AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.

App Number: pJK1424832159

3RP - 1011

ENTERPRISE PRODUCTS OPERATING, LLC

1/19/2017

3R-1011

Release Report/ General Correspondence

Enterprise SJ

Date: 2012

.597

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company Enterprise Products	Contact Aaron Dailey
Address 614 Reilly Avenue, Farmington, NM 87401	Telephone No. (505) 599-2286
Facility Name Val Verde Gas Plant	Facility Type Amine Treating Plant

Surface Owner Private	Mineral Owner Private	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
SE/4 SE/4	11	29N	11W					San Juan

Latitude N 36.4858" **Longitude** W 108.1200"

RCVD APR 3 '12
OIL CONS. DIV.
DIST. 3

NATURE OF RELEASE

Type of Release 50/50 mix of amine and water	Volume of Release 10-12 Barrels (estimated)	Volume Recovered 40 yards of amine stained soil
Source of Release Train 8 feed pump expansion joint	Date and Hour of Occurrence 3.25.2012 @ 0:630 (estimated)	Date and Hour of Discovery 3.25.2012 @ 0:6:50
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Train 8 Still Feed Pump expansion joint failed, thus causing amine to over fill concrete containment. Once containment was full, amine escaped to the surrounding gravel area and proceeded to flow in a southern direction. Approx amount of amine is estimated at 10 to 12 barrels of amine. Outside operator discovered this problem and worked quickly to create dikes to contain the amine spill from spreading further. At the same time, this pump was shut down and rendered out of service until the problem can be effectively resolved.

Describe Area Affected and Cleanup Action Taken.*
Operations group dispatched a contractor with a vacuum truck and shovel crew to remove the liquid and amine stained soil from the area. The excavation continued until all visual staining and odor of amine was removed from the release location. Amine contaminated soil, a volume of approximately 40 yards, was hauled to an OCD permitted landfarm facility. Please see the attached photo documentation and MSDS information.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION
Printed Name: Aaron Dailey	Approved by Environmental Specialist:
Title: Environmental Scientist	Approval Date: 4/24/2012 Expiration Date:
E-mail Address: amdailey@eprod.com	Conditions of Approval: Attached ☐
Date: 3.28.2012 Phone: (505) 599-2286	

* Attach Additional Sheets If Necessary

NJK1211548821

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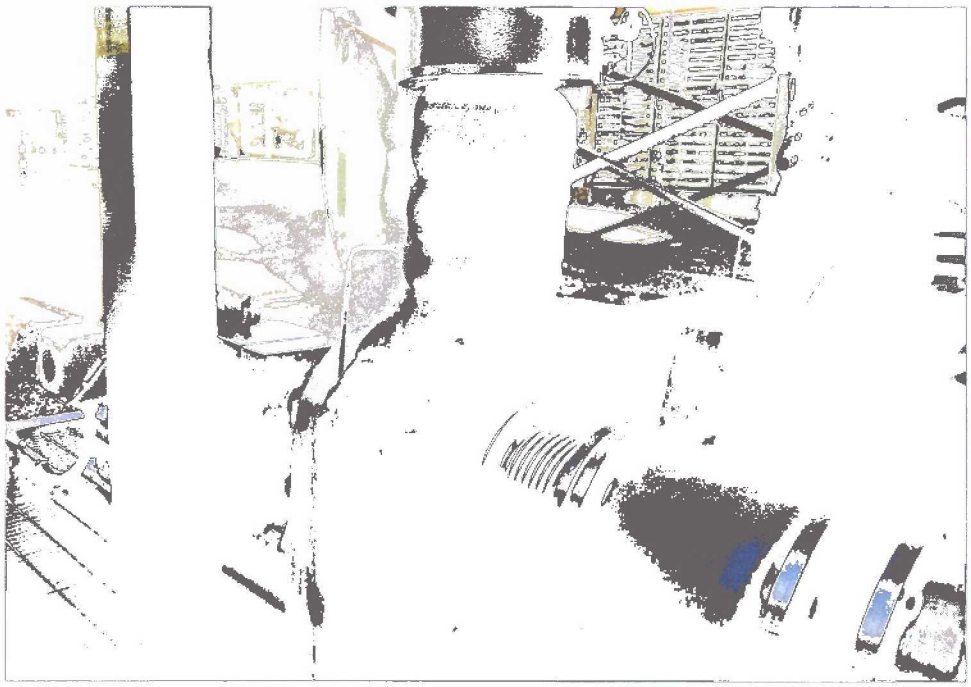
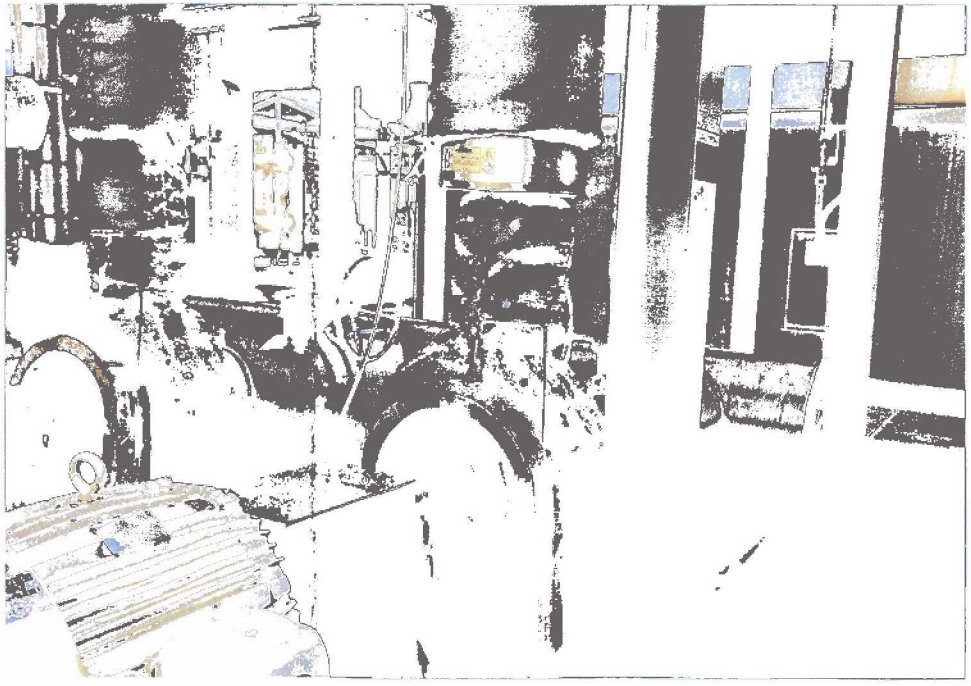
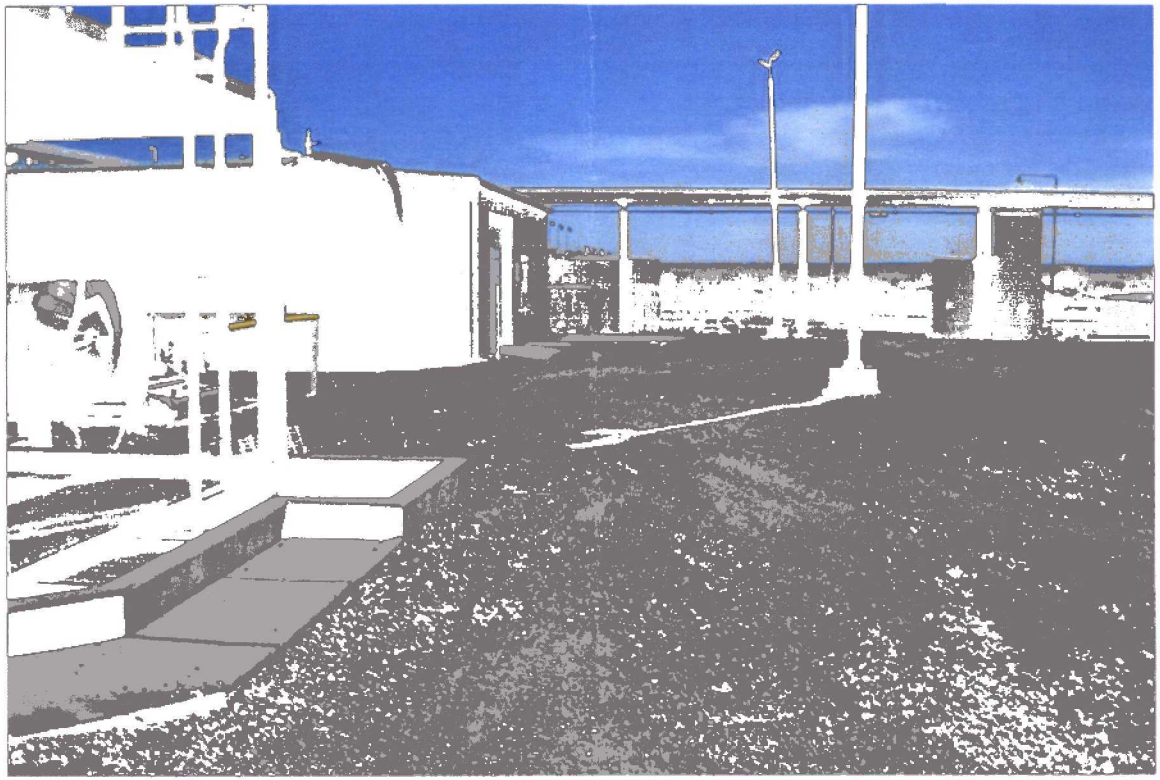
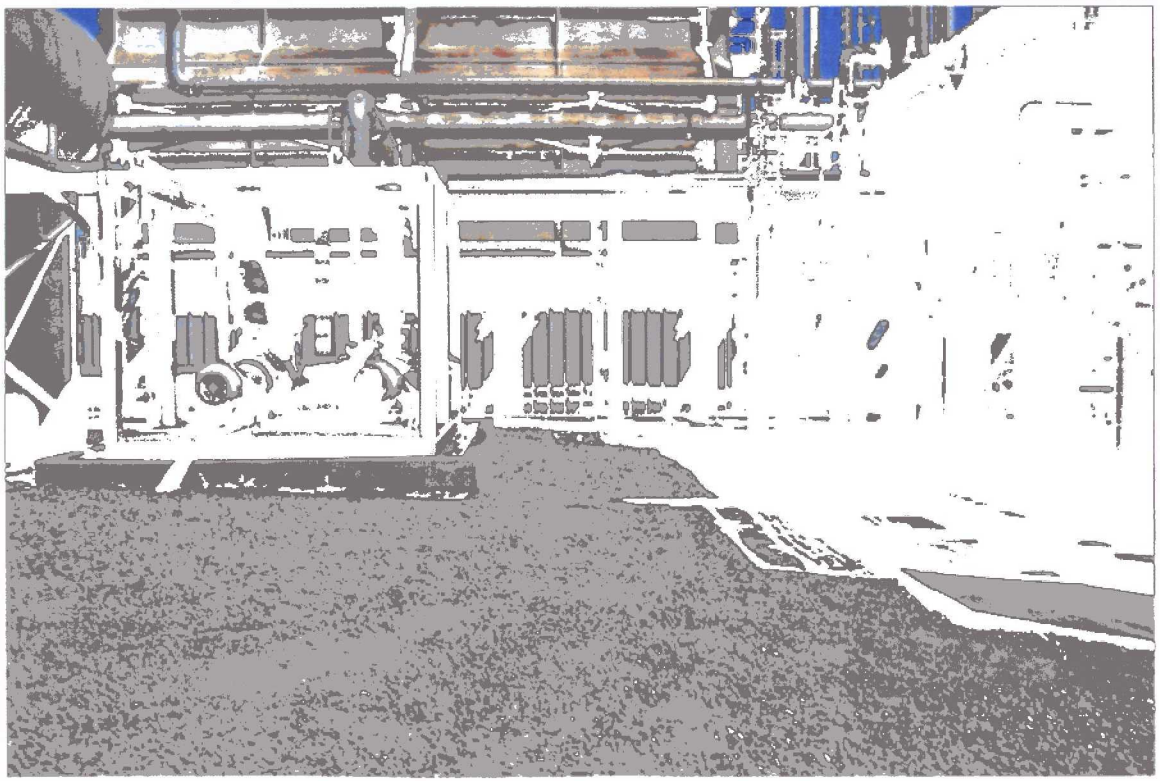
Before cleanup - 3.25.2012



