                                   | .  🖸                                   | · · · · · · · · · · · · · · · · · · · |                     | <del></del>      |  |  |
| ☐ Total organic o                                  | arbon        |                         |  |  |                                       |                     |                  |  |  |
| ( )  |              |                         | mg/l                                   | - Cation/A                             | nion Ba                               | lance _             |                  |  |  |
| Cother:  | <del></del>  |                         |  | Analyst                                | Date Re                               | ported F            | leviewed by      |  |  |
|  |              |                         |  |  | 2   2                                 | 2788                | ري               |  |  |
| Laboratory remark                                  | ks           |                         | -                                      |  |                                       |                     |                  |  |  |
|  |              |                         |  |  |                                       |                     |                  |  |  |
|  |              | <del></del>             | <del></del>                            |  |                                       |                     |                  |  |  |
| FOR OCT US   | E Data C     | wner Notifie            |  | Phone or Lett                          | -ar?                                  | Ted                 | tals             |  |  |
| FUR UCD US   | ~ Dale (     | TANET HOFTER            | <b>-</b>                               | THOME OF THEFT                         |                                       | -177                |                  |  |  |

| ANALYTI             | CATIONS<br>E MEQ.             | PPM                               | DET.                          | ANALYTI                  | ANIONS<br>MEQ.               | PPM                          | DET.                         |
|---------------------|-------------------------------|-----------------------------------|-------------------------------|--------------------------|------------------------------|------------------------------|------------------------------|
| Ca<br>Mg<br>Na<br>K | 5.99<br>2.51<br>5.09<br>0.10  | 120.00<br>30.50<br>117.00<br>4.00 | <3.0<br><0.3<br><10.0<br><0.3 | HC03<br>SO4<br>CL        | 3.90<br>2.52<br>7.56         | 238.00<br>121.00<br>268.00   | <1.0<br><10.0<br><5.0        |
| Mn<br>Fe            | 0.00                          | 0.00                              |                               | NO3<br>CO3<br>NH3<br>PO4 | 0.00<br>0.00<br>0.00<br>0.00 | 0.00<br>0.00<br>0.00<br>0.00 | < 0.<br>< 1.<br>< 0.<br>< 0. |
| ·                   | 13.68<br>Dissolved<br>lance = | 271.50<br>Solids=<br>97.88%       | 884                           |                          | 13.98<br>C No.               | 627.00<br>= 427I             | _                            |



#### New Mexico Health and Environment Department SCIENTIFIC LABOR OF TO DIVISION 700 Camino de Salud NE Albuquerque, NM 87106 — (505) 841-2555



# ENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

| PECEIVED                         | 44983                 | WK-1270             | USER 5930                             | D 59600 🕅 (         | THER: 82              | 235   |  |
|----------------------------------|-----------------------|---------------------|---------------------------------------|---------------------|-----------------------|---|--|
| BB104 V                          | 4                     | SITE INFORM-        | Sample location A                     | eris Cres 1         | roce                  | ring  | Corregtor                                      |
| Collected by - Pers              | S CONTRACT / C        |                     | Collection aris description           | West 11             | atos                  | wel   |  |
| <u> </u>                         | Kry- / Je             | ey 10CD             |                                       |                     | 72                    | Marie   | 27 6.62 =                                      |
|                                  | ENVIRONMENT           | TAL BUREAU          |                                       |                     | - XIA                 | ロリトゥハー  | like mint                                      |
| SEND                             | NM OTI CONS           | SERVATION DIV       | ISION                                 | _                   |                       |   | 7-170  |
| FINAL<br>REPORT                  | State Land            | Office Bldg.        | . PO Box. 2081                        | 3                   | <del></del>           | <del></del>                                   |  |
| то                               |                       | NM 87504-2088       | \$<br>                                |                     |                       |   | <del>, , _ , _ , _ , _ , _ , _ , _ , _ ,</del> |
| At                               | tn: <u>David Bo</u> y | ver                 |                                       | · ·                 |                       |   |  |
| P                                | hone: 827-58          | 112                 |                                       |                     | Station/<br>well code |   |  |
|                                  | CONDITIONS            |                     |                                       |                     | Owner                 | · · · · · · · · · · · · · · · · · · ·         |  |
| ☐ Bailed                         | Pump                  | Water level         | 72 S 78                               | Discharge           |                       | Sample type                                   | 1. 1   |
| ☐ Dipped                         | S <del>∠</del> Tap    |                     |                                       |                     |                       |   | Grav   |
| pH (00400)                       | <u></u>               | Conductivity (Uncor | rected) µmho                          | Water Temp. (00010) | ⊇ ⁄) •c               | Conductivity                                  | at 25°C (00094)<br>µmho                        |
| Field comment                    | ts                    | 1                   | <del></del>                           | ·                   |                       |   |  |
|                                  | ·                     |                     | <del></del>                           |                     |                       | <del></del>                                   |  |
| <del></del>                      |                       | <del></del>         | <del></del>                           |                     |                       |   | <del></del>                                    |
| SAMPLE FIE                       | LD TREATMEN           | T - Check prope     | r boxes                               |                     |                       |   | <del></del>                                    |
| No. of sample                    | ea \ \XNI             | Whole sample        | ☐ F: Filtered in                      | field with CA: 2    | ml H₂SO₄/             | L added                                       | !  |
| submitted                        |                       | (Non-nitered)       | <del></del>                           | moraine filler      |                       |   |  |
| X NA: No                         | acid added [] (       | Other-specify:      | □A:                                   | 5ml conc. HNO3 ac   | ided 🗆 🗖 A            | 4m1 fr  | uming HNO3 added                               |
| ANALYTICA                        | L RESULTS from        | SAMPLES             |                                       |                     |                       |   |  |
| NA NA                            |                       |                     | Inits Date analyze                    | From WE.            | NA Sample             | ::  | Date :   |
| Conductivi<br>25°C (0005         | ty (Corrected)        | 2127                | mho 5/23                              | 777                 |                       | -   | Analyzed                                       |
| Ì                                |                       |                     |                                       | Calcium             | 20                    | 4 mg/1_                                       | 5/16   |
| Total non-fi                     |                       |                     |                                       | Potassium           |                       | 4 mg/1  | Sho  |
| (00530)                          | ab ak                 | 7,8                 | mg/1 - 2/14                           | _   /               |                       | . 6 mg/1_                                     | 5/16   |
| C Other:                         | κο pπ                 | 7,65                | 201                                   | _ Magnesium _       |                       |   | = =  |
| ☐ Other:                         |                       |                     |                                       | Sodium              |                       | 38_mg/7_                                      | 5/14   |
| A-H <sub>7</sub> SO <sub>4</sub> |                       |                     |                                       | Bicarbonate         |                       | ) <u>)                                   </u> | <del></del>                                    |
| ☐ Nitrate-N +                    | Nitrate N             |                     |                                       | Chioride _          | 66                    |   | 5/20   |
| total (0063)                     | o)                    | <del></del>         | mg/l                                  | _Sulfate _          | 11/4                  | mg/1_   | <del></del>                                    |
| ☐ Ammonia-I                      | , ,                   | <del></del>         | mg/l                                  | - Total Solid       | is                    | <u>Omg/1_</u>                                 | -5/20  |
| (                                | )                     |                     | mg/l                                  | -   -               | <del></del>           |   |  |
| Chemical of demand (0            |                       |                     | mg/l                                  | .  🗆                |                       |   |  |
| ☐ Total organ                    | nic carbon            |                     | -                                     | rt <del>x</del> í   |                       |   |  |
| COther:                          | )                     |                     | mg/l                                  | Cation/A            |                       |   |  |
| ☐ Other:                         |                       |                     |                                       | Analyst             |                       | eponed F                                      | Reviewed by                                    |
| Laboratory ren                   | marks                 | ····                |                                       |                     | 13/4                  | 7 03  |  |
| 55}                              | -                     |                     | · · · · · · · · · · · · · · · · · · · |                     |                       |   |  |
|                                  |                       | <del></del>         |                                       |                     |                       |   |  |
| FOR 657                          | HCP Pro- 1            | V                   |                                       | Phone or Lett       | er?                   | T-4   | tals   |
| FOR OCD                          | ust Date (            | Owner Notifie       | <u> </u>                              | - mone or reft      | - · ·                 |   |  |

| ANALYT              | CATIONS<br>E MEQ.             | PPM                               | DET.                          | ANALYTE           | ANIONS<br>MEQ.               | •                            | DET.<br>LIMIT                |
|---------------------|-------------------------------|-----------------------------------|-------------------------------|-------------------|------------------------------|------------------------------|------------------------------|
| Ca<br>Mg<br>Na<br>K | 10.18<br>3.01<br>8.18<br>0.10 | 204.00<br>36.60<br>188.00<br>4.00 | <3.0<br><0.3<br><10.0<br><0.3 | HC03<br>SO4<br>CL | 3.67<br>2.38<br>18.62        | 224.00<br>114.00<br>660.00   | <1.0<br><10.0<br><5.0        |
| Mn<br>Fe            | 0.00                          | 0.00                              | <br> <br>                     | CO3               | 0.00<br>0.00<br>0.00<br>0.00 | 0.00<br>0.00<br>0.00<br>0.00 | < 0.<br>< 1.<br>< 0.<br>< 0. |
| SUMS                | 21.47                         | 432.60                            |                               |                   | 24.66                        | 998.00                       |                              |
|                     | Dissolved<br>lance =          | Solids=<br>87.03%                 | 1610                          | WC<br>Date o      | No.<br>ut/By                 | = 8801270                    | -                            |

## 88-0489 C CINTIFIC LABORATORY DIVON THE TOTAL OF THE TOTA

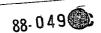


| pu.                  | Albuquerque, NM 87106 841-   | 2570 ENVIRONMENT                                 |
|----------------------|--|--|
| REPORT TO:           | David Boyer  | S.L.D. No. OR- 489 A4B                           |
| REFORT TO.           | N.M. Oil Conservation Division   | DATE REC. 4-19-88                                |
|                      | P. O. Box 2088   |  |
| •                    | Santa Fe, N.M. 87504-2088  | PRIORITY 3                                       |
| PHONE(S):            | 327-5812 Us  | SER CODE: 8 2 2 3 5                              |
| SUBMITTER:           | David Boyer  | CODE:  2   6   0                                 |
| SAMPLE COLLE         | ction code: (чүммддннмміі) <u> 8 8 0 4 </u>  | 14.1.1.20218                                     |
| SAMPLE TYPE:         | WATER SOIL , FOOD , OTHER:   | CODE:  |
| COUNTY:              | ed ; city: Lorengton   | CODE:  |
| LOCATION CODE        | E: (Township-Range-Section-Tracts) [15543]   | (E+02+312) 21(10N06E24342)                       |
|                      | UESTED: Please check the appropriate box(es) below to in   | dicate the type of analytical screens            |
| =                    | er possible list specific compounds suspected or required.   | DAMED VOM VOX E COMPANYO                         |
|                      | PURGEABLE SCREENS ic Purgeables (1-3 Carbons) (7   | EXTRACTABLE SCREENS (751) Aliphatic Hydrocarbons |
| ''                   |  | 760) Organochlorine Pesticides                   |
|                      | in the second se | 55) Base/Neutral Extractables                    |
| (766) Trihalo        |  | 758) Herbicides, Chlorophenoxy acid              |
| Other                |  | 59) Herbicides, Triazines                        |
|                      |  | (60) Organochlorine Pesticides                   |
|                      |  | (61) Organophosphate Pesticides                  |
|                      |  | 767) Polychlorinated Biphenyls (PCB's)           |
|                      |  | 764) Polynuclear Aromatic Hydrocarbons           |
|                      |  | 762) SDWA Pesticides & Herbicides                |
| Remarks:             |  |  |
|                      | <u></u>  |  |
| FIELD DATA:          | 1100   |  |
| pH=; Co              | nductivity= 1180umho/cm at 18-5°C; Chlorine Resid  | ual=mg/l   |
| Dissolved Oxygen:    | =mg/l; Alkalinity=mg/l; Flow Rate  |  |
| Depth to water       | ft.; Depth of well ft.; Perforation Interval   | ft.; Casing:                                     |
| Sampling Location    | n, Methods and Remarks (i.e. odors, etc.)  | T 00/000   |
| Darrs                | turline numb   | ales well (delp)                                 |
| I certify that the   | e results in this block, accurately perfect the results of my  | field analyses, observations and                 |
| activities (signatur |  | thod of Shipment to the Lab: Stale Cer           |
| This form accom-     | panies Septum Vials, Glass Jugs, and/or  |  |
|                      | served as follows:   | [1]) S(C) S) (\V) \$\\[1]                        |
| ☐ NP:                | No Preservation; Sample stored at room temperature.  |  |
| P-Ice                | Sample stored in an ice bath (Not Frozen).   | prine residual ALIM 6 1988                       |
| P-Na2S2O3            | Sample Preserved with Sodium Thiosulfate to remove chlorody  |  |
| I certify that th    | is sample was transferred from   | to OIL CONSERVATION DIVISION                     |
| at (location)        | on   | and that   |
| the statements in    | this block are correct. Evidentiary Seals: Not Sealed  | Seals Intact: Yes No                             |

For OCD Use: Date Owner Notified Phone or (Letter?) Initials

#### THIS PAGE FOR LABORATORY RESULTS ONLY

| This sample was tested using the analytical screen      | ing method(s)                                 | checked below:   |        |
|---|---|--|--------|
| PURGEABLE SCREENS                                       |   | EXTRACTABLE SCREENS  |        |
| (753) Aliphatic Purgeables (1-3 Carbons)                |   | (751) Aliphatic Hydrocarbons   |        |
| (156) Amphasic & Halogenated Purgeables                 |   | (760) Organochlorine Pesticides  |        |
| (765) Mass Spectrometer Purgeables                      |   | (755) Base/Neutral Extractables  |        |
| (766) Trihalomethanes                                   |   | (758) Herbicides, Chlorophenoxy acid                                       |        |
| Other Specific Compounds or Classes                     |   | (759) Herbicides, Chlorophenoxy acid                                       |        |
| Other Specific Compounds of Classes                     |   | (760) Organochlorine Pesticides  |        |
|   |   |  |        |
|   |   | (761) Organophosphate Pesticides   |        |
|   |   | (767) Polychlorinated Biphenyls (PCB's)                                    |        |
|   |   | (764) Polynuclear Aromatic Hydrocarbons (762) SDWA Pesticides & Herbicides |        |
|   |   | [ (702) 5DWA Pesticides & Refolicides                                      |        |
| ANA   | ALYTICA                                       | AL RESULTS   |        |
|   |   |  | CONC   |
| COMPOUND(S) DETECTED                                    | CONC.   | COMPOUND(S) DETECTED   | CONC.  |
| + 11  | [PPB]   |  | [PPB]  |
| aromalia auronables                                     | N.D.  |  |        |
| Salogenated surgeables                                  | ļ <u>"                                   </u> |  | -      |
| - Mondanion sinding                                     | <b></b>                                       | ·  |        |
| 11 - Vichlowethane                                      | 1.5   | ·  |        |
|   |   |  | •      |
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|   |   |  |        |
|   |   |  |        |
|   | -39/  |  | [ :    |
| * DETECTION LIMIT * *                                   | 005 1/2                                       |  |        |
| * DETECTION LIMIT * 1                                   | 12-5 70                                       | + DETECTION LIMIT + T  |        |
| ABBREVIATIONS USED:                                     |   |  |        |
| N D = NONE DETECTED AT OR ABOVE                         | THE STATE                                     | D DETECTION LIMIT  |        |
| T R = DETECTED AT A LEVEL BELOW                         |   |  |        |
| [ RESULTS IN BRACKETS ] ARE UNCONF.                     |   |  |        |
| ,   | ,   | ···  | 1      |
|   | <del></del>                                   | <del></del>  |        |
| LABORATORY REMARKS:                                     |   |  |        |
|   |   | ,  |        |
|   |   |  |        |
|   |   |  |        |
|   |   | •  |        |
|   |   |  |        |
|   |   |  |        |
| CERTIFICAT  | TE OF ANAL                                    | YTICAL PERSONNEL   | ļ      |
|   |   |  |        |
| Seal(s) Intact: Yes No 2. Seal(s) broken by             |   | Alaked date:   |        |
| I certify that I followed standard laboratory procedure |   |  | and    |
| that the statements on this page accurately reflect to  | he analytical i                               | results for this sample.   |        |
| Date(s) of analysis: 4/20/88. Analyst's sig             | mature:                                       | any C. Welen   |        |
| I certify that I have reviewed and concur with the      |   |  | block. |
| Reviewers signature: Kmeylihlin                         |   |  | 1      |
|   |   |  |        |

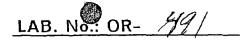


FIC LABORATORY DIVION
700 Camino de Salud NE
...ouquerque, NM 87106 841-2570



| REPORT TO:        | David Boyer   | S.L.D. No. OR- 49/ A+B                       |
|-------------------|---|--|
|                   | N.M. Oil Conservation Division  | DATE REC. 4-19-88                            |
|                   | P. O. Box 2088  |  |
|                   | Santa Fe, N.M. 87504-2088   | PRIORITY 3                                   |
| PHONE(S):         | 327-5812  | USER CODE:   8   2   2   3   5               |
| SUBMITTER:        | David Boyer   | CODE: 12   6   0                             |
| SAMPLE COLLE      | ction code: (YYMMDDHHMMIII) $ \underline{\mathcal{B}} \underline{\mathcal{B}} \mathcal{O} $ | 911411125248                                 |
|                   | WATER X, SOIL, FOOD, OTHER:   | CODE:  |
| CAMY:             | overation; country  | CODE:  |
| LOCATION COL      | E: (Township-Range-Section-Tracts) 11555+   | 317 1E+012+31512 (10N06E24342)               |
| ANALYSES REC      | QUESTED: Please check the appropriate box(es) below   | w to indicate the type of analytical screens |
| required. Whenev  | er possible list specific compounds suspected or requestrate PURGEABLE SCREENS              | EXTRACTABLE SCREENS                          |
| (753) Alipha      | tic Purgeables (1-3 Carbons)  | (751) Aliphatic Hydrocarbons                 |
|                   | tic & Halogenated Purgeables  | (760) Organochlorine Pesticides              |
| (765) Mass        | Spectrometer Purgeables   | (755) Base/Neutral Extractables              |
| [ (766) Trihal    | omethanes   | (758) Herbicides, Chlorophenoxy acid         |
| Other             | Specific Compounds or Classes   | (759) Herbicides, Triazines                  |
| I □ —             |   | (760) Organochlorine Pesticides              |
|                   |   | (761) Organophosphate Pesticides             |
|                   |   | [ (767) Polychlorinated Biphenyls (PCB's)    |
|                   |   | (764) Polynuclear Aromatic Hydrocarbons      |
|                   |   | [ (762) SDWA Pesticides & Herbicides         |
| Remarks:          |   |  |
|                   |   |  |
| FIELD DATA:       |   |  |
| pH=; C            | onductivity= <u>1930</u> umho/cm at <u>30</u> °C; Chlorin                                   | e Residual=mg/l                              |
| Dissolved Oxyger  | n=mg/l; Alkalinity=mg/l; Flow Rate_   |  |
| Depth to water    | ft.; Depth of wellft.; Perforation Int  | ervalft.; Casing:                            |
| Sampling Location | on, Methods and Remarks (i.e. odors, etc.)  |  |
| Davis             | Gos Processing - Wes  | 7  |
|                   | hallower, silomersil  | le pump)                                     |
| I certify that th | re collector):  | of my field analyses, observations and       |
| This form accord  | panies Septum Vials, Glass Jugs, and  | Wethou of Simplicate to the Lab.             |
| <b>)</b>          | reserved as follows:  |  |
| NP:               | No Preservation; Sample stored at room temperatu  | 10   |
| P-Ice             | Sample stored in an ice bath (Not Frozen).  |  |
|                   | Sample Preserved with Sodium Thiosulfate to remo  | We chloring residual [0]201477 [m]           |
| CHAIN OF CU       | STODY   |  |
| I certify that th | nis sample was transferred from   |  |
| at (location)     | •   | on / / OIL CONSERVATION DIVISION             |
| the statements i  | n this block are correct. Evidentiary Seals: Not Seal                                       | SANIAPE                                      |
| Signatures        |   |  |
|                   |   |  |
|                   | se: Date Owner Notified 7/6/38 (  | Phone or Letter? Initials                    |





#### THIS PAGE FOR LABORATORY RESULTS ONLY

| This sample was tested using the analytical scree  | ning method(s)                        | checked below:  |               |
|--|---------------------------------------|---|---------------|
| PURGEABLE SCREENS                                  |                                       | EXTRACTABLE SCREENS   |               |
| (753) Aliphatic Purgeables (1-3 Carbons)           |                                       | (751) Aliphatic Hydrocarbons  |               |
| (754) Aromatic & Halogenated Purgeables            |                                       | (760) Organochlorine Pesticides   |               |
| (765) Mass Spectrometer Purgeables                 |                                       | (755) Base/Neutral Extractables   |               |
| (766) Trihalomethanes                              |                                       | (758) Herbicides, Chlorophenoxy acid  |               |
| Other Specific Compounds or Classes                |                                       | (759) Herbicides, Triazines   |               |
| The specific compounds of classes                  |                                       | (760) Organochlorine Pesticides   |               |
|  | <del></del>                           | -   |               |
|  | <del></del>                           | (761) Organophosphate Pesticides  |               |
|  |                                       | (767) Polychlorinated Biphenyls (PCB's) (764) Polynuclear Aromatic Hydrocarbons |               |
| <u> </u>   |                                       | (762) SDWA Pesticides & Herbicides  |               |
|  | <del></del>                           | [ (702) 3D WA Pessicides & Herbicides   |               |
| AN   | ALYTICA                               | AL RESULTS  |               |
| COMPOUND(S) DETECTED                               | CONC.                                 | COMPOUND(S) DETECTED  | CONC.         |
| 1 / 1 + 1 11                                       | IFFBI                                 |   | 1.1.5         |
| halogenated purgeables                             |                                       |   |               |
| 1.14 Dichlorsethobre                               | 1.5                                   |   |               |
| till at  |                                       |   |               |
| - sulasonessene                                    |                                       |   |               |
|  | <u> </u>                              |   |               |
| gromatic surgeables                                | No.D.                                 |   | ì             |
| monane pungedores                                  | Mark.                                 |   |               |
|  | <u> </u>                              |   |               |
| , , ,  |                                       | ·   |               |
|  | 1                                     |   |               |
|  |                                       |   |               |
|  | 1                                     |   | -}            |
|  | <del> </del>                          |   |               |
|  | <u> </u>                              |   |               |
| • DETECTION LIMIT • *                              | 5 18/6                                | + DETECTION LIMIT + +   | ]             |
| ABBREVIATIONS USED:                                |                                       |   |               |
| N D = NONE DETECTED AT OR ABOVE                    | THE STATE                             | D DETECTION LIMIT   |               |
| T R = DETECTED AT A LEVEL BELOW                    | THE STATE                             | D DETECTION LIMIT (NOT CONFIRMED)   |               |
| [ RESULTS IN BRACKETS ] ARE UNCON                  |                                       |   |               |
|  |                                       |   |               |
|  | · · · · · · · · · · · · · · · · · · · |   | <del></del>   |
| ABORATORY REMARKS:                                 |                                       |   |               |
|  |                                       |   |               |
|  |                                       |   |               |
|  |                                       |   |               |
|  |                                       |   |               |
|  |                                       |   |               |
|  |                                       |   | <del></del> - |
| CERTIFICA  | TE OF ANAL                            | YTICAL PERSONNEL  |               |
| Control Introduction Van III No III Control Van    |                                       | t walled  |               |
| Seal(s) Intact: Yes No 2. Seal(s) broken b         |                                       | M date:  If and analysis of this sample unless otherwise noted                  |               |
| hat the statements on this page accurately reflect |                                       |   | TUG           |
|  |                                       |   |               |
| Date(s) of analysis: 4/20/88 Analyst's si          | gnature:                              | Hary Colden   |               |
|  |                                       | alts for this sample and with the statements in this                            | block         |
| // \   | ,, ., ., ., ., .,                     | the second in the   | DIOGR.        |
| Reviewers signature: K. Meyerhan                   |                                       |   |               |
|  |                                       |   |               |