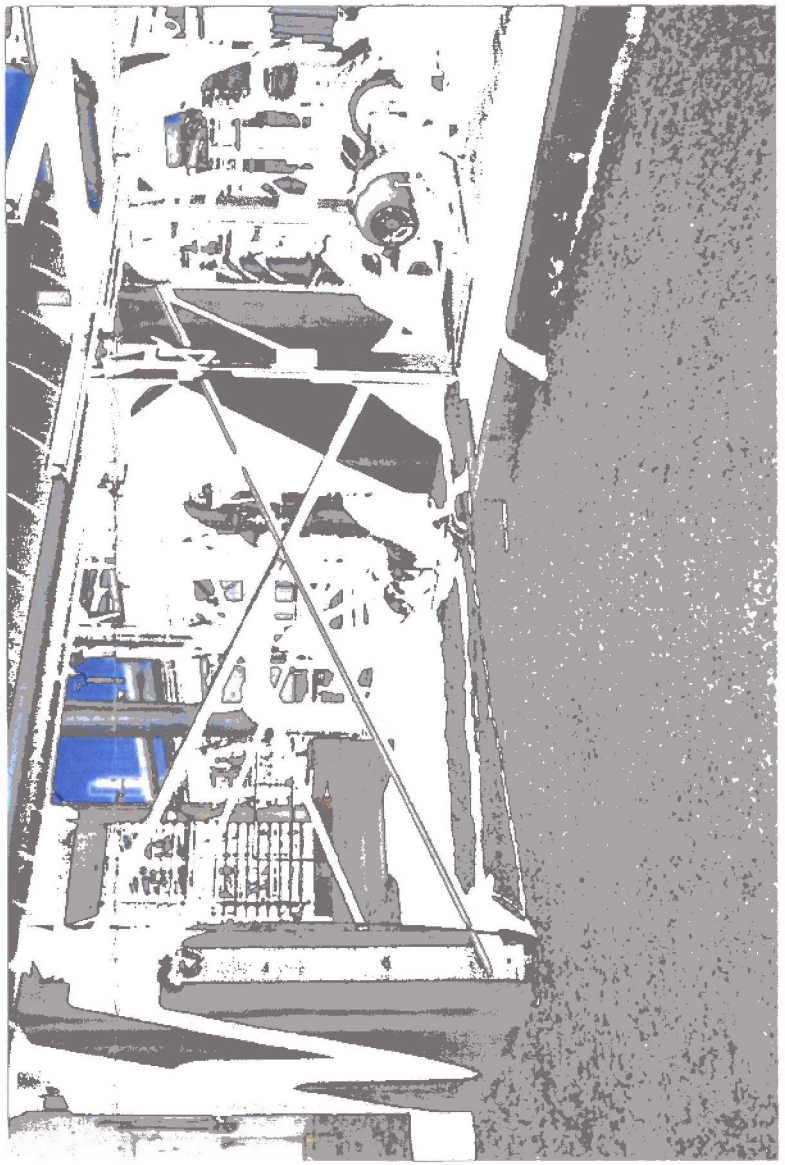






After clean up - completed 3/30/2012

soils were excavated @ depths of 6" to 18"



1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

24-HOUR EMERGENCY PHONE NUMBER: 1-866-865-4767

Product: GAS/SPEC* CS-2010 SOLVENT

Product Code: 72641

Effective Date: 01/19/00 Date Printed: 12/04/00 MSD: 006602

INEOS, Limited Liability Company, Plaquimine, LA 70764

Customer Information Center: 1-866-865-4767

2. COMPOSITION/INFORMATION ON INGREDIENTS

Methyldiethanolamine	CAS# 000105-59-9	65%
Proprietary ingredient		30% max.
Water	CAS# 007732-18-5	6% max.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

****
* Clear, colorless to yellow viscous liquid. Amine odor. Causes *
* severe eye burns. *
****

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

EYE: May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Vapors or mists may cause eye irritation.

SKIN: Prolonged or repeated exposure may cause skin irritation, even a burn. May cause more severe response if confined to skin or skin is abraded (scratched or cut). A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

INGESTION: Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. Ingestion may cause gastrointestinal irritation or ulceration. Ingestion may cause burns of mouth and throat. Signs and symptoms of excessive exposure may be nausea and/or vomiting. Signs and symptoms of excessive exposure may be abdominal cramps and/or diarrhea.

INHALATION: If material is heated or mist is produced, concentrations may be attained that are sufficient to cause irritation and other effects.