754m

Organic Section - Phone: 841-2570 OR89-0909-C REPORT TO: DAVID BOYER S.L.D. No. OR-N.M. OIL CONSERVATION DIVISION DATE REC. P.O. Box 2088 PRIORITY Santa Fe, NM 87504-2088 PHONE(s): 827-5812 COLLECTION CITY: 1001nalon county: Les COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) 89062111617 USER CODE: | 8|2|2|3|5| SUBMITTER: - David Bover \_\_\_\_\_\_ CODE: | 2|6|0 | SAMPLE TYPE: WATER X, SOIL L, FOOD L, OTHER:\_\_\_ This form accompanies \_\_\_\_\_ Septum Vials, \_\_\_\_ Glass Jugs, and/or \_\_\_\_\_ Samples were preserved as follows: NP: No Preservation; Sample stored at room temperature. 🔯 P-Ice Sample stored in an ice bath (Not Frosen). P-AA Sample Preserved with Ascorbic Acid to remove chlorine residual. P-HCI Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical acreens required. Whenever possible list specific compounds suspected or required. EXTRACTABLE SCREENS PURGEABLE SCREENS (753) Aliphatic Headspace (1-5 Carbons) (751) Aliphatic Hydrocarbons (754) Aromatic & Halogenated Purgeables [758] Base/Neutral Extractables (765) Mass Spectrometer Purgeables (758) Herbicides, Chlorophenoxy acid (766) Trihalomethanes (759) Herbicides, Triazines 774) SDWA VOC's I (8 Regulated +) (760) Organochlorine Pesticides 7 (775) SDWA VOC's II (EDB & DBCP) (761) Organophosphate Pesticides [ (767) Polychlorinated Biphenyls (PCB's) Other Specific Compounds or Classes (764) Polynuclear Aromatic Hydrocarbons (762) SDWA Pesticides & Herbicides Remarks: PIELD DATA: pH= ; Conductivity= /// Sumho/cm at \_\_\_\_\_\_ C; Chlorine Residual= \_\_\_\_\_mg/l Dissolved Oxygen= mg/l; Alkalinity= mg/l; Flow Rate \_\_\_\_\_ Depth to water \_\_\_\_ft.; Depth of well\_\_\_\_ft.; Perforation Interval \_\_\_\_\_ft.; Casing: Sampling Location, Methods and Remarks (i.e. odors, etc.) Daris Car Processing - Earl I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): 1 / / Koya Method of Shipment to the Lab: Slala & CHAIN OF CUSTODY I certify that this sample was transferred from \_\_\_\_\_ on \_\_\_\_\_\_\_ - \_\_\_\_\_ and that the statements in this block are correct. Evidentiary Seals: Not Sealed 🔲 OR Seals Intact: Yes 🔲 No 🔲 Signatures

For OCD use: Date owner notified: 1/3/89 Phone or Letter? Initials



LAB. No.: OR-

#### THIS PAGE FOR LABORATORY RESULTS ONLY

| This sample was tested using the analytical acreen  | ing method(s)    | checked below:   |        |  |  |
|---|------------------|--|--------|--|--|
| PURGEABLE SCREENS  [753] Aliphatic Headspace (1-5 Carbons) [754] Aromatic & Halogenated Purgeables [755] Mass Spectrometer Purgeables [766] Trihalomethanes [774] SDWA VOC's I (8 Regulated +) [775] SDWA VOC's II (EDB & DBCP) Other Specific Compounds or Classes |                  | EXTRACTABLE SCREENS  (751) Aliphatic Hydrocarbons  (755) Base/Neutral Extractables  (758) Herbicides, Chlorophenoxy acid  (759) Herbicides, Triazines  (760) Organochlorine Pesticides  (761) Organophosphate Pesticides  (767) Polychlorinated Biphenyls (PCB's)  (764) Polynuclear Aromatic Hydrocarbons |        |  |  |
|   | ALYTICA          | [ (762) SDWA Pesticides & Herbicides   |        |  |  |
| COMPOUND(S) DETECTED  | CONC.            | COMPOUND(S) DETECTED   | CONC.  |  |  |
|   |                  |  |        |  |  |
|   |                  |  |        |  |  |
|   |                  |  |        |  |  |
| ·   |                  | +  |        |  |  |
| • DETECTION LIMIT • *  ABBREVIATIONS USED:  N D = NONE DETECTED AT OR ABOVE  T R = DETECTED AT A LEVEL BELOW  [ RESULTS IN BRACKETS ] ARE UNCONF  | THE STATED       | DETECTION LIMIT (NOT CONFIRMED)  |        |  |  |
| LABORATORY REMARKS:   |                  |  |        |  |  |
|   |                  |  |        |  |  |
| CERTIFICAT  | E OF ANALY       | TICAL PERSONNEL  |        |  |  |
| Seal(s) Not Sealed Intact: Yes No . Seal(s) broken by: date:  |                  |  |        |  |  |
| Date(s) of analysis: Analyst's sig  | nature:          |  |        |  |  |
| I certify that I have reviewed and concur with the  | analytical resul | ts for this sample and with the statements in this   | block. |  |  |
| Reviewers signature:  |                  |  |        |  |  |

STATE OF NEW MEXICO

#### HEALTH AND VIRONMENT DEPARTMENT SCIENTIFIC LABORATORY DIVI

700 Camino de Salud, NE Albuguerque, NM 87106 [505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

July 25, 1989

#### ANALYTICAL REPORT SLD Accession No. OR-89-0909

Distribution

( Submitter

(X) SLD Files

NM Oil Consv. Div.

State Land Office Bldg.

P. O. Box 2088

Santa Fe, NM 87504-2088 From:

Organic Chemistry Section

Scientific Laboratory Div.

700 Camino de Salud, NE

Albuquerque, NM 87106

Re:

A purgeable water sample submitted to this laboratory on June 27, 1989

User:

OIL CONSERVATION DIV

State Land Office Bldg.

P. O. Box 2088

Santa Fe, NM 87504-2088

DEMOGRAPHIC DATA

COLLECTION LOCATION On: 21-Jun-89 By: Boy . . .

At: 16:19 hrs.

In/Near: Lovington

ANALYTICAL RESULTS: Aromatic & Halogenated Purgeable Screen

| <u>Parameter</u>               | Value | Note | <u>MDL</u> | <u>Units</u> |  |
|--------------------------------|-------|------|------------|--------------|--|
| Aromatic Purgeables (6)        | 0.00  | N    | 0.50       | ppb          |  |
| Halogenated Purgeables (33)    | 0.00  | И    | 1.00       | ppb          |  |
| Notations & Comments:          |       |      |            |              |  |
| MDL = Minimal Detectable Level |       |      |            |              |  |

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified;

T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.

Evidentiary Seals: Not Sealed [A]; Intact: No \_\_\_, Yes \_\_ & Broken By: \_\_\_\_

Date:

Laboratory Remarks: Davis Gas- East Wtr Supply

Analyst:

Analyst, Organic Chemistry

Date

Reviewed By:

Richard F. Meyerhein

Supervisor, Organic Chemistry Section

MECHIVED

JUL 31 1989 OIL CONSERVATION DIV. SANTA FE

| · · · · · · · · · · · · · · · · · · ·  |  |
|--|--|
| REPORT TO: DAVID BOYER   | Sample No. 8903291645  |
| N.M. OIL CONSERVATION DIVISION   | DATE REC.  |
| P.O. Box 2088  | PRIORITY   |
| Santa Fe, NM 87504-2088  | PHONE(S): 827-5812   |
| COLLECTION CITY:   | · · · · · · · · · · · · · · · · · · ·                        |
|  |  |
| COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) 19191/   |  |
| LOCATION CODE: (Township-Range-Section-Tracts)   | + +   (10N06E24342)  |
| SUBMITTER: David Boyer   |  |
| SAMPLE TYPE: WATER . SOIL ., FOOD ., OTHER:  |  |
| This form accompanies Septum Vials, Glass Jugs, and/or   |  |
| Samples were preserved as follows:   |  |
| NP: No Preservation; Sample stored at room temperature.  P-Ice Sample stored in an ice bath (Not Frozen).                    |  |
| P-AA Sample Preserved with Ascorbic Acid to remove chlorine resid  | duai.  |
| P-HCl Sample Preserved with Hydrochloric Acid (2 drope/40 ml)  |  |
| ANALYSES REQUESTED: Please check the appropriate box(es) below to indica   | ite the type of analytical screens                           |
| required. Whenever possible list specific compounds suspected or required.  PURGEABLE SCREENS                                | ITRACTABLE SCREENS   |
|  | Aliphatic Hydrocarbons                                       |
|  | Base/Neutral Extractables                                    |
| (755) Mass Spectrometer Purgeables   | Herbicides, Chlorophenoxy acid                               |
| (766) Trihalomethanes (759)  | Herbicides, Triasines  |
|  | Organochiorine Pesticides                                    |
|  | Organophosphate Pesticides Polychlorinated Biphenyls (PCB's) |
| =  | Polynucies Aromatic Hydrocarbons                             |
|  | SDWA Pesticides & Herbicides                                 |
| Remarks:   |  |
|  |  |
| <br>FIELD DATA:  | •  |
| pH=; Conductivity=1170umho/cm at 20°C; Chlorine Residual=  | smg/l  |
| Dissolved Oxygen= mg/l; Alkalinitym mg/l; Flow Rate_   | <b></b> .  |
| Depth to waterft.; Depth of wellft.; Perforation Interval  | R.; Casing:  |
| Sampling Location, Methods and Remarks (i.e. odore, etc.)  | 10 T+ 1: 1:  |
| Sample From EasT (delp) Wally We   | ell ned to machine shop.                                     |
| (taken from outlet at west well after  | isolaling wrotes tonk  |
| I certify that the results in this block accurately reflect the results of my field activities.(signature collector): Method | of Shipment to the Lab: Eymans                               |
| CHAIN OF CUSTODY   |  |
| I certify that this sample was transferred from  | to Dim   |
| at (location) on 4   | 5 89 - 12 25 and that  |
| the statements in this block are correct. Evidentiary Spale: Not Sealed OR   | Seals Intact: Yes 🔲 No 🔲                                     |
| Signatures Course & Williams   |  |
| <br>   | ——————————————————————————————————————                       |
| For OCD use: Date owner notified: 6/19/189   | Phone or Letter? Initials                                    |