(Continued on Page 2)

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3. HAZARDS IDENTIFICATION (CONTINUED)

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: No relevant information found.

4. FIRST AID

EYE: Immediate and continuous irrigation with flowing water for at least 30 minutes is imperative. Prompt medical consultation is essential.

SKIN: Wash off in flowing water or shower.

INGESTION: Do not induce vomiting. Give large amounts of water or milk if available and transport to medical facility. Do not give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air if effects occur. Consult a physician.

NOTE TO PHYSICIAN: May cause tissue destruction leading to stricture. If lavage is performed, suggest endotracheal and/or esophageal control. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES
FLASH POINT: No flash to boiling (290F).
METHOD USED: PMCC.
AUTOIGNITION TEMPERATURE: Not determined.

FLAMMABILITY LIMITS
LFL: Not determined.
UFL: Not determined.

HAZARDOUS COMBUSTION PRODUCTS: Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to nitrogen oxides, carbon monoxide, carbon dioxide.

OTHER FLAMMABILITY INFORMATION: This material will not burn until the water has evaporated. Residue can burn. Spills

(Continued on Page 3)

Product Name: GAS/SPEC* CS-2010 SOLVENT
Product Code: 72641

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5. FIRE FIGHTING MEASURES (CONTINUED)

of these organic liquids on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

EXTINGUISHING MEDIA: To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively.

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny unnecessary entry. To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical, or foam.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES (See Section 15 for Regulatory Information)

PROTECT PEOPLE: Clear non-emergency personnel from the area.

PROTECT THE ENVIRONMENT: Contain material to prevent contamination of soil, surface water or ground water.

CLEANUP: Absorb with material such as: non combustible material and/or sand. Collect material in suitable and properly labeled open containers. Avoid materials such as: sawdust or cellulose.

7. HANDLING AND STORAGE

HANDLING: Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

(Continued on Page 4)

7. HANDLING AND STORAGE (CONTINUED)

STORAGE: Do not store in aluminum, copper, copper alloys. See Stability & Reactivity, Section 10, of the MSDS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Use chemical goggles. Eye wash fountain should be located in immediate work area. If vapor exposure causes eye discomfort, use a full-face respirator.

SKIN PROTECTION: When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron or full-body suit will depend on operation. If hands are cut or scratched, use gloves impervious to this material even for brief exposures.

RESPIRATORY PROTECTION: For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator.

EXPOSURE GUIDELINE(S): None established.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear, colorless to light yellow viscous liquid.
ODOR: Amine odor.
VAPOR PRESSURE: 1.79 mmHg @ 20C.
VAPOR DENSITY: >1
BOILING POINT: 290F
SOLUBILITY IN WATER: Complete
SPECIFIC GRAVITY: 1.014 25/25C
pH: 12.6

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under recommended storage conditions. See Storage, Section 7.

CONDITIONS TO AVOID: Product can decompose at elevated temperatures.

(Continued on Page 5)

Product Name: GAS/SPEC* CS-2010 SOLVENT
Product Code: 72641

Effective Date: 01/19/00 Date Printed: 12/04/00 MSD: 006602

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10. STABILITY AND REACTIVITY (CONTINUED)

INCOMPATIBILITY WITH OTHER MATERIALS: Avoid contact with halogenated hydrocarbons, nitrites, strong acids. Avoid contact with oxidizing materials. Heating above 60C in the presence of aluminum can result in corrosion and generation of flammable hydrogen gas. Product may potentially react with various halogenated organic solvents, resulting in temperature and/or pressure increases.

HAZARDOUS DECOMPOSITION PRODUCTS: Hazardous decomposition products depend upon temperature, air supply and the presence of other materials.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION (See Section 3 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1)

SKIN: The dermal LD50 has not been determined.

INGESTION: Based on information for the components, the oral LD50 for rats is expected to be > 1600 mg/kg.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): For the major component methyldiethanolamine: in vitro mutagenicity studies were negative. Animal mutagenicity studies were negative. No relevant information found on other component(s)

12. ECOLOGICAL INFORMATION (For detailed Ecological data, write or call the address or non-emergency number shown in Section 1)

ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING: Based largely or completely on data for major component(s). Bioconcentration potential is low (BCF less than 100 or Log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).

DEGRADATION & PERSISTENCE: Based on information for methyldiethanolamine. Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD >40%). Based on information for proprietary ingredient. Biodegradation may occur under aerobic conditions (in the presence of oxygen).

(Continued on Page 6)

Product Name: GAS/SPEC* CS-2010 SOLVENT
Product Code: 72641

Effective Date: 01/19/00 Date Printed: 12/04/00 MSD: 006602

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12. ECOLOGICAL INFORMATION (For detailed Ecological data, write or call

ECOTOXICITY: Based on information for methyldiethanolamine. Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in most sensitive species). Based on information for proprietary ingredient. Material is practically non-toxic to fish on an acute basis (LC50 > 100 mg/L).

13. DISPOSAL CONSIDERATIONS (See Section 15 for Regulatory Information)

DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. INEOS, LIMITED LIABILITY COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients).

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destruction device.

As a service to its customers, INEOS can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone INEOS's Customer Information Center at 866-865-4767 for further details.

14. TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (D.O.T.):
This product is not regulated by D.O.T. when shipped domestically by land.

15. REGULATORY INFORMATION (Not meant to be all inclusive--selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements

(Continued on Page 7)

Product Name: GAS/SPEC* CS-2010 SOLVENT
Product Code: 72641

Effective Date: 01/19/00 Date Printed: 12/04/00 MSD: 006602

REGULATORY INFORMATION: (CONTINUED)

are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS
==========

SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
PROPRIETARY INGREDIENT	PROPRIETARY	PA1

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).

STATE RIGHT-TO-KNOW: This product is not known to contain any substances subject to the disclosure requirements of

New Jersey

(Continued on Page 8)

REGULATORY INFORMATION:(CONTINUED)

Pennsylvania

OSHA HAZARD COMMUNICATION STANDARD:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

16. OTHER INFORMATION

MSDS STATUS: New MSDS.

Val Verde Plant operations 1/22/04

Val Verde Plant is changing amine from Gas Spec CS plus to Gas Spec 2010. Both products are manufactured by Ineos Chemical Company and distributed by Coastal Chemical. The purpose of this chemical replacement is to achieve lower fuel and electricity rates. Review and sign the attached Chemical Request Review form and Management of Change form. Return to Blair Armstrong, Val Verde Plant Supervisor.

Mike Betz -Val Verde
Richard LeClair -Val Verde 2-21-04
Jennifer Fuqua -Midland, TX 3/8/04
Conrad Smith -Denver, CO 3-17-04 sent to Blair

Val Verde Asset

Chemical Request Review Form

THIS FORM UST BE COMPLETED PRIOR TO ORERING ANY MATERIALS THAT ARE --1) NOT CURRENTLY USED IN YOUR AREA OR 2) SUPRLIED BY A NEW OR DIFFERENT SUPPLIER. CHECK MSDS MASTER COPY TO DETERMINE IF THE CHEMICAL IS NEW. **THE MSDS FOR THE MATERIAL YOU WISH TO ORDER MUST ACCOMPANY THIS FORM. AFTER APPROVAL BY PSM/SAFETY COORDINATOR, ENVIRONMENTAL DESIGNEE, AND ASSET MANAGER, FORWARD THIS FORM, MSDS, AND PURCHASE REQUISITION TO PURCHASING.**

Requester Blair Armstrong BA Phone 505-632-9492 Date 1-22-04

Area where this product will be used: Val Verde amine treaters

Chemical will be used: Permanently X Temporary Basis ☐ Date to be Used: 2/1/04

Is a contractor bringing this chemical onsite ☐ Yes No X To be used only by the contractor? ☐ Yes x No

Name of contractor company:

Is this chemical and its intended use exactly the same as a chemical now used in the plant. (I.e., are you notifying us about an alternate supplier?) ☐ Yes ☒ No

If yes, what is the chemical and current supplier at your unit?

Is this chemical a replacement for another chemical? X Yes ☐ No

If so, a) what is the chemical now used? Gas Spec CS Plus

b) Will the current chemical be permanently removed from the plant, (i.e., can we delete this chemical from the plant inventory?) ☐ Yes X No

Chemical Name: Gas Spec 2010 Manufacturer/Vendor: INEOS

Address: City: Plaquemine State LA Zip 70764

Verification: CAS # 000105-59-9 and 007732-18-5 MSDS Date: 1-19-00

Does this product/chemical contain any substance listed in Section 313 of Sara Title III? NO

Chemical State: Solid ☐ Liquid X Gas ☐ Stored in what type of container? Steel tank

Amount stored at **EACH** operating or mechanical area:

bls storage and 24,000 gallon train inventory

Describe use of chemical: Amine used for CO2 gas treating

TO BE FILLED OUT BY PSM/SAFETY COORDINATOR OSHA HAZARD DETERMINATION:

☐ Highly Toxic	☐ Sensitizer (Skin/Lungs)	☐ Flammable
☐ Toxic	☐ Absorption (Skin)	☐ Pyrophoric
☐ Carcinogen	☒ Irritant (Skin/Eyes/Lungs)	☐ Explosive
☐ Reactive	☐ Corrosive (Skin/Eyes)	☐ Oxidizer
☐ Immediate (Acute) Health Hazard	☐ Sudden Release of Pressure Hazard	
☐ Delayed (Chronic) Health Hazard		

COMMENTS:

Medical Review Required? ☐ Yes ☒ No

Approved: Richard R. LeClair Date: 1-22-04 Training Required? ☒ Yes ☐ No

PSM/Safety Coordinator or Designee

TO BE FILLED OUT BY ENVIRONMENTAL

SARA 311/312 ☒ Yes ☐ No SPCCP: ☐ Yes ☒ No

SARA 313 ☐ Yes ☒ No Mix/Pure ☐ Yes ☐ No

Approved: Date: 3/8/04

Environmental Designee

Approved: Date:

Asset Manager

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

24-HOUR EMERGENCY PHONE NUMBER: 1-866-865-4767

Product: GAS/SPEC* CS-PLUS SOLVENT

Product Code: 13693

Effective Date: 08/06/99 Date Printed: 12/04/00 MSD: 003430

INEOS, Limited Liability Company, Plaquimine,LA 70764

Customer Information Center: 1-866-865-4767

2. COMPOSITION/INFORMATION ON INGREDIENTS

Methyldiethanolamine	CAS# 000105-59-9	60-70%
Proprietary Alkylamine		
Water	CAS# 007732-18-5	2.0% MAX

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

****

* Causes severe eye and skin burns. Causes severe burns of the mouth *
* and throat. May be harmful if swallowed. May cause respiratory *
* tract irritation. Combustible liquid and vapor. *

****

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

EYE: Due to the pH of the material, it is assumed that exposure may cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness.

SKIN: Short single exposure may cause severe skin burns. Classified as corrosive according to DOT. A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts. The dermal LD50 (rabbit) for methyldiethanolamine is 6230 mg/kg.

INGESTION: Single dose oral toxicity considered to be low. The oral LD50 for rats is 4780 mg/kg for methyldiethanolamine. Small amounts swallowed incidental to normal handling are not likely to cause injury; swallowing amounts larger than that may cause injury. Ingestion may cause gastrointestinal irritation or ulceration. Ingestion may cause burns of mouth and throat. Observations in animals include liver and kidney effects.

INHALATION: Excessive exposure may cause irritation to upper respiratory tract.

Product Name: GAS/SPEC* CS-PLUS SOLVENT
Product Code: 13693

Effective Date: 08/06/99 Date Printed: 12/04/00 MSD: 003430

3. HAZARDS IDENTIFICATION (CONTINUED)

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:
No relevant information found.

TERATOLOGY (BIRTH DEFECTS): Contains component(s) which did not cause birth defects or any other fetal effects in lab animals.

CANCER INFORMATION:
No relevant information found.

REPRODUCTIVE EFFECTS:
No relevant information found.

4. FIRST AID

EYES: Wash eyes immediately and continuously until assistance arrives for transport to medical facility; wash enroute, if possible. If medical assistance is not immediately available, wash for 30 minutes and seek medical attention immediately.

SKIN: Immediate continued and thorough washing in flowing water for 30 minutes is imperative while removing contaminated clothing. Prompt medical consultation is essential.

INGESTION: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

INHALATION: Remove to fresh air if effects occur. Consult physician.

NOTE TO PHYSICIAN: If burn is present, treat as any thermal burn, after decontamination. Eye irrigation may be necessary for an extneded period of time to remove as much caustic as possible. Duration of irrigation and treatment is at the discretion of medical personnel. May cause tissue destruction leading to stricture. If lavage is performed, suggest endotracheal and/or esophagoscopic control. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

5. FIRE FIGHTING MEASURES

FLASH POINT: 192F, 88.9C
METHOD USED: PMCC

(Continued on Page 3)

MATERIAL SAFETY DATA SHEET PAGE: 3

Product Name: GAS/SPEC* CS-PLUS SOLVENT
Product Code: 13693

Effective Date: 08/06/99 Date Printed: 12/04/00 MSD: 003430

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5. FIRE FIGHTING MEASURES (CONTINUED)

FLAMMABLE LIMITS
LFL: Not established
UFL: Not established

EXTINGUISHING MEDIA: Water fog, carbon dioxide, dry chemical, foam. For large scale fires, alcohol resistant foams are preferred if available. General purpose synthetic foams or protein foams may function, but much less effectively. Water may be used to flush spills away from fire exposures and to dilute spills to non-flammable mixtures. If possible, contain fire run off water.

FIRE AND EXPLOSION HAZARDS: Keep unnecessary people away; isolate hazard area and deny unnecessary entry. Highly toxic fumes are released in fire situations. Fire water run off may be toxic. See environmental section of this MSDS. When using water spray, boil over may occur when the product temperature reaches the boiling point of water (tank type scenarios, not spills). See also "storage and handing" section of this MSDS.

FIRE-FIGHTING EQUIPMENT: Wear positive pressure, self-contained breathing apparatus and full protective equipment.

6. ACCIDENTAL RELEASE MEASURES (See Section 15 for Regulatory Information)

ACTION TO TAKE FOR SPILLS: Wash with small amounts of water. Dike to avoid contamination of sewer with large amounts, soak up with absorbent material, scoop into drums. Keep out of sewers, storm drains, surface waters and soil.

7. HANDLING AND STORAGE

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Spills of these organic liquids on hot fibrous insulations may lead to lowering of the autoignition temperature possibly resulting in spontaneous combustion. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld or perform similar operations on or near empty containers. Will produce flammable vapors above the flash point.

Do not use sodium nitrite or other nitrosating agents in

(Continued on Page 4)

Product Name: GAS/SPEC* CS-PLUS SOLVENT
Product Code: 13693

Effective Date: 08/06/99 Date Printed: 12/04/00 MSD: 003430

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7. HANDLING AND STORAGE (CONTINUED)

formulations containing this product. Suspected cancer-causing nitrosamines could be formed.

STORAGE:
Store in a tightly closed container, away from sunlight, in a cool, dry and well ventilated area. Keep away from strong acids and oxidizing materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINE(S): None established.

ENGINEERING CONTROLS: Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

RESPIRATORY PROTECTION: If respiratory irritation is experienced, use an approved air-purifying respirator.

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse.

EYE PROTECTION: Use chemical goggles. Wear a face shield which allows use of chemical goggles, or wear a full-face respirator, to protect face and eyes when there is any likelihood of splashes. Eye wash fountain should be located in immediate work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT	:	183C, 361F
VAPOR PRESSURE	:	0.5 mmHg @ 25C
VAPOR DENSITY	:	3.5
SOLUBILITY IN WATER	:	Complete
SPECIFIC GRAVITY	:	1.01 @ 25/25C
FREEZING POINT	:	-23.1C
APPEARANCE	:	Pale straw liquid
ODOR	:	Amine odor

(Continued on Page 5)

Product Name: GAS/SPEC* CS-PLUS SOLVENT
Product Code: 13693

Effective Date: 08/06/99 Date Printed: 12/04/00 MSD: 003430

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10. STABILITY AND REACTIVITY

STABILITY: (CONDITIONS TO AVOID) Stable, avoid heat, sparks, and open flames.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Acids, strong oxidizers, halogenated hydrocarbons.

HAZARDOUS DECOMPOSITION PRODUCTS: Combustion may produce carbon dioxide, toxic carbon monoxide and nitrogen oxides. Unidentified organic compounds may be formed during combustion.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION (See Section 3 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1)

MUTAGENICITY
No relevant information found.