Contract Lab <u>Accult A85</u>
Contract No. <u>77-521.07-123</u>



| DATE<br>RECEIVED                          |                           | VB<br>21                      | Sample No.                  | 890329               | 1645        |                            |                               |
|---|---------------------------|-------------------------------|-----------------------------|----------------------|-------------|----------------------------|-------------------------------|
| Collection DATE 089 103 139               |                           | SITE INFORM- >                | Sample location             |                      | Proc        | eff                        | ing                           |
| Collected by - Parson/A                   | Pener Am Do               |                               | Collection sile description | East wa              | tes w       |                            | From                          |
| (   | ,                         | •                             |                             |                      | top         | met                        | to w. Well                    |
| SEND N<br>FINAL S<br>REPORT S             | itate Land<br>Santa Fe, i | SERVATION DI                  | , PO Box 2088<br>8          |                      | aftes       | stor                       | getone                        |
| Pho-                                      | 007 50                    | 110                           |                             | • •                  | Station/    | ·                          |                               |
| Pnon<br>SAMPLING COI                      | e: 827-58<br>NDITIONS     | 12                            |                             |                      | Owner       |                            |                               |
| ☐ Bailed<br>☐ Dipped                      | □ Pump<br>▼Tap            | Water level                   |                             | Discharge            |             | Sample typ                 | ral                           |
| pH (00400)                                | フ                         | Conductivity (Unco            | rrected)<br>11⊃⊘μmho        | Water Temp. (00010)  | 20°C        | Conductive                 | ty at 25°C (00094)<br>µmho    |
| Field comments                            | west                      | welld                         | isconn                      | eleb)                |             |                            |                               |
|   |                           |                               |                             |                      |             |                            |                               |
| No. of samples                            | TREATMEN                  | — Check prope<br>Whole sample | C. Filtered in              | field with           | 2 ml H₂SO₄/ | 'L added                   |                               |
| submitted  SNA: No aci                    |                           | (Non-filtered)                | 0.45 µme                    | TIDI AND RILET       |             |                            | fuming HNO <sub>3</sub> added |
| ANALYTICAL R                              | ESULTS from               | SAMPLES                       |                             |                      |             |                            |                               |
| NA NA                                     |                           |                               | Units Date analyze          | From NE,             | NA Sample   | <b>:</b>                   | Date                          |
| Conductivity (C<br>25°C (00095)           | orrected)                 | <del>-</del>                  | μmho                        |                      |             |                            | Analyzed                      |
| Total non-filtera residue (susper (00530) |                           |                               | mg/l                        | CalciumPotassium     |             | mg/l<br>mg/l               |                               |
| Conner: Lay                               | pH =                      | ·                             |                             | Magnesium            | ·           |                            |                               |
| ☐ Other:                                  |                           |                               |                             | Sodium               |             | mg/l<br>mg/l               |                               |
| A-H <sub>2</sub> SO <sub>4</sub>          |                           |                               |                             | Bicarbonat  Chloride |             | ر /ور <sub>ا</sub><br>1/وn |                               |
| ☐ Nitrate-N+, Nitrotel (00630)            | trate-N                   |                               | mo/l                        | Sulfate _            |             | mg/1                       |                               |
| C Ammonia-N to                            |                           |                               | mg/l                        | Total Soli           | ds          | mg/1                       |                               |
| ☐ Total Kjeldahl-f                        |                           | <del></del>                   | mg/l                        | Q <u>(Q</u> >        |             | <del>,</del>               |                               |
| Chemical oxyg<br>demand (0034)            | 0)                        |                               | mg/l                        | D MR E               | JUDRIA      | <u></u>                    |                               |
| Total organic co                          | arbon                     |                               | mg/l                        | - Cation/            | Anion Ba    | lance                      |                               |
| ☐ Other:                                  |                           |                               |                             | Analyst              | Date F      | Reported                   | Reviewed by                   |
| Laboratory remark                         | S                         |                               | <del></del>                 | _ <del></del>        |             |                            | <u> </u>                      |
|   |                           |                               |                             |                      |             |                            |                               |
| FOR OCD US                                | E Date (                  | Owner Notifi                  | ed                          | Phone or Let         | ter?        | Ir                         | nitals                        |

| Contract Lab Accu              | 52.07-123                       |  |              |
|--------------------------------|---------------------------------|--|--------------|
| Date<br>Received               | Lab<br>No. Samp                 | Le No. 8903291645  | _            |
| COLLECTION DATE & T            | 1 4 7 7                         |  | RII          |
| COLLECTED BY: RAU              | es/Anderson O                   | East water well  |              |
|                                |                                 | OWNER:   |              |
| TO:                            | •                               | OWNER.   |              |
| ENVIRONMENTAL E                | UTR PAIT                        | SITE LOCATION:   |              |
| NM OIL CONSERVA                |                                 | county: Lea  |              |
| State Land Offi                | се Bldg., РО Вож 20             |  |              |
| SANTA FE, NM                   | 87504-2088                      | Township, Range, Section, Tract: ()  | 0N0          |
| ATTN: D. ROY                   | eR                              |  | 1            |
| TELEPHONE: 827                 |                                 | ON/ WELL CODE:   |              |
| _                              |                                 |  |              |
| SAMPLING CONDITIONS            | LATITUDE, LONG                  | ITUDE:   | _            |
|                                | ump   Water Level:              | Discharge:   Sample T  | уре          |
| Dipped 🗓 2                     | Cap                             | book   |              |
| pH(00400)   Conduct            | vity(Uncorr.)   Wate            | r Temp. (00010)   Conductivity   | at           |
| 7                              | 1170                            | (00094)  | ,            |
| FIELD COMMENTS: &              | 170 µmho                        | essen of two wells   | <del>/</del> |
| Tibers to                      | an to a of used                 | Tuell offer last stime   |              |
| water                          | Tombo Tonde                     | Mest well disconnected   |              |
| SAMPLE FIELD TREAT             |                                 | LAB ANALYSIS REQUESTED:  |              |
| Check proper boxes  WPN: Water |                                 | ☐ ICAP Scan  |              |
| Preserved W/HNO,               | WPF: Water     Preserved w/HNO2 | Mark box next to metal if  | AA           |
| Non-Filtered 3                 | Filtered                        | is required.   |              |
|                                | ANALYTICAL RE                   | SILLTS (MG/L)  |              |
| ELEMENT ICAP VA                | LUE AA VALUE                    | ELEMENT ICAP VALUE A   | A V          |
| Aluminum 📉                     |                                 | Silicon  |              |
| Barium                         |                                 | Silver Strontium T   |              |
| Beryllium D                    | <u> </u>                        |  |              |
|                                | R                               |  |              |
| Cadmium                        | — <u> </u>                      | Vanadium   |              |
| Chromium                       |                                 | ·  |              |
| Cobalt 🛱                       |                                 | Arsenic Selenium Sele |              |
| C                              |                                 | Mercury  |              |
| Iron A                         |                                 |  |              |
| Lead                           |                                 | ——————————————————————————————————————   |              |
| Magnesium [                    |                                 | ——————————————————————————————————————   |              |
|                                |                                 | ——————————————————————————————————————   |              |
| Molybdenum                     |                                 | ——— H-   |              |
|                                |                                 |  |              |
| Nickel                         |                                 |  |              |
| Nickel LAB COMMENTS:           |                                 |  |              |

#### Accu-Labs Research, Inc.

May 9, 1989 Page 7 of 18

Mr. David Boyer NM Oil Conservation Division RECEIVED

RE: 9649-29859-20

Date Samples Rec'd: 4-5-89 P.O. No. 77-521.07-123 MAY 1 7 1989

OIL CONSERVATION DIV. SANTA FE

#### REPORT OF ANALYSIS

| ALR Designation<br>Sponsor Designation                                   | 9649-29859-20-7<br>8903291645<br>3-29-89 | 9649-29859-20-8<br>8903291345<br>3-29-89 | 9649-29859-20-9<br>8903291210<br>3-29-89 |
|--|--|--|--|
| GC/MS VOLATILE ORGANICS, μg  | /L:                                      |  |  |
| Chloromethane  | <10                                      | <10                                      | <100                                     |
| Bromomethane   | <10                                      | <10                                      | <100                                     |
| Vinyl chloride   | <10                                      | <10                                      | <100                                     |
| Chloroethane   | <10                                      | <10                                      | <100                                     |
| Methylene chloride   | <5                                       | <5                                       | <50                                      |
| 1,1-Dichloroethene   | <5                                       | <5                                       | <50                                      |
| 1,1-Dichloroethane   | <5                                       | <5                                       | <50                                      |
| Total 1,2-Dichloroethene   | <5                                       | <5                                       | <50                                      |
| Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon tetrachloride | <5                                       | <5                                       | <50                                      |
|  | <5                                       | <5                                       | <50                                      |
|  | <5                                       | <5                                       | <50                                      |
|  | <5                                       | <5                                       | <50                                      |
| Bromodichloromethane   | <5                                       | <5                                       | <50                                      |
| 1,2-Dichloropropane  | <5                                       | <5                                       | <50                                      |
| c-1,3-Dichloropropene  | <5                                       | <5                                       | <50                                      |
| Trichloroethene  | <5                                       | <5                                       | <50                                      |
| Benzene Dibromochloromethane 1,1,2-Trichloroethane t-1,3-Dichloropropene | 13                                       | <5                                       | 3400                                     |
|  | <5                                       | <5                                       | <50                                      |
|  | <5                                       | <5                                       | <50                                      |
|  | <5                                       | <5                                       | <50                                      |
| 2-Chloroethylvinyl ether   | <5                                       | <5                                       | <50                                      |
| Bromoform  | <5                                       | <5                                       | <50                                      |
| 1,1,2,2-Tetrachloroethane  | <5                                       | <5                                       | <50                                      |
| Tetrachloroethene  | <5                                       | <5                                       | <50                                      |

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May 9, 1989 Page 8 of 18

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|---|--|--|--|
| Determination: μg/L   |  |  |  |
| Toluene   | <5                                       | <5                                       | 3500                                     |
| Chlorobenzene   | <5                                       | <5                                       | <50                                      |
| Ethyl benzene   | <5                                       | <5                                       | 670                                      |
| Total Dichlorobenzenes  | <5                                       | <5                                       | <50                                      |
| Total Xylenes   | <5                                       | <5                                       | 1400                                     |
| Determination: mg/L   |  |  |  |
| Aluminum, total Barium, total Boron, total Cadmium, total Calcium, total                                    | <0.1                                     | 0.1                                      | <1*                                      |
|   | 0.10                                     | 0.27                                     | 0.9                                      |
|   | 0.2                                      | 0.7                                      | 9.3                                      |
|   | <0.005                                   | <0.005                                   | <0.05*                                   |
|   | 160                                      | 570                                      | 3500                                     |
| Chromium, total Cobalt, total Copper, total Iron, total Magnesium, total                                    | <0.005                                   | 0.008                                    | <0.05*                                   |
|   | <0.005                                   | <0.005                                   | <0.05*                                   |
|   | 0.048                                    | 0.070                                    | <0.05*                                   |
|   | 1.7                                      | 1.6                                      | 2.5                                      |
|   | 24                                       | 72                                       | 980                                      |
| Manganese, total  | 0.069                                    | 0.027                                    | 1.1                                      |
| Mercury, total  | 0.0007                                   | <0.001*                                  | 0.002                                    |
| Molybdenum, total   | <0.005                                   | 0.011                                    | <0.05*                                   |
| Nickel, total   | <0.01                                    | 0.01                                     | <0.1*                                    |
| Potassium, total  | 4.3                                      | 26                                       | 570                                      |
| Silver, total Sodium, total Strontium, total Zinc, total Total Alkalinity, (as CaCO <sub>3</sub> to pH 4.5) | <0.005<br>120<br>1.0<br>0.022<br>280     | <0.005<br>280<br>4.6<br>0.024            | <0.005<br>19,000<br>65<br><0.05          |

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May 9, 1989 Page 9 of 18

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|--|--|--|---|
| Determination: mg/L  |  |  |   |
| Carbonate (as CO <sub>3</sub> ) Bicarbonate (as HCO <sub>3</sub> ) pH Specific Conductance, µmhos/cm | <5<br>330<br>7.5<br>1600                 | <5<br>140<br>7.2<br>5400                 | <5<br>1900<br>7.3                           |
| Arsenic, total<br>Lead, total<br>Selenium, total<br>Total Solids<br>Bromide                          | 0.008<br><0.005<br><0.005<br>930         | 0.015<br><0.005<br>0.006<br>3300         | 0.72<br><0.005<br><0.005<br>65,000<br><200* |
| Fluoride<br>Chloride<br>Sulfate (as SO <sub>4</sub> )<br>Ion Balance                                 | 1.4<br>260<br>110<br>101                 | <br>630<br>1400<br>95                    | <br>37,000<br>1300<br>99                    |



### **Attachment F**

## H<sub>2</sub>S Monitoring Plan

#### Hydrogen Sulfide Contingency Plan

#### PURPOSE

- Purpose of Plan To provide an organized plan of action for alerting and protecting the public following the accidental release of a potentially hazardous volume of hydrogen sulfide.
- II. Activation of Plan This plan shall be activated immediately by plant personnel on duty upon the detection of a potentially hazardous volume of hydrogen sulfide released to the atmosphere.
- HI. Area of Exposure · A major pipeline failure of any gas pipeline transporting gas containing Hydrogen Sulfide (H<sub>2</sub>S) to or from the Denton Gas Plant will create a hazardous area of exposure in the vicinity of the failure. The plat included in this plan indicates areas of exposure which involve public or private facilities. Pipeline ruptures within these indicated areas of exposure will require immediate action to protect the lives of persons that may be in or may enter into these areas.
- IV: Notification A call list is included in this plan which lists telephone numbers of various public services and home telephone numbers of Davis Gas Processing supervisors that the person on duty may notify for timely assistance in handling the emergency.
- V. Shut-off Source of Gas and Evacuate Area-Personnel on duty at the time of an emergency shall take immediate steps to simultaneously block traffic from entering the area and evacuate the area of persons already in the area. Call for assistance from city officials, if necessary, Since there is one resident and no public buildings in the area, all persons in the area will be transient.
  - Simultaneously with action to evacuate the area of persons, steps shall be taken to close all block valves on the ruptured pipeline to shut off the supply of gas to the ruptured area. Source of gas to the rupture may be from either the plant or the field, therefore, the proper block valves at the plant and in the field must be closed. See enclosed map of Gathering System, valves and exposure areas.
- VI. Special Considerations All H<sub>2</sub>S bearing gas entering or leaving the Denton Gas Plant (except the acid gas flare within the Plant fenced area) is lighter than air and, therefore, will tend to rise at the point it is released to the atmosphere. At the point the gas is released to the atmosphere, it (including the H<sub>2</sub>S component) will begin a dispersion process within the atmosphere, thereby becoming less and less Concentrated both vertically and horizontally away from the point of release.