12. ECOLOGICAL INFORMATION (For detailed Ecological data, write or call the address or non-emergency number shown in Section 1)

No data available at MSDS effective date.

13. DISPOSAL CONSIDERATIONS (See Section 15 for Regulatory Information)

DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. INEOS, LIMITED LIABILITY COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients).

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destruction device.

As a service to its customers, INEOS can provide names of information resources to help identify waste management

(Continued on Page 6)

Product Name: GAS/SPEC* CS-PLUS SOLVENT
Product Code: 13693

Effective Date: 08/06/99 Date Printed: 12/04/00 MSD: 003430

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13. DISPOSAL CONSIDERATIONS (See Section 15 for Regulatory Information)

companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone INEOS's Customer Information Center at 866-865-4767 for further details.

14. TRANSPORT INFORMATION

CANADIAN TDG INFORMATION:
For TDG regulatory information, if required, consult transportation regulations, product shipping papers, or your INEOS representative.

15. REGULATORY INFORMATION (Not meant to be all-inclusive--selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS

SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard
A fire hazard

(Continued on Page 7)

Product Name: GAS/SPEC* CS-PLUS SOLVENT
Product Code: 13693

Effective Date: 08/06/99 Date Printed: 12/04/00 MSD: 003430

REGULATORY INFORMATION:(CONTINUED)

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
PROPRIETARY INGREDIENT	PROPRIETARY	PA1

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).

OSHA HAZARD COMMUNICATION STANDARD:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CANADIAN REGULATIONS

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

E - corrosive to metal or skin
Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

CPR STATEMENT: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following

(Continued on Page 8)

Product Name: GAS/SPEC* CS-PLUS SOLVENT
Product Code: 13693

Effective Date: 08/06/99 Date Printed: 12/04/00 MSD: 003430

REGULATORY INFORMATION: (CONTINUED)

ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

COMPONENTS:	CAS #	AMOUNT (%w/w)
Methyldiethanolamine	CAS# 000105-59-9	60-70%
Proprietary Alkylamine		

HMIRA INFORMATION: A claim for exemption from ingredient disclosure has been filed under the Hazardous Materials Information Review Act (Canada). The Hazardous Materials Information Review Commission registry number, and date, assigned to this claim are:

Claim Number: 4466 Filing Date: August 5, 1999

16. OTHER INFORMATION

MSDS STATUS: Revised Section 15, Canadian regulations

PRODUCT USE: Gas conditioning solvent.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Enterprise Products Operating	Contact: Aaron Dailey
Address: 614 Reilly Ave, Farmington, New Mexico	Telephone No: (505) 599-2286
Facility Name: 6B-12 Pipeline	Facility Type: Natural gas gathering pipeline

Surface Owner: Navajo Tribal/NAPI	Mineral Owner: Navajo Tribal	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	32	28N	12W					San Juan

Latitude_N 36.6121 Longitude_W -108.1267

RCVD NOV 2 '12
OIL CONS. DIV.
DIST. 3

NATURE OF RELEASE

Type of Release: Natural Gas	Volume of Release: Unknown-significant amount of dry gas released over time, nominal amount of liquid	Volume Recovered: TBD
Source of Release: Natural Gas Pipeline Release	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery 10/23/2012 @ 15:00 hours
Was Immediate Notice Given? ☒ Yes ☐ No ☒ Not Required	If YES, To Whom? Brenette Pine, NAPI safety representative and Steve Austin, NNEPA	
By Whom? Aaron Dailey	Date and Hour: 10/25/2012 @ approximately 09:00 hours	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
No Watercourse Reached.

Describe Cause of Problem and Remedial Action Taken.* On October 23, 2012 a third party operator (BP) identified a pipeline leak. The operator contacted the area supervisor and operations technicians were dispatched and confirmed the operator's findings. The leak was determined to be on Lateral 6B-12. The segment was then isolated the production wells were shut in and the segment of line was take out of service. Repairs are scheduled for 10/31/2012.

Describe Area Affected and Cleanup Action Taken.* An environmental assessment was conducted on 10/26/2012, where the auger samples to 12 feet indicated little liquids impact to soil, suggesting the release could have been a release of dry gas to the impact area. Corrective actions will be conducted based on the laboratory analytic results, third party environmental contractor and agency recommendations. A c-141 "final" report will be submitted along with a third party environmental corrective action report once site closure standards have been met.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION
Printed Name: Aaron Dailey	Approved by Environmental Specialist: Jonathan D. Kelly
Title: Field Environmental Scientist	Approval Date: 11/27/2012 Expiration Date:
E-mail Address: amdailey@eprod.com	Conditions of Approval: Attached ☐
Date: 10.31.2012 Phone: (505) 599-2286	

* Attach Additional Sheets If Necessary

nJK1233249557

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District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Enterprise Products	Contact Aaron Dailey
Address 614 Reilly Avenue, Farmington 87401	Telephone No. (505) 599-2286
Facility Name Lateral 2A-4 pipeline	Facility Type Pipeline

Surface Owner BLM	Mineral Owner BLM	API No.

LOCATION OF RELEASE

San Juan

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	13	27N	10W					

RCVD AUG 30 '12
OIL CONS. DIV.
DIST. 3

Latitude N36.5703° **Longitude** W107.8520°

NATURE OF RELEASE

Type of Release Natural Gas Pipeline Release (Pinhole)	Volume of Release Unknown	Volume Recovered 50 yards of stained soil
Source of Release 4" Pipeline	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 5.1.2012
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? Brandon Powell/Jonathan Kelly (Aztec OCD), and BLM contacts.	
By Whom? Aaron Dailey, Enterprise Products Company	Date and Hour 5.1.2012 @ 13:00 hours	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A pipeline leak was discovered at this location. This line was safely blown down and LOTO was done. Emergency one call was conducted, standing liquids were removed and hauled to an OCD permitted landfarm. The pipe was exposed and repaired the following day.

Describe Area Affected and Cleanup Action Taken.*
Surface impacts were approximately 5' X 10' and a small rivulet of liquid that ran down a small drainage at a distance of approximately 35 yards. This was cleaned up immediately and confirmation sampling was conducted by a third party environmental contractor. The stained soil below surface was removed until cleanup and confirmation sampling could be conducted by a third party environmental contractor. Please refer to the attached third party environmental corrective action report for specific details and analytic results for this location.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Aaron Dailey	OIL CONSERVATION DIVISION Approved by Environmental Specialist: Jonathan D. Kelly
Printed Name: Aaron Dailey	
Title: Field Environmental Scientist	Approval Date: 9/20/2012 Expiration Date:
E-mail Address: amdailey@eprod.com	Conditions of Approval: Attached ☐
Date: August 28, 2012 Phone: 505-599-2286	

* Attach Additional Sheets If Necessary

nJK1226433084

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District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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1000 Rio Brazos Road, Aztec, NM 87410
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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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Enterprise Products Operating, LP	Contact Aaron Dailey
Address 614 Reilly Avenue, Farmington, NM 87401	Telephone No. (505) 599-2286
Facility Name Jacquez Gas Com F#1 Gathering Line	Facility Type Natural Gas Gathering Pipeline

Surface Owner Private	Mineral Owner Private	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	4	29N	9W					San Juan

Latitude_N36deg45.105'_ **Longitude**_W107deg47.454'_

RCVD JUN 18 '12
OIL CONS. DIV.
DIST. 3

NATURE OF RELEASE

Type of Release Natural Gas	Volume of Release Unknown	Volume Recovered All free product was removed from location and groundwater has cleaned up to well below standard
Source of Release 4" natural gas gathering line	Date and Hour of Occurrence Initial leak location discovered on 7.27.2011 @ 1700 hours	Date and Hour of Discovery Groundwater results received 10.24.2011 @ 11:14 hours
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Glenn Von Gonten	
By Whom? Ross Kennemer, Animas Environmental Services	Date and Hour 10.26.2011 @ 11:14 hours	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Pipeline repairs were completed 10.10.2011. Soil and groundwater investigation activities were conducted on 10.10.2011. Contaminated soil and groundwater were removed from the excavation for line repair access. Soil and grab samples were collected for laboratory analysis. Upon receipt of laboratory reports and analysis, a site investigation workplan was submitted to NM OCD on 11.9.2011. Landowner granted access to conduct groundwater sampling on 3.15.2012 in accordance with EPA approved methods. Analytics demonstrate that the nominal amount of residual constituents that were sloughed off into the groundwater at the time the repairs were made and groundwater sampling was done have degraded. Please find the attached Groundwater Investigation Report dated June 11, 2012 prepared by Animas Environmental Services.