Denton Flant

The rate of dispersion of the gas into the atmosphere varies with the temperature difference between the gas and atmosphere, the volume of gas, and the wind speed. The table below shows the concentration of H<sub>2</sub>S expressed in parts per million by volume in the various gas streams entering the Denton Gas Plant. Also, the table shows estimated H<sub>2</sub>S dispersion expressed as the 100 ppm radius of exposure, and the 500 ppm radius of exposure for each gas stream. These latter figures are calculated distances downwind from point of release at which the air would be expected to have H2S concentration of 100 ppm or 500 ppm by volume. The radial of exposures were calculated using the equations set out in New Mexico Statewide Rule 118.

| H <sub>2</sub> S Concentration     |            | Radius of E | Radius of Exposure, ft. |  |
|------------------------------------|------------|-------------|-------------------------|--|
| Gas Stream                         | <u>ppm</u> | 100 ppm     | 5 <u>00 ppm</u>         |  |
| North-Denton Inlet                 | 20,260     | 853 feet    | 390 feet                |  |
| South Denton Inlet                 | 25,380     | 1101 feet.  | 503 feet                |  |
| C&K / Ship Lateral Inlet           | 60         |             |                         |  |
| High Plains & Austin Lateral Inlet | 0          |             |                         |  |
| Mesa Inlet                         | 8          |             |                         |  |
| Denton Plant:                      | 9,250      | 935 feet    | 427 feet                |  |

#### CALL LIST

#### NEW MEXICO STATEWIDE PULE 118 CONTINGENCY PLAN

#### SERVICES

| FIRE DEFARTMENT                       | LOVINGTON, N.MEXI   | co 575-396-2359                  |
|---------------------------------------|---------------------|----------------------------------|
| GENERAL HOSPITAL                      | LOVINGTON, N. MEXT  | do 575-396-6611                  |
| POLICE DEPARTMENT                     | LOVINGTON, N.MEXI   | CO 575-396-2811                  |
| HELICOPTER (BPS)                      | HOBBS, NEW MEXICO   | 575-392-6581                     |
| VETERINARIAN                          | HOBBS, NEW MEXICO   | 575-892-5563                     |
| HIGHWAY PATROL (DPS)                  | HOBBS, NEW MEXICO   | 575-392-5588                     |
| COUNTY SHERIFF                        | HOBBS, NEW MEXICO   | 575-393-2515                     |
| ENVIRONMENTAL<br>IMPROVEMENT DIV.     | HOBBS, NEW MEXICO   | 575-397-5250                     |
| DAVIS GAS SUPERVISORS                 |                     |                                  |
| DAVID PEPPER<br>Plant Foreman         | LOVINGTON, N. MEX   | ICO 575-396-6022<br>575-369-5945 |
| DAN MEACHAM<br>Oper. Supervisor       | BIG LAKE, TEXAS     | 325-884-2299<br>432-556-5381     |
| BOBBY ROACH<br>Safety Director        | MIDLAND, TEXAS      | 432-563-1247<br>432-528-6434     |
| BOB STEWART<br>Environmental Director | MIDLAND, TEXAS      | 432-602-6311<br>432-664-0188     |
| MICHAEL DAVIS<br>V.P. OPERATIONS      | ABILENE, TEXAS      | 325-695-2370<br>325-668-6339     |
| PUBLIC NEAR HZS EXPOSORE              | RADIUS              |                                  |
| FREDOY WHITMAN                        | NORTH DENTON LATERA | L 575-399-6678                   |

#### VII. General

Hydrogen sulfide is one of the most potentially lethal hazards found in the oil and gas industry. Davis Gas Processing intends to make every effort to provide adequate safeguards against harm to persons both on location and in the immediate vicinity from the effects of H<sub>2</sub>S released to the atmosphere. In those areas where H<sub>2</sub>S is common, the following safety procedures/policies shall be in effect:

- 1.) This contingency plan shall be read and understood by all Plant personnel. Proper exercise of the Plant's gas leak detection program should assure that no major escape of H<sub>2</sub>S bearing gas will ever occur at the Davis Gas Plant. However it is essential and is required by New Mexico Statewide Rule 118, adopted March 15, 1976, that this contingency plan be understood by all plant personnel and at all times be available for personnel referral and use.
- During the Plant's regular training sessions regarding use, care, and storage of respiratory
  equipment, all personnel will be reminded of possible need for the equipment during
  activation of this contingency plan.
- 3.) Location of all block valves for shutting off sources of gas to a pipe rupture area as shown on the plat accompanying this plan shall be personally visited by all plant personnel to assure each person's knowledge of exact location.
- 4.) Gas released from pipeline ruptures may be ignited by automotive ignition and exhaust systems, as well as by persons smoking, and by lightning. The possibility of ignition by whatever means should always be considered and avoided in all efforts to evacuate persons or to control the escape of gas in an area of H<sub>2</sub>S exposure.

It should always be remembered that the bulk of gas emitted to the atmosphere will flow with the wind as it disperses, therefore, contact with the gas can be prevented by avoiding positions directly downwind from the point of emission. This fact should always be considered in working in the area (closing valves, etc.) and evacuating persons from the area.

#### VIII. Physical Characteristics

Hydrogen sulfide (H<sub>2</sub>S) is a colorless, flammable gas which may be liquefied under pressure and which occurs in a variety of natural and industrial settings. Typically called "sour gas", hydrogen sulfide is soluble in water, crude oil or petroleum fractions, and is extremely corrosive. The gas can cause severe stress cracking of steel and other metals. Hydrogen sulfide burns with a blue flame to form sulfur dioxide which is also a toxic gas. Hydrogen sulfide is slightly heavier than air and may accumulate to dangerous concentrations in low lying areas and confined spaces. The gas can be dispersed by wind movement or air currents.

H2S Contingency Plan revised 3/07/07

#### IX. Effects From Exposure

The health effects associated with hydrogen sulfide exposure are primarily determined by the concentration of the gas in the individuals breathing zone, the length of the exposure period(s) and individual susceptibility to the contaminant.

The health effects associated with hydrogen sulfide exposure are most often the result of sudden, excessive exposures experienced over a short time period. For example, a short-term exposure to hydrogen sulfide at a concentration of 500 ppm can result in respiratory arrest, loss of consciousness, and death within minutes.

A most important characteristic of hydrogen sulfide gas is its ability to cause offactory fatigue or a failure in the sense of smell. At concentrations approaching 100 ppm, exposure to hydrogen sulfide causes a loss of the sense of smell. This effect can result in an individual developing a false sense of security relative to the exposure conditions. High concentrations of hydrogen sulfide, especially those capable of causing death or serious physical injury, cannot be detected by the sense of smell.

#### X. Hydrogen Sulfide Work Practices

The incorporation of the following specific work practices discussed below into routine operation and maintenance activities can help prevent overexposure to hydrogen sulfide. These work practices have proven effective in controlling hydrogen sulfide exposure in various Davis. Gas operations.

#### L) Engineering controls

#### A. Ventilation

When the potential for hydrogen sulfide exposure occurs during routine operation and maintenance activities, ventilation of the worker's breathing zone is extremely important. Hydrogen sulfide gas is slightly heavier than air and does not readily dissipate. As such the gas may accumulate in low lying areas and confined spaces and may remain for an extended time.

Laboratory operations involving hydrogen sulfide gas or materials containing hydrogen sulfide shall be conducted under a properly functioning laboratory hood or with local exhaust ventilation placed at the source of emission.

For indoor work, such as in buildings containing transfer pumps, gas processing equipment, gas compressors, treaters, LACT, or other equipment the accumulation of hydrogen sulfide gas in these enclosed work areas is prevented through the use of general/dilution ventilation.

#### 2.) Work Practices

If possible, workers shall always remain upwind from the source of hydrogen sulfide gas while completing tasks. Wind direction shall be verified by a wind sock, streamer, or vane prior to initiating work. Wind conditions cannot be relied on, however, as a single means of controlling exposure.

#### 3.) Monitoring

#### A. Personal Alarm Monitors

When routine and maintenance tasks involve potential exposure to hydrogen sulfide above 10 ppm, the use of continuous reading personal monitors with audible and/or visual alarms is required. When a group of employees is working close together, it is not necessary that each employee wear a monitor. Representative employees shall be selected to wear personal monitors when such group tasks are to be performed. A portable monitor can be substituted for the personal type as long as it adequately samples the work area used by all potentially exposed employees.

Monitors shall be utilized for the complete duration of work activity. It is required that monitors be set to alarm at 10 ppm or less. If the alarm sounds, indicating a concentration at/or above this level, workers shall immediately leave the area. Workers shall withdraw upwind to a position which is considered to be a safe distance from the source of the gas. The alarm will continue to sound until the detector-sensor is cleared of hydrogen sulfide. Depending on the type of monitor and the concentration of the gas, this can take several minutes, even though the monitor is removed to a hydrogen sulfide free atmosphere. Allowing workers to re-enter, and work in the area shall be permitted only if they are wearing a full face pressure-demand airline respirator with egress bottle or self-contained breathing apparatus (SCBA). This procedure shall be followed, until it has been established that the area is safe from hydrogen sulfide (less than 10 ppm).

#### B Fixed (Stationary) Monitors

Continuous fixed area monitors shall be permanently installed in locations where the sudden release of hydrogen sulfide is possible. The monitor sensors shall be placed in proximity to potential sources of a hydrogen sulfide release. Several sensors may be needed at points of possible gas emission and shall be connected to a central monitor. The monitor H<sub>2</sub>S warning device, andible and visual, shall be located so that the alarm can be easily recognized throughout the facility. Employees must be instructed to follow established response procedures in the event that an alarm is activated.

Denton Plant

Survey measurements shall be made using portable hydrogen sulfide monitors. The following applications are most suitable for survey monitoring with portable devices.

- \* Monitoring of work areas prior to entry
- \* Monitoring of confined spaces
- \* Detection of leak sources
- \* Monitoring when lines, valves, or vessels are opened

#### 4.) Respiratory Protection

Supplied-air (airline or SCBA) respiratory protection against hydrogen sulfide exposure is required in the following situations.

- When routine or maintenance work tasks involve exposure to H<sub>2</sub>S concentrations of 10 ppm or greater.
- When a fixed monitor alarms, and re-entry to the work area is required to complete a job.
- If entry is required into a confined space is necessary and measurable levels of hydrogen sulfide are identified within the confined space.
- During rescue of employees suspected of H<sub>2</sub>S overexposure.
- For specific tasks identified with significant exposure potential and outlined in local program guidelines.

All respiratory protection equipment for hydrogen sulfide must be of the supplied-air type, equipped with pressure-demand regulators and operated in the pressure demand mode only and meet the Standard of Industrial Hygiene Practice for Respiratory Protection. This is the only type of respiratory protection recommended for hydrogen sulfide application. If airline units are used, an egress bottle with at least a 5-minute supply shall also be carried. Gas masks or other air-purifying respirators must never be used for hydrogen sulfide due to the poor warning properties of the gas.

Use of respiratory protection shall be accompanied by a written respiratory protection program referenced to Davis Gas. "Respiratory Protection Program"

#### 5.) Confined Space Entry

Work conducted in low lying areas and confined spaces where hydrogen sulfide may accumulate requires specific precautions beyond those described above. These conditions may be encountered during excavation and line repair or tank (vessel) entry or maintenance and inspection. Before starting work, these tasks require that the excavated area or vessel be thoroughly tested with a direct reading hydrogen sulfide instrument, as well as tested for sufficient oxygen and the absence of flammable atmospheres. These measurements are to be included as an integral part of an entry procedure. Furthermore, where entry permits are required these measured levels must be noted on the permit. Combination hydrogen sulfide detectors which also measure combustible gas and oxygen are available. Care must be taken to determine the hydrogen sulfide concentration throughout the complete area.

If hydrogen sulfide levels are determined to be above 10 ppm, entry into a confined space requires respiratory protection. Efforts must be made to ventilate the confined space prior to scheduled entry. When concentrations of hydrogen sulfide remain above 10 ppm, additional forced air venting is required before entry, when time permits. If entry is necessary under the above conditions respiratory protection shall consist of a pressure-demand airline respirator with an egress bottle or an SCBA. A standby person, also equipped with proper respiratory protection, is required to be outside the vessel and in constant audio or visual contact with the worker inside. This precaution is necessary to ensure that rapid rescue of the worker inside can be accomplished.

#### XI. Warning Signs

Warning signs for hydrogen sulfide must be posted to remind employees of the potential hazard at each specific location. Additionally, signs must indicate the need for monitors or respiratory protection in areas where such equipment is required. Warning signs shall be posted on all units where the potential for a dangerous release of hydrogen sulfide exists.

#### XII. Emergency Procedures

The prompt performance of specific rescue and emergency first aid procedures can very often result in the full recovery of victims overcome by hydrogen sulfide. These victims shall be immediately removed from the contaminated atmosphere by a rescuer wearing full-face pressure-demand supplied air respiratory protection, e.g., SCBA or supplied air with egress unit. Rescue must never be attempted without proper respiratory protection! Many such attempts have resulted in the rescuer also becoming a victim.

Once the victim is safely removed from the contaminated atmosphere, the rescuer is to begin artificial respiration or administer oxygen if breathing has ceased. Caution must be taken during the application of artificial respiration not to inhale air directly from the victim's lungs, as this could also result in the rescuer being overcome. Depending on the length of exposure and concentration of hydrogen sulfide, heart failure may occur within 4 to 6 minutes. If the victim's heart has stopped, cardiopulmonary resuscitation (CPR) must be started immediately. If the victim does not respond to emergency aid, emergency medical aid must be summoned to the scene, and the individual taken, as soon as possible, to a hospital for further treatment. Regardless of apparent condition, all overexposure victims shall receive appropriate medical attention as soon as possible:

#### XIII. Training

- A. All field personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, shall be H<sub>2</sub>S trained and certified. They shall be trained and made familiar with detection equipment, ventilation equipment, prevailing winds, briefing areas, warning systems, and evacuation procedures where appropriate.
- B. All Field personnel shall be trained in basic first-aid procedures applicable to victims of H<sub>2</sub>S exposure. During subsequent on-site training sessions and drills, emphasis shall be placed upon rescue and first aid for H<sub>2</sub>S victims. The training shall consist of the following:
- a. Introduction
  - · Definition
  - Dangers of H-S
  - · Properties of H<sub>2</sub>S
  - · Physical Effects
  - · Sources of H2S
- b. Hydrogen Sulfide Detection
  - ·Types of Equipment
  - Detector use in the field
- c. Protective Breathing Equipment
  - ·Types of Equipment
  - · Practical exercise in the use of company owned equipment
- d. Safety Precautions To Be Used
- e. Emergency Procedures
- f. Written Examination
- C. Safety Precautions to be used when dealing with H<sub>2</sub>S

#### While in the field during normal working conditions employees shall abide by the following rules:

Davis Gas Processing employee will designate an upwind briefing area where any personnel on location can assemble for a "tailgate" safety meeting or to meet in the event of un emergency situation. A designated vehicle with ample fuel, will be facing an exit with nothing blocking the path, in case of an emergency.

- 1. Stay upwind of any escaping gas. Be alert to any wind direction changes,
- Use fresh air breathing equipment when a on tank battery where H<sub>2</sub>S gas concentration is KNOWN OR SUSPECTED.
- 3. OBSERVE AND OBEY all warning signs on location.
- 4. Use extreme caution when gauging all tanks. Stay on the upwind side of the hatch. Turn your body away from the hatch when opening.
- 5. Produced water contains H<sub>2</sub>S. Use the same precautions as with crude oil.
- 6. Smoking, open flames, etc., are prohibited where gas is present or in a NO SMOKING AREA.
- 7. If at any time a job is considered to be hazardous, shut down operations and contact the company supervisor in charge of the job and a Davis Gas Supervisor.
- 8. Do not enter any tank or enclosed vessel without using fresh air breathing equipment. A supervisor MUST be on location at all times, when entering Confined Spaces and a Confined Space Permit will be required.
- 9. If it does become necessary to enter any tank or enclosed vessel the following conditions must be met:
  - a. The individual entering the tank must have in his possession a card stating that he has been trained in Hydrogen Sulfide Procedures and Confined Space Safety.
  - b. The tank can be entered only if the employee is wearing a 'breathing air' work unit. The minimum equipment required is: a self-contained emergency fresh air bottle, a harness, and a non-sparking lifeline. The lifeline must be adequate to remove them from the vessel of Confined Space, in the event of failure of their breathing equipment or any other accident that could incapacitate them.
  - c. An individual entering vessels must obtain a proper facemask seal.
  - d. Breathing equipment must be inspected and face mask seal must be tested by a supervisor before entry.
  - e. Backup personnel with proper equipment must be stationed at the entrance of the tank or enclosed vessel. They will man the safety lifeline, maintain communication and keep the individual inside under observation in case of an accident or emergency.

Denton Flami

- f. A designated supervisor must be on location to monitor conditions of air bottles, manifold, and airline as each bottle in use is depleted. The supervisor will designate the briefing and safe smoking area. Fle/she is responsible for safety conditions on the job location. He/she will be responsible for the cleaning and disinfecting of the breathing apparatus after and before storage.
- 10. All Davis Gas Processing owned fresh air breathing equipment will be inspected monthly by the Plant Personnel and quarterly by a designated outside company determined by the Safety Department. A record of the inspections will be maintained. Any equipment found to be unserviceable shall be tagged "OUT OF ORDER" and turned in for repairs.

#### D. In the event of escaping gas or a hydrogen sulfide emergency, these procedures should be used:

- 1. Immediately go to the upwind briefing area and determine if all erew members and other personnel working on the location are safe and accounted for.
- 2. Notify the Davis Cus Processing supervisor and the plant supervisor /personnel as soon as possible.
- 3. Under no circumstances attempt to rescue anyone that has been overcome by gas unless #2 has been completed and wearing fresh air breathing equipment in use while making the rescue.
- 4. After protective breathing equipment is in-use move any victims to a safe location upwind from the H<sub>2</sub>S source.
- 5. If the victim is unconscious and not breathing, trained personnel shall immediately apply mouth-to-mouth artificial respiration and continue it until normal breathing is restored.
- 6. After a victim is revived do not leave him alone. H<sub>2</sub>S victims can have irritations or suffer other complications from H<sub>2</sub>S exposure.
- All H<sub>2</sub>S victims should receive medical attention. Keep victims under observation until examined by a doctor.
- 8. Keep everyone away from the scene of the H<sub>2</sub>S danger until supervisory personnel can take charge of the location.

#### E. Hydrogen Sulfide Work Procedures

- 1. Employees working in areas of 10 to 100 ppm shall use H<sub>2</sub>S detection monitors while performing work at these locations. Should the monitor alarm, the employee shall go to a safe area (up or cross wind) and shall not re-enter without supplied air respirator or until the levels are less than 10ppm. Any well, tank, battery, or work area where H<sub>2</sub>S may be in the atmosphere, should be approached form upwind if possible. Windsocks must be clearly visible and should be displayed at a height of at least eight feet.
- 2. Where the level of H<sub>2</sub>S is 100 to 299 ppm employees shall use H<sub>2</sub>S detection monitors while performing work in these locations. Should the monitor alarm, the employee shall egress to a safe area (up or cross wind) and shall not re-enter without supplied air respirator or until the levels are less than 10 ppm. Notify your supervisor when the potential for H<sub>2</sub>S is above 10 ppm before re-entry with respiratory protection. Respiratory Protection equipment shall be available in adequate

Denion Plant

numbers and strategically located for quick and easy access. SCBA or nirline respirators shall be donned before performing specific tasks such as:

- a. Where employee exposure exceeds or is expected to exceed, 10 ppm measured in the work-area atmosphere,
- b. For confined space entry work when the concentration has not yet been determined and entry is required to perform the initial check. Persons shall not enter a tank, vessel, enclosed area or confined space, or any other area suspected to have H2S accumulation without addressing confined space entry permitting.
- e. During emergency rescue where a worker may have been overcome by H2S:
- d. When opening a system or bleeding down a systems vessels, lines or scrubbers and the concentration of H<sub>2</sub>S gas in the work-area atmosphere is at or suspecied to be at 10 ppm or greater.
- 3. Employees who are required to work in areas where the atmosphere contains H<sub>2</sub>S concentrations of 300 ppm or greater shall use monitors while performing work in these areas. Employees shall approach an open source only while wearing a SCBA or airline respirator and at least one standby person must be present and equipped with a SCBA or airline respirator.
- 4. Davis Gas Processing requires, back up personnel when H/S levels are greater than 100 ppm.

#### F. Electronic Monitors

- 1. HyS monitors are required whenever personnel are working in an area with potential exposure to hydrogen sulfide gas is at or above the Permissible Exposure Limit (PEL) of 10 parts per million (PPM) in the atmosphere. Employees assigned to a sour gas lease must have an electronic H<sub>2</sub>S monitor available for his/her use. All Davis Gas Processing employees, when working in a suspected H<sub>2</sub>S area, MUSI utilize an H<sub>2</sub>S monitor, that registers an alert at a H<sub>2</sub>S level greater than 10 ppm. Crews can share a monitor's coverage if all the workers are within 6 feet of a portable H<sub>2</sub>S monitor, when they are on the same level (no worker breathing zones below sensor levels), when there is an unimpeded line of sight between each individual and the sensor, and when the sensor is generally upwind from each individual.
- H<sub>2</sub>S monitors must be calibrated so that the first alarm reacts to H<sub>2</sub>S levels equal to or less than 10 ppm (permissible exposure limit, PEL), with the second alarm reacting to H<sub>2</sub>S levels equal to or less than 15 ppm (short term exposure limits, STEL). H<sub>2</sub>S monitors must have both an audible and a visual alarm

Davis Gas Processing
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Safety and Loss Prevention Standard

- 3. H<sub>2</sub>S monitors shall be tested daily by the user to assure the monitor is functional, turning the monitor off, then on or pushing a test button will initiate the alarm sequence. If the alarm does not sound, the monitor shall be returned to the issuer for repairs. Monitors must be bump tested or calibrated as to the manufacturer's recommendations. Generally calibrations are required whenever the battery or sensor is replaced and every month or before use, whichever is less frequent. If the manufacturer recommends a calibration interval of less than 30 days, follow the manufacturer's recommendation.
- 4. Documentation of hump test and calibrations shall be maintained for 5 years.