Describe Area Affected and Cleanup Action Taken.*
Please find the attached Groundwater Investigation Report dated June 11, 2012 prepared by Animas Environmental Services. No further action is recommended at this site.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION
Printed Name: Aaron Dailey	Approved by Environmental Specialist:
Title: Environmental Scientist	Approval Date: 6/20/12 Expiration Date:
E-mail Address: amdailey@eprod.com	Conditions of Approval: Attached ☐
Date: 6.14.2012 Phone: (505) 599-2286	

* Attach Additional Sheets If Necessary

COPY TO OCD AZTEC

nJK1217248319

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District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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1000 Rio Brazos Road, Aztec, NM 87410
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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
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Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Enterprise Products	Contact Aaron Dailey
Address 614 Reilly Avenue, Farmington 87401	Telephone No. (505) 599-2286
Facility Name Lateral 2A-4 pipeline	Facility Type Pipeline

Surface Owner BLM	Mineral Owner BLM	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	13	27N	10W					San Juan

Latitude N36.5703° **Longitude** W107.8520°

NATURE OF RELEASE

Type of Release Natural Gas Pipeline Release (Pinhole)	Volume of Release Unknown	Volume Recovered 50 yards of stained soil
Source of Release 4" Pipeline	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 5.1.2012
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? Brandon Powell/Jonathan Kelly (Aztec OCD), and BLM contacts.	
By Whom? Aaron Dailey, Enterprise Products Company	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RCVD MAY 8 '12
OIL CONS. DIV.
DIST. 3

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A pipeline leak was discovered at this location. This line was safely blown down and LOTO was done. Emergency one call was conducted, standing liquids were removed and hauled to an OCD permitted landfarm. The pipe was exposed and repaired the following day.

Describe Area Affected and Cleanup Action Taken.*
Surface impacts were approximately 5' X 10' and a small rivulet of liquid that ran down a small drainage at a distance of approximately 35 yards. This was cleaned up immediately and confirmation sampling was conducted by a third party environmental contractor. The stained soil below surface was removed until cleanup and confirmation sampling could be conducted by a third party environmental contractor. A third party environmental corrective action report will be submitted along with the OCD c-141 "final" report once this has been completed.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION
Printed Name: Aaron Dailey	Approved by Environmental Specialist: Jonathan D. Kelly
Title: Field Environmental Scientist	Approval Date: 5/24/2012 Expiration Date:
E-mail Address: amdailey@eprod.com	Conditions of Approval: Attached ☐
Date: May 7, 2012 Phone: 505-599-2286	

* Attach Additional Sheets If Necessary

nJK1214556844

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AZTEC - 1 copy sent to EMNRD OCD/SF office Attn: Glenn Von Gonten

District I
1625 N. French Dr., Hobbs, NM 88240
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State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

X Initial Report ☐ Final Report

Name of Company: Enterprise Field Services, LLC	Contact: Aaron Dailey
Address: 1100 Louisiana Street, Houston, TX 77002	Telephone No.: (505) 559-2286
Facility Name: K-17/K-Loop Release Site	Facility Type: Pipeline

Surface Owner: BLM	Mineral Owner BLM	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	23	27N	R8W					San Juan

Latitude N36.552209 **Longitude W107.652894**

NATURE OF RELEASE

Type of Release: Natural gas condensate	Volume of Release: Unknown	Volume Recovered: N/A
Source of Release:	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? ☐ Yes ☒ No Not Required	If YES, To Whom? Verbal notification was provided by David Smith to Brandon Powell, Aztec District.	
By Whom?	Date and Hour 4.11.2012 @ 09:30 hours	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

RCVD APR 13 '12
OIL CONS. DIV.
DIST. 3

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
On March 19, 2010, Enterprise responded to a condensate release at the K-17/K-Trunk pipeline location, and discovered apparent historical soil impacts at this location. An initial site investigation performed during 2010 indicated that soil impacts were present that exceeded NM OCD remediation standards. It is not known if the initial release discovery, or subsequent site investigation, was reported to the OCD. On March 21, 1012, Enterprise conducted a limited site investigation to determine in soil or groundwater impacts were present at the site requiring further actions. Based on laboratory results received on March 30, 2012, groundwater has been affected at one monitoring location (TSW-11) by benzene concentrations (25 µg/L), which are in excess of the applicable NM WQCC Groundwater Quality Standard (10 µg/L).

Describe Area Affected and Cleanup Action Taken.*
Enterprise is currently preparing a site investigation work plan for OCD approval. The work plan is being designed to ensure that the full extent of affected soil and groundwater at this location are been fully delineated. Remedial actions for the affected area will also be proposed in this work plan.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: A R	OIL CONSERVATION DIVISION
Printed Name: Aaron Dailey	Approved by Environmental Specialist: Jonathan D. Kelly
Title: Scientist, Field Environmental	Approval Date: 4/19/2012 Expiration Date:
E-mail Address: amdailey@eprod.com	Conditions of Approval: Attached ☐
Date: 4.11.2012 Phone: (505) 427-1719	

* Attach Additional Sheets If Necessary

nJK1211036789

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CORRECTIVE ACTION REPORT

Property:

Valve City Slug Receiver Release
SW1/4 SW1/4, S33 T30N R9W
San Juan County, New Mexico

December 12, 2011
SWG Project No. 0411017

Prepared for:

Enterprise Products Operating, LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Aaron Dailey

Prepared by:

Kyle Summers, C.P.G.
Manager, Four Corners Office

B. Chris Mitchell, P.G.
Principal Geoscientist

Southwest
606 S. Rio Grande Avenue
Unit A, Downstairs West
Aztec, NM 87410
Ph: (505) 334-5200
Fax: (505) 334-5204

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LIST OF APPENDICES

CORRECTIVE ACTION REPORT

Valve City Slug Receiver Release
SW1/4 SW1/4, S33 T30N R9W
San Juan County, New Mexico

SWG Project No. 0411017

1.0 INTRODUCTION

1.1 Site Description & Background

The Valve City Slug Receiver Release Site is located within the Enterprise Products Operating, LLC (Enterprise) pipeline right-of-way (ROW) in the southwest ¼ of Section 33 in Township 30 North and Range 9 West in San Juan County, New Mexico, referred to hereinafter as the "Site" or "subject Site". The Site is located on public land managed by the United States Bureau of Land Management (BLM) and consists of native vegetation rangeland with oil and gas gathering facilities, including a pig receiver and associated storage tank.

On November 7th, 2011, evidence of a release was identified at the Site. An estimated 10 barrels (bbls) of condensate/water mixture was released from the storage tank as a result of overflow, and was contained within the unlined secondary containment structure. The released fluids primarily pooled in the southern half of the containment, with the deepest pooling occurring in the southwest corner of the containment. Free liquids were removed from the secondary containment utilizing vacuum truck. The tank's remaining inventory of liquids was recovered and the tank was removed from the secondary containment structure to allow effective soil removal from the area of release. A temporary tank was placed nearby within a lined secondary containment and plumbed into the fluid stream to allow continued operation of the pipeline during corrective Excavation activities were initiated on November 10th, 2011.

A topographic map depicting the location of the Site is included as Figure 1, and a Site Vicinity Map is included as Figure 2 in Appendix A.

1.2 Project Objective

The primary objective of the corrective actions was to reduce the concentration of chemicals of concern (COCs) in the on-Site soils to below the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

1.3 Standard of Care

Southwest Geoscience's (SWG's) services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. SWG makes no warranties, express or implied, as to the services performed hereunder. Additionally, SWG does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client.

1.4 Additional Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and SWG cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. SWG's findings and recommendations are based solely upon data available to SWG at the time of these services.

1.5 Reliance

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of Enterprise and SWG. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and SWG's Agreement. The limitation of liability defined in the agreement is the aggregate limit of SWG's liability to the client.

2.0 SITE RANKING

In accordance with the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, SWG utilized the general site characteristics obtained during the completion of corrective action activities to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the table below:

Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	10*
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area • <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	0
	No	0	
Distance to Surface Water Body	<200 feet	20	10
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			20

*Unknown groundwater depth. Estimate based on monitoring well located approximately 1,000 feet southeast of Site.