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Deriton Plant Sainty and Loss Prevention Standard MAP OF NORTH DENTON LINE (PUBLIC EXPOSURE) CR 1.44 ....... C# 129 (8.17) 心 J. 107 10 16

# ATTACHMENT TO THE DISCHARGE PERMIT GW-048 DAVIS GAS PROCESSING, INC. DENTON GAS PLANT DISCHARGE PERMIT APPROVAL CONDITIONS (June 28, 2004)

- 1. Payment of Discharge Permit Fees: The \$100.00 filing fee has been received by the OCD. The \$4,000.00 required flat fee may be paid in a single payment due at the time of approval, or in equal annual installments over the duration of the permit, with the first payment due upon receipt of this approval.
- 2. <u>Davis Gas Processing, Inc. Commitments:</u> Davis Gas Processing, Inc. will abide by all commitments submitted in the Discharge Permit renewal application dated November 20, 2003.
- 3. <u>Waste Disposal</u>: All wastes will be disposed of at an OCD approved facility. Only oilfield exempt wastes shall be disposed of down Class II injection wells. Non-exempt oilfield wastes that are non-hazardous may be disposed of at an OCD approved facility upon proper waste characterization per 40 CFR Part 261.
- 4. <u>Drum Storage:</u> All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums will be stored on their sides with the bungs in and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets will also be stored on an impermeable pad and curb type containment.
- 5. <u>Process Areas:</u> 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. <u>Above Ground Tanks:</u> 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 tanks or existing tanks that undergo a major modification, as determined by the Division, must be placed within an impermeable bermed enclosure.
- 7. <u>Above Ground Saddle Tanks:</u> 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. <u>Labeling:</u> All tanks, drums and containers will be clearly labeled to identify their contents and other emergency notification information.

- 9. <u>Below Grade Tanks/Sumps:</u> All 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. All pre-existing sumps and below-grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing to 3 pounds per square inch above normal operating pressure and/or visual inspection of cleaned out tanks and/or sumps, or other OCD approved methods. The OCD will be notified at least 72 hours prior to all testing.
- 10. <u>Underground Process/Wastewater Lines:</u> All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity at present and then every 5 years thereafter, or prior to Discharge Permit. 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.
- 11. <u>Class V Wells</u>: Leach fields and other wastewater disposal systems at OCD regulated facilities which inject non-hazardous fluid into or above an underground source of drinking water are considered Class V injection wells under the EPA UIC program. All Class V wells that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes will be closed unless it can be demonstrated that groundwater will not be impacted in the reasonably foreseeable future. Closure of Class V wells must be in accordance with a plan approved by the Division's Santa Fe Office. The OCD allows industry to submit closure plans that are protective of human health, the environment and groundwater as defined by the WQCC, and are cost effective. Class V wells that inject domestic waste only must be permitted by the New Mexico Environment Department.
- 12. <u>Housekeeping:</u> All systems designed for spill collection/prevention will be inspected weekly and after each storm event to ensure proper operation and to prevent overtopping or system failure. A record of inspections will be retained on site for a period of five years.
- 13. <u>Spill Reporting:</u> All spills/releases will be reported pursuant to OCD Rule 116 and WQCC 1203 to the OCD Hobbs District Office.
- 14. <u>Transfer of Discharge Permit:</u> The OCD will be notified prior to any transfer of ownership, control, or possession of a facility with an approved discharge permit. A written commitment to comply with the terms and conditions of the previously approved discharge permit must be submitted by the purchaser and approved by the OCD prior to transfer.
- 15. Storm Water Plan: Davis Gas Processing, Inc. shall maintain storm water runoff controls. As a result of Davis Gas Processing, Inc.' operations any water contaminant that exceeds the WQCC standards listed in 20 NMAC 6.2.3101 is discharged in any storm water runoff then Davis Gas Processing, Inc. shall notify the OCD within 24 hours, modify the plan within 15 days and submit for OCD approval. Davis Gas Processing, Inc. shall also take immediate corrective actions pursuant to Item 12 of these conditions.

- 16. Closure: The OCD will be notified when operations of the Denton Gas Plant are discontinued for a period in excess of six months. Prior to closure of the Denton Gas Plant a closure plan will be submitted for approval by the Director. Closure and waste disposal will be in accordance with the statutes, rules and regulations in effect at the time of closure.
- 17. <u>Certification:</u> Davis Gas Processing, Inc., by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Davis Gas Processing, Inc. further acknowledges that these 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.

Accepted:

DAVIS GAS PROCESSING, INC.

Page 3 of 3



## NEW MEXICO ENERGY, MERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor Joanna Prukop Cabinet Secretary

June 28, 2004

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

Mr. J. L. Davis
Davis Gas Processing, Inc.
211 North Colorado
Midland, Texas 79701-4696

**RE:** Discharge Permit Renewal GW-048

Davis Gas Processing, Inc.

**Denton Gas Plant** 

Lea County, New Mexico

Dear Mr. Davis:

The ground water Discharge Permit GW-048 renewal for the Davis Gas Processing, Inc. Denton Gas Plant located in the NW/4 SW/4 of Section 2, Township 15 South, Range 37 East, NMPM, Lea County, New Mexico, is hereby approved under the conditions contained in the enclosed attachment.

The discharge plan consists of the original discharge permit for GW-048 approved September 12, 1989, the renewal application dated June 18, 2004 and the attached stipulations of approval. 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 days of receipt of this letter.

The Discharge Permit application was submitted pursuant to 20 NMAC 3106 of the New Mexico Water Quality Control Commission (WQCC) Regulations. It is approved pursuant to 20 NMAC 3109.A. Please note 20 NMAC 3109.E and 20 NMAC 3109.F, which provide for possible future amendments or modifications of the permit. Please be advised that approval of this permit does not relieve Davis Gas Processing, Inc. of liability should operations result in pollution of surface water, ground water, or the environment.

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

Mr. J. L. Davis GW-048 Denton Gas Plant June 28, 2004 Page 2

Please note that 20 NMAC 3104 of the regulations provides: "When a permit has been approved, discharges must be consistent with the terms and conditions of the permit." Pursuant to 20 NMAC 3107.C., Davis Gas Processing, Inc. is required to notify the Director of any facility expansion, production increase, or process modification that would result in any change in the discharge of water quality or volume.

Pursuant to 20 NMAC 3109.G.4., this permit is for a period of five years. This approval will expire on September 12, 2009, and Davis Gas Processing, Inc. should submit an application in ample time before this date. Note that under 20 NMAC 3106.F. of the regulations, if a discharger submits a Discharge Permit 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. It should be noted that all discharge permit facilities will be required to submit the results of an underground drainage testing program as a requirement for Discharge Permit.

The Discharge Permit application for the Davis Gas Processing, Inc. Denton Gas Plant is subject to WQCC Regulation 3114. Every billable facility submitting a discharge permit application will be assessed a fee equal to the filing fee of \$100 plus a flat fee of \$4,000.00 for gas processing plants. The OCD has received the filing fee.

Please make all checks payable to: Water Management Quality Management Fund

C/o: Oil Conservation Division

1220 South St. Francis Drive

Santa Fe. New Mexico 87505.

If you have any questions please contact Mr. W. Jack Ford at (505) 476-3489. 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,

Roger C. Anderson

Chief, Environmental Bureau Oil Conservation Division

RCA/wjf
Attachment

xc: OCD Hobbs Office

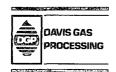
## ATTACHMENT TO THE DISCHARGE PERMIT GW-048 DAVIS GAS PROCESSING, INC. DENTON GAS PLANT DISCHARGE PERMIT APPROVAL CONDITIONS (June 28, 2004)

- 1. Payment of Discharge Permit Fees: The \$100.00 filing fee has been received by the OCD. The \$4,000.00 required flat fee may be paid in a single payment due at the time of approval, or in equal annual installments over the duration of the permit, with the first payment due upon receipt of this approval.
- 2. <u>Davis Gas Processing, Inc. Commitments:</u> Davis Gas Processing, Inc. will abide by all commitments submitted in the Discharge Permit renewal application dated November 20, 2003.
- 3. <u>Waste Disposal</u>: All wastes will be disposed of at an OCD approved facility. Only oilfield exempt wastes shall be disposed of down Class II injection wells. Non-exempt oilfield wastes that are non-hazardous may be disposed of at an OCD approved facility upon proper waste characterization per 40 CFR Part 261.
- 4. <u>Drum Storage:</u> All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums will be stored on their sides with the bungs in and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets will also be stored on an impermeable pad and curb type containment.
- 5. <u>Process Areas:</u> 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. <u>Above Ground Tanks:</u> 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 tanks or existing tanks that undergo a major modification, as determined by the Division, must be placed within an impermeable bermed enclosure.
- 7. <u>Above Ground Saddle Tanks:</u> 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. <u>Labeling:</u> All tanks, drums and containers will be clearly labeled to identify their contents and other emergency notification information.

- 9. <u>Below Grade Tanks/Sumps:</u> All 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. All pre-existing sumps and below-grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing to 3 pounds per square inch above normal operating pressure and/or visual inspection of cleaned out tanks and/or sumps, or other OCD approved methods. The OCD will be notified at least 72 hours prior to all testing.
- 10. <u>Underground Process/Wastewater Lines:</u> All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity at present and then every 5 years thereafter, or prior to Discharge Permit. 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.
- 11. <u>Class V Wells</u>: Leach fields and other wastewater disposal systems at OCD regulated facilities which inject non-hazardous fluid into or above an underground source of drinking water are considered Class V injection wells under the EPA UIC program. All Class V wells that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes will be closed unless it can be demonstrated that groundwater will not be impacted in the reasonably foreseeable future. Closure of Class V wells must be in accordance with a plan approved by the Division's Santa Fe Office. The OCD allows industry to submit closure plans that are protective of human health, the environment and groundwater as defined by the WQCC, and are cost effective. Class V wells that inject domestic waste only must be permitted by the New Mexico Environment Department.
- 12. <u>Housekeeping:</u> All systems designed for spill collection/prevention will be inspected weekly and after each storm event to ensure proper operation and to prevent overtopping or system failure. A record of inspections will be retained on site for a period of five years.
- 13. <u>Spill Reporting:</u> All spills/releases will be reported pursuant to OCD Rule 116 and WQCC 1203 to the OCD Hobbs District Office.
- 14. <u>Transfer of Discharge Permit:</u> The OCD will be notified prior to any transfer of ownership, control, or possession of a facility with an approved discharge permit. A written commitment to comply with the terms and conditions of the previously approved discharge permit must be submitted by the purchaser and approved by the OCD prior to transfer.
- 15. Storm Water Plan: Davis Gas Processing, Inc. shall maintain storm water runoff controls. As a result of Davis Gas Processing, Inc.' operations any water contaminant that exceeds the WQCC standards listed in 20 NMAC 6.2.3101 is discharged in any storm water runoff then Davis Gas Processing, Inc. shall notify the OCD within 24 hours, modify the plan within 15 days and submit for OCD approval. Davis Gas Processing, Inc. shall also take immediate corrective actions pursuant to Item 12 of these conditions.

- 16. <u>Closure:</u> The OCD will be notified when operations of the Denton Gas Plant are discontinued for a period in excess of six months. Prior to closure of the Denton Gas Plant a closure plan will be submitted for approval by the Director. Closure and waste disposal will be in accordance with the statutes, rules and regulations in effect at the time of closure.
- 17. <u>Certification:</u> Davis Gas Processing, Inc., by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Davis Gas Processing, Inc. further acknowledges that these 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.

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| DAVIS GAS PROCESSING, INC. |  |
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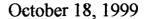


### DAVIS GAS PROCESSING, INC.

211 North Colorado MIDLAND, TEXAS 79701-4696

CO "SERMATION DA

OFF: (915) 682-6311 FAX: (915) 682-4024



Mr. Roger C. Anderson Chief, Environmental Bureau New Mexico Energy, Minerals And Natural Resources Department 2040 South Pacheco Street Santa Fe, New Mexico 87505

Re: Discharge Plan Renewal GW-408
Davis Gas Processing, Inc.
Denton Gas Plant
Lea County, New Mexico

Dear Mr. Anderson:

In my letter of September 27, 1999 (copy attached), we transmitted the flat fee and filing fee to you. The letter indicates a signed copy of the conditional approval form was also transmitted; however, I found two signed copies of this document on my desk. In the event this document was accidentally not transmitted, I am sending a signed copy hereunder.