Based on SWG's evaluation of the scoring criteria, the Site would have a Total Ranking Score of 20. This ranking is based on the following:

- Numerous wells are documented within a 1.5 mile radius of the site. The majority of the wells appear to be nearer the San Juan River. Groundwater was not encountered during the excavation activities, indicating that it is >20 feet below ground surface. A monitoring well located at a remediation site approximately 1,000 feet southeast of the Site purportedly indicates a depth to groundwater of approximately 50 feet bgs at a slightly lower elevation.
- No water sources were identified in the immediate area.
- Mansfield Canyon Arroyo, though generally dry, is located approximately 265 feet to the south.

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

Soil removal activities were initiated on November 10th, 2011 by Enterprise and OFT Construction, Inc. (OFT). Kyle Summers, a SWG environmental professional, was present during corrective action activities. During excavation activities, air in the breathing zone was monitored to ensure that the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) of 200 parts per million (ppm) Time Weighted Average (TWA) for an 8-hour work day was not exceeded. Additionally, Enterprise monitored the excavation for benzene concentrations. As a result of occasionally elevated benzene levels in the breathing zone, Site workers were required to wear air-purifying respirators equipped with fresh organic vapor removing cartridges during a portion of the remediation activities.

During the initial phases of the excavation, a back hoe was utilized to remove hydrocarbon impacted soils from the excavation. During early stages of the excavation, it became apparent that historical releases were present at the site, possibly related to a pre-existing sub-grade tank. When it became apparent that the depth of impact exceeded the reach of the back hoe, a track hoe excavator was transported to the site to continue with cleanup activities. To enhance stability of the excavation, the sidewalls were sloped up to six (6) feet bgs on all sides. The final dimensions of the main excavation measured approximately 38 feet wide by 45 feet long, with depths ranging from 8 feet to 20 feet bgs. Approximately 1,265 cubic yards of soil from the excavation was transported to the Envirotech land farm facility near Angel Peak in San Juan County, New Mexico for treatment/disposal. The excavation was backfilled with unaffected imported fill. Following backfill activities, a new secondary containment structure was built and a liner installed before the tank was returned to service.

The lithology encountered during the completion of corrective action activities consisted primarily of sands and silty sands, underlain at approximately 18 feet bgs by silty sands, gravels and cobbles. The relatively loose sediments resulted in minimal lateral migration of released liquids. Groundwater was not encountered during the excavation activities.

Figure 3 is a Site map that indicates the approximate location of the excavated area in relation to pertinent land features (Appendix A). Photographic documentation of the field activities is included in Appendix B.

3.2 Soil Sampling Program

SWG screened head-space samples of the impacted soils with a photoionziation detector (PID) fitted with a 10.6 eV lamp to guide excavation limits.

SWG's soil sampling program included the collection of fifteen (15) discrete analytical confirmation samples from the side walls and bottom of the excavation. The soil sample locations were selected based on visual, olfactory and/or PID evidence of potential impairment and excavation dimensions. Several of the analytical samples were collected during horizontal delineation activities, early in the excavation process. The highest observed PID readings typically occurred between 0 feet and 10 feet bgs, but several areas exhibited highly elevated PID readings (pockets) at greater depths, resulting in additional vertical soil removal, most notably in the southwest portion of the excavation.

Figure 3 depicts the approximate dimensions of the excavated areas, the analytical sample locations, and PID readings for those soils remaining in place. (Appendix A).

The analytical soil samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied label, and placed on ice in a cooler, which was secured with a custody seal. The sample cooler and completed chain-of-custody form were relinquished to Envirotech Analytical Laboratory in Farmington, New Mexico.

4.0 LABORATORY ANALYTICAL METHODS

Selected confirmation soil samples were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA SW-846 Method #8021B, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (GRO) using EPA SW-846 Method #8015.

Laboratory results and PID readings for soils remaining in place are summarized in Table 1, included in Appendix C. The executed chain-of-custody form and laboratory data sheets are provided in Appendix D.

5.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.30 *Remediation*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

5.1 Confirmation Soil Samples

SWG compared the BTEX and TPH concentrations or practical quantitation limits (PQLs) associated with the fifteen (15) confirmation samples collected from the excavated area to the OCD *Remediation Action Levels* for sites having a total ranking score of 20 or greater.

- The laboratory analysis of the confirmation soil samples of soils remaining in place did not indicate benzene concentrations above the OCD *Remediation Action Levels*.

- The laboratory analysis of the confirmation soil samples of soils remaining in place did not indicate total BTEX concentrations above the OCD *Remediation Action Levels*.

- The laboratory analysis of the confirmation soil samples of soils remaining in place did not indicate TPH GRO/DRO concentrations above the OCD *Remediation Action Levels*.

- The laboratory analyses of samples CS-27, CS-28, CS-29, and CS-30 indicate total BTEX and/or TPH GRO/DRO levels above the OCD *Remediation Action Levels*, however, these affected soils were removed and the over-excavated area re-sampled (CS-32, CS-33, CS-34) prior to backfilling.

Based on analytical and screening results, the soils which remain in-place at the Site are below the OCD *Remediation Action Levels*. Confirmation sample results are provided in Table 1 in Appendix C.

6.0 FINDINGS AND RECOMMENDATIONS

The Valve City Slug Receiver Release Site is located within the Enterprise pipeline ROW in the southwest ¼ of Section 33 in Township 30 North and Range 9 West in San Juan County, New Mexico. The Site is located on public land managed by the United States Bureau of Land Management (BLM) and consists of native vegetation rangeland with oil and gas gathering facilities, including a pig receiver and associated storage tank.

On November 7th, 2011, evidence of a release was identified at the Site. An estimated 10 bbls of condensate/water mixture was released from the storage tank as a result of overflow, and was contained within the unlined secondary containment structure. The released fluids primarily pooled in the southern half of the containment, with the deepest pooling occurring in the southwest corner of the containment. Free liquids were removed from the secondary containment utilizing vacuum truck. The tank's remaining inventory of liquids was recovered and the tank was removed from the secondary containment structure to allow effective soil removal from the area of release. A temporary tank was placed nearby within a lined secondary containment and plumbed into the fluid stream to allow continued operation of the pipeline during corrective Excavation activities were initiated on November 10th, 2011.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD *Remediation Action Levels* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

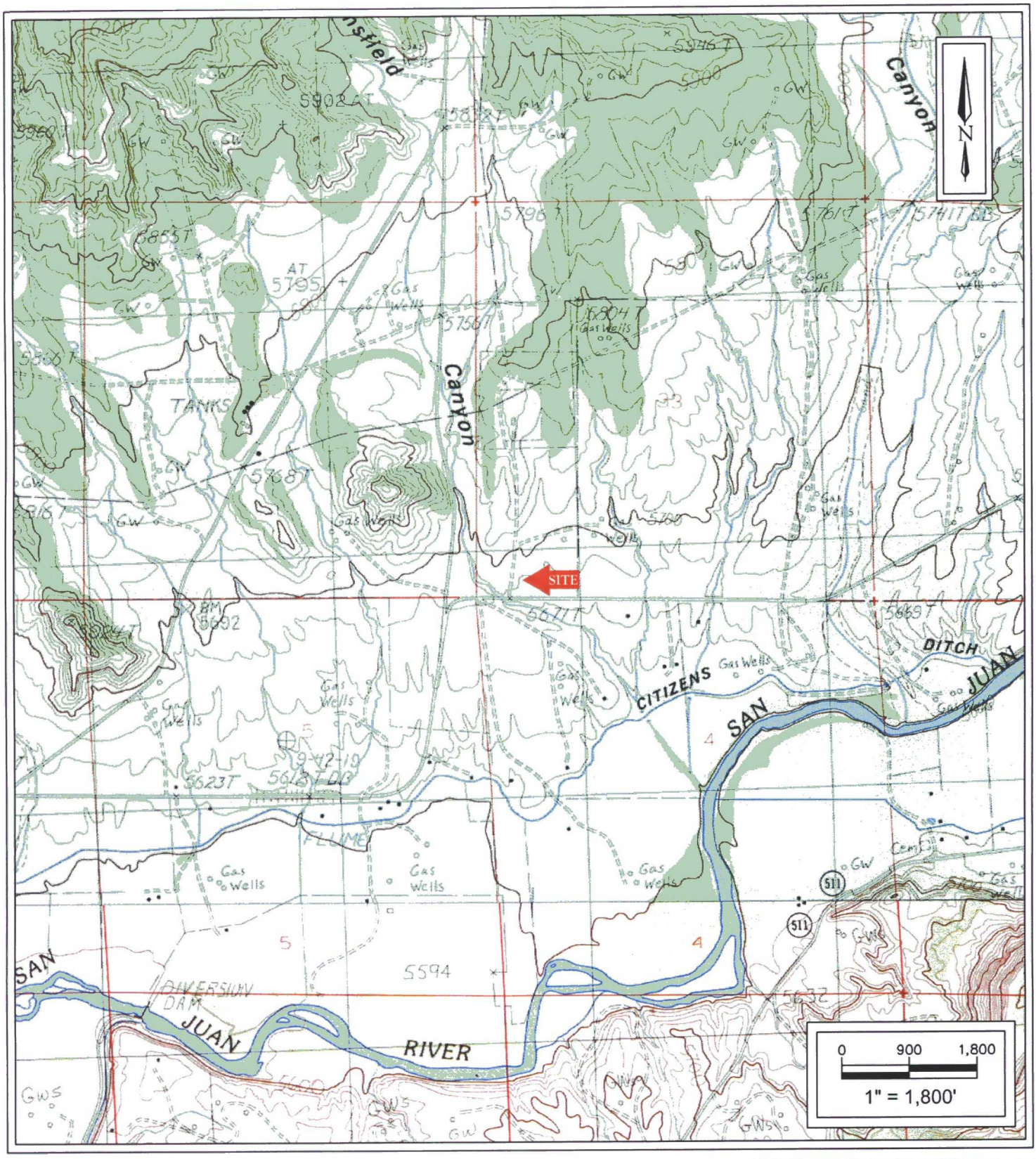
- The final dimensions of the main excavation measured approximately 38 feet wide by 45 feet long, with depths ranging from 8 feet to 20 feet bgs. Approximately 1,265 cubic yards of soil from the excavation was transported to the Envirotech land farm facility near Angel Peak in San Juan County, New Mexico for treatment/disposal. The excavation was backfilled with unaffected