Very truly yours,

Don K. Judd

Agent

cc: J.L. Davis

## ATTACHMENT TO THE DISCHARGE PLAN RENEWAL GW-048 DAVIS GAS PRODUCING DENTON GAS PLANT DISCHARGE PLAN APPROVAL CONDITIONS (September 15, 1999)

9

- 1. Payment of Discharge Plan Fees: The \$50.00 filing fee has not been received by the OCD. There is a required flat fee equal to one-half of the original flat fee for natural gas plants. The renewal flat fee required for this facility is \$1,667.50 which may be paid in a single payment due at the time of approval, or in equal annual installments over the duration of the discharge plan, with the first payment due upon receipt of this approval.
- 2. <u>Davis Gas Producing Commitments:</u> Davis Gas Producing will abide by all commitments submitted in the discharge plan renewal application dated May 20, 1999 and these conditions for approval.
- 3. <u>Waste Disposal</u>: All wastes will be disposed of at an OCD approved facility. Only oilfield exempt wastes shall be disposed of down Class II injection wells. Non-exempt oilfield wastes that are non-hazardous may be disposed of at an OCD approved facility upon proper waste characterization per 40 CFR Part 261.
- 4. <u>Drum Storage:</u> All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums will be stored on their sides with the bungs in and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets will also be stored on an impermeable pad and curb type containment.
- 5. <u>Process Areas:</u> 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. <u>Above Ground Tanks:</u> 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 tanks or existing tanks that undergo a major modification, as determined by the Division, must be placed within an impermeable bermed enclosure.
- 7. <u>Above Ground Saddle Tanks</u>: 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. <u>Labeling:</u> All tanks, drums and containers will be clearly labeled to identify their contents and other emergency notification information.

9. <u>Below Grade Tanks/Sumps:</u> All 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. All pre-existing sumps and below-grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing to 3 pounds per square inch above normal operating pressure and/or visual inspection of cleaned out tanks and/or sumps, or other OCD approved methods. The OCD will be notified at least 72 hours prior to all testing.

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- 10. <u>Underground Process/Wastewater Lines:</u> All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity no later than February 28, 2000 and every 5 years, from tested date, thereafter. The permittee 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.
- 11. <u>Class V Wells</u>: No Class V wells that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes will be approved for constructed unless it can be demonstrated that groundwater will not be impacted in the reasonably foreseeable future. Leach fields and other wastewater disposal systems at OCD regulated facilities which 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.
- 12. <u>Housekeeping:</u> All systems designed for spill collection/prevention will be inspected weekly and after each storm event to ensure proper operation and to prevent overtopping or system failure. A record of inspections will be retained on site for a period of five years.
- 13. <u>Spill Reporting:</u> All spills/releases will be reported pursuant to OCD Rule 116 and WQCC 1203 to the OCD Hobbs District Office.
- 14. <u>Transfer of Discharge Plan:</u> The OCD will 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.

- 15. <u>Closure:</u> The OCD will be notified when operations of the Denton Gas Plant are discontinued for a period in excess of six months. Prior to closure of the Denton Gas Plant a closure plan will be submitted for approval by the Director. Closure and waste disposal will be in accordance with the statutes, rules and regulations in effect at the time of closure.
- 16. <u>Certification:</u> Davis Gas Producing, by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Davis Gas Producing further acknowledges that these 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.

Accepted:

**DAVIS GAS PRODUCING** 



September 15, 1999

### CERTIFIED MAIL RETURN RECEIPT NO. Z-274-520-533

Mr. Donald K. Judd Davis Gas Producing 211 North Colorado Midland, Texas 79701

RE: Discharge Plan Renewal GW-048

Davis Gas Producing Denton Gas Plant Lea County, New Mexico

Dear Mr. Judd:

The ground water discharge plan renewal GW-048 for the Davis Gas Producing Denton Gas Plant located in the SW/4 of Section 2, Township 15 South, Range 37 East, NMPM, Lea County, New Mexico, is hereby approved under the conditions contained in the enclosed attachment. The discharge plan consists of the discharge plan as approved September 12, 1989 and renewed on February 1, 1995, and renewal application dated May 20, 1999. 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 10 working days of receipt of this letter.

The discharge plan renewal application was submitted pursuant to Section 3106 of the New Mexico Water Quality Control Commission (WQCC) Regulations. It is approved pursuant to Section 3109.A. Please note Sections 3109.E and 3109.F, which provide for possible future amendments or modifications of the plan. Please be advised that approval of this plan does not relieve Davis Gas Producing of liability should operations result in pollution of surface water, ground water, or the environment.

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

- 15. <u>Closure:</u> The OCD will be notified when operations of the Denton Gas Plant are discontinued for a period in excess of six months. Prior to closure of the Denton Gas Plant a closure plan will be submitted for approval by the Director. Closure and waste disposal will be in accordance with the statutes, rules and regulations in effect at the time of closure.
- 16. <u>Certification:</u> Davis Gas Producing, by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Davis Gas Producing further acknowledges that these 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.

| Title               |
|---------------------|
| by                  |
| DAVIS GAS PRODUCING |
| Accepted:           |

Mr. Donald K. Judd GW- 048 Denton Gas Plant September 15, 1999 Page 2

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

Pursuant to Section 3109.G.4., this renewal plan is for a period of five years. This renewal will expire on **September 12, 2004**, and Davis Gas Producing should submit an application in ample time before this 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. It should be noted that all discharge plan facilities will be required to submit the results of an underground drainage testing program as a requirement for discharge plan .

The discharge plan renewal application for the Davis Gas Producing Denton Gas Plant is subject to WQCC Regulation 3114. Every billable facility submitting a discharge plan application will be assessed a fee equal to the filing fee of \$50. There is a renewal flat fee assessed for gas plant facilities equal to one-half of the original flat fee or \$1,667.50. The OCD has not received the filing fee.

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

Sincerely,

Roger C. Anderson

Chief, Environmental Bureau Oil Conservation Division

RCA/wjf Attachment

xc: OCD Hobbs Office

|                          | Z 274~520  | 533 OCD   |
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| ii 199                   | Return Receipt Showing to<br>Whom & Date Delivered                                 | 1.25      |
| , Apr                    | Return Receipt Showing to Whom,<br>Date, & Addressee's Address                     |           |
| 3800                     | TOTAL Postage & Fees   | \$ 3,72   |
| PS Form 3800, April 1995 | Postmark or Date   | W-048     |
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# ATTACHMENT TO THE DISCHARGE PLAN RENEWAL GW-048 DAVIS GAS PRODUCING DENTON GAS PLANT DISCHARGE PLAN APPROVAL CONDITIONS (September 15, 1999)

- 1. Payment of Discharge Plan Fees: The \$50.00 filing fee has not been received by the OCD. There is a required flat fee equal to one-half of the original flat fee for natural gas plants. The renewal flat fee required for this facility is \$1,667.50 which may be paid in a single payment due at the time of approval, or in equal annual installments over the duration of the discharge plan, with the first payment due upon receipt of this approval.
- 2. <u>Davis Gas Producing Commitments:</u> Davis Gas Producing will abide by all commitments submitted in the discharge plan renewal application dated May 20, 1999 and these conditions for approval.
- 3. <u>Waste Disposal</u>: All wastes will be disposed of at an OCD approved facility. Only oilfield exempt wastes shall be disposed of down Class II injection wells. Non-exempt oilfield wastes that are non-hazardous may be disposed of at an OCD approved facility upon proper waste characterization per 40 CFR Part 261.
- 4. <u>Drum Storage:</u> All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums will be stored on their sides with the bungs in and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets will also be stored on an impermeable pad and curb type containment.
- 5. <u>Process Areas:</u> 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. <u>Above Ground Tanks:</u> 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 tanks or existing tanks that undergo a major modification, as determined by the Division, must be placed within an impermeable bermed enclosure.
- 7. <u>Above Ground Saddle Tanks:</u> 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. <u>Labeling:</u> All tanks, drums and containers will be clearly labeled to identify their contents and other emergency notification information.

- 9. <u>Below Grade Tanks/Sumps:</u> All 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. All pre-existing sumps and below-grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing to 3 pounds per square inch above normal operating pressure and/or visual inspection of cleaned out tanks and/or sumps, or other OCD approved methods. The OCD will be notified at least 72 hours prior to all testing.
- 10. <u>Underground Process/Wastewater Lines:</u> All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity no later than February 28, 2000 and every 5 years, from tested date, thereafter. The permittee 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.
- 11. <u>Class V Wells</u>: No Class V wells that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes will be approved for constructed unless it can be demonstrated that groundwater will not be impacted in the reasonably foreseeable future. Leach fields and other wastewater disposal systems at OCD regulated facilities which 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.
- 12. <u>Housekeeping:</u> All systems designed for spill collection/prevention will be inspected weekly and after each storm event to ensure proper operation and to prevent overtopping or system failure. A record of inspections will be retained on site for a period of five years.
- 13. <u>Spill Reporting:</u> All spills/releases will be reported pursuant to OCD Rule 116 and WQCC 1203 to the OCD Hobbs District Office.
- 14. <u>Transfer of Discharge Plan:</u> The OCD will 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.

- 15. Closure: The OCD will be notified when operations of the Denton Gas Plant are discontinued for a period in excess of six months. Prior to closure of the Denton Gas Plant a closure plan will be submitted for approval by the Director. Closure and waste disposal will be in accordance with the statutes, rules and regulations in effect at the time of closure.
- 16. <u>Certification:</u> Davis Gas Producing, by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Davis Gas Producing further acknowledges that these 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.

| Accepted:           |  |
|---------------------|--|
| DAVIS GAS PRODUCING |  |
| byTitle             |  |



### ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87504 (505) 827-5800

September 12, 1989

Certified Mail Return Receipt No. P-106 675 313

Mr. Donald K. Judd Davis Gas Processing 211 North Colorado Midland, TX 79701

RE:

Discharge Plan GW-48
Denton Gas Plant
Lea County, New Mexico

Dear Mr. Judd:

The groundwater discharge plan (GW-48) for the Denton Gas Plant located in the SE/4 of Section 2, Township 15 South, Range 37 East, NMPM, Lea County, New Mexico is hereby approved.

The approved discharge plan consists of the plan dated December 8, 1988 and materials dated March 14, 1989 and September 5, 1989 submitted as supplements to the discharge plan.

The discharge plan was submitted pursuant to Section 3-106 of the N.M. Water Quality Control Commission Regulations. It is approved pursuant to Section 3-109.F., which provides for the possible future amendments of the plan. Please be advised that the approval of this plan does not relieve you of liability should your operation result in actual pollution of surface or ground waters which may be actionable under other laws and/or regulations.

There will be no routine monitoring or reporting requirements other than those contained in the plan.

Please note that Section 3-104 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 3-107.C., you are required to notify the Director of the Oil Conservation Division (OCD) of any facility expansion, production increase, or process modification that would result in any significant change in discharge water quality or volume.

Mr. Donald K. Judd Davis Gas Processing September 12, 1989 Page 2

Pursuant to Section 3-109.G.4., this plan approval is for a period of five (5) years. This approval will expire September 12, 1994 and you should submit an application for renewal in ample time before that date.

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

Sincerely,

William J. LeMay,

Director

WJL/RCA/ag

cc: Oil Conservation Division - Hobbs

#### P-106 675 313

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

|                         | (See Reverse)   |          |  |  |  |
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| PS Form 3800, June 1985 | Postmark or Date  |          |  |  |  |



Daris Gas Droc. Pitot Field E side plant, Receives oil-water squarator seeids, Epit discharge



David Gas Poroc. 4/14/887218 E. Oit . receives cooling tower sumpolsain water Pil Brain A to field.



Oil-Water Separator Daris Cas Proc. 4/14/28 A&B



Domine Storage & transfer area Sais Cos Proc. 4/14/28 ASB



Oil Stained Soil Davis Gos Processing 4/19/88 ATB



Daris Gas Proc.
4/14/38
016 on ground
N. 26 Compressors



Davis Gas Prox. 4/14/38 ASS Consensate tank bottom Drain line



Daris Gas Proc. 4/14/38 ASE Leaby oil Transfer pumps



Daries Gas Proc 4/19/33 Bys Compressors and piping Nog compressors



Daris bat 4/14/88 A98 Cryogenic plant



Javis Gas processing 4/14/88 ASTE. Water leabs forom 4 cooling fachet pumps desains to N. Plant unused cooling tower Go pumping to East pit. Oil Sisom leaks al compressors mixes with water From Jackels and moresto lower sump.





Davis Gas Droc 4/14/88 278 Grainge from Escale Domine Horage to field