imported fill. Following backfill activities, a new secondary containment structure was built and a liner installed before the tank was returned to service.

- The lithology encountered during the completion of corrective action activities consisted primarily of sands and silty sands, underlain at approximately 18 feet bgs by silty sands, gravels and cobbles. The relatively loose sediments resulted in minimal lateral migration of released liquids. Groundwater was not encountered during the excavation activities.

- Based on analytical and PID screening results, the soils remaining on-Site do not exhibit COC concentrations above the OCD *Remediation Action Levels.*

Based on the laboratory analytical results and PID screening, no additional investigation or remediation appears warranted at this time.



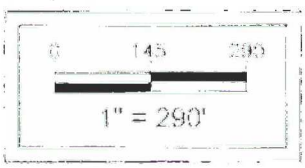
Enterprise Field Services
Valve City Slug Receiver Tank Release
N36° 45' 41.782"; W107° 47' 33.435"
Off County Road 4599
San Juan County, New Mexico

SWG Project No. 0411017

Southwest GEOSCIENCE

Figure 1
Topographic Map
Turley & Blanco Quadrangles
New Mexico
Contour Interval = 20 Feet
1985

SITE



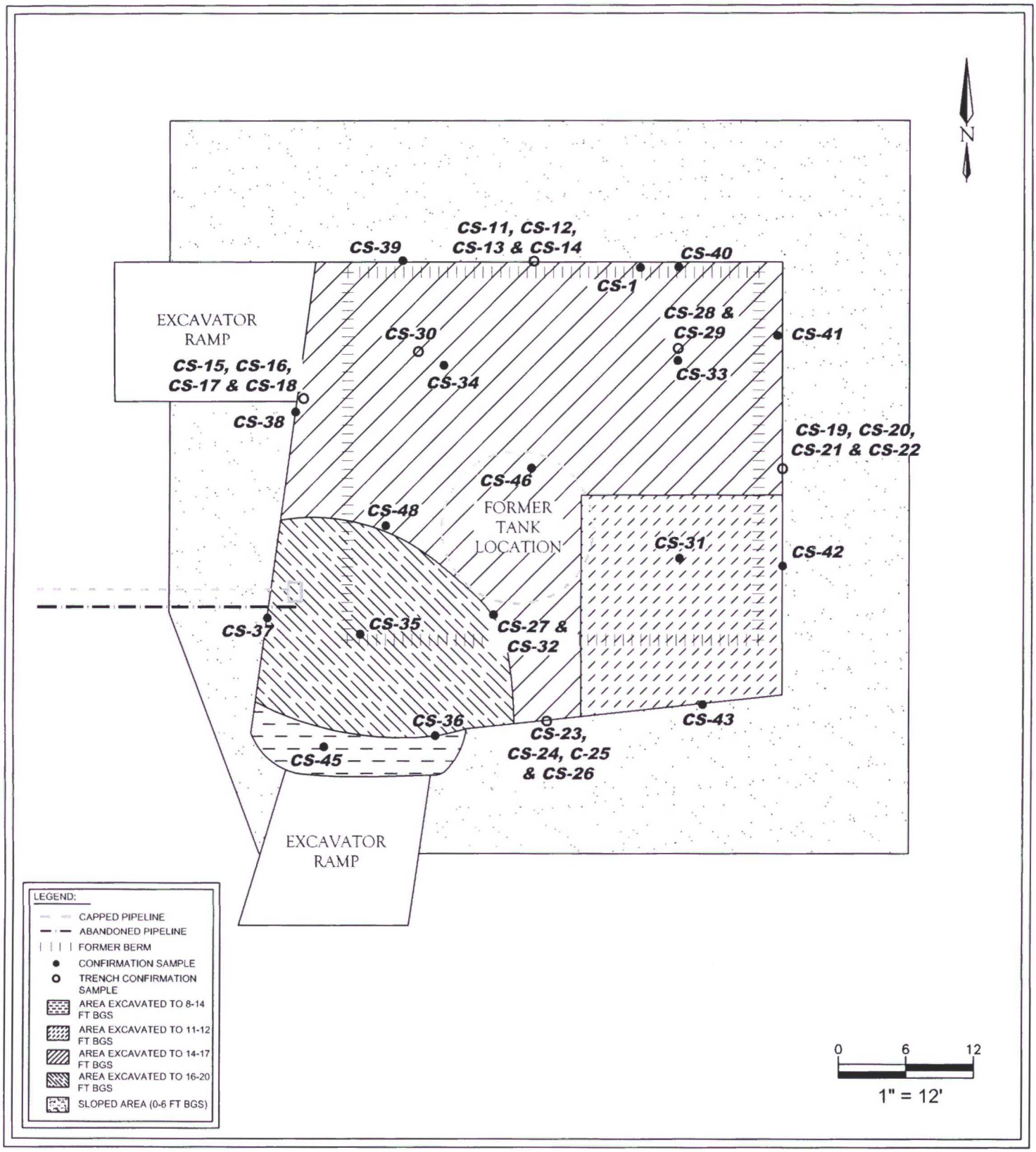
Enterprise Field Services
Valve City Slug Receiver Tank Release
N36° 45' 41.782"; W107° 47' 33.435"
Off County Road 4599
San Juan County, New Mexico

SWC Project No. 0411017

Southwest

Figure 2

Site Vicinity Map



Enterprise Field Services
Valve City Slug Receiver Tank Release
N36° 45' 41.782"; W107° 47' 33.435"
Off County Road 4599
San Juan County, New Mexico

SWG Project No. 0411017

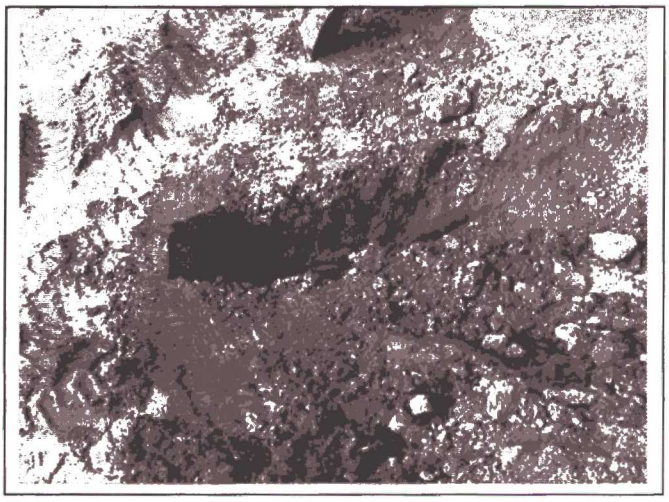
Southwest GEOSCIENCE

Figure 3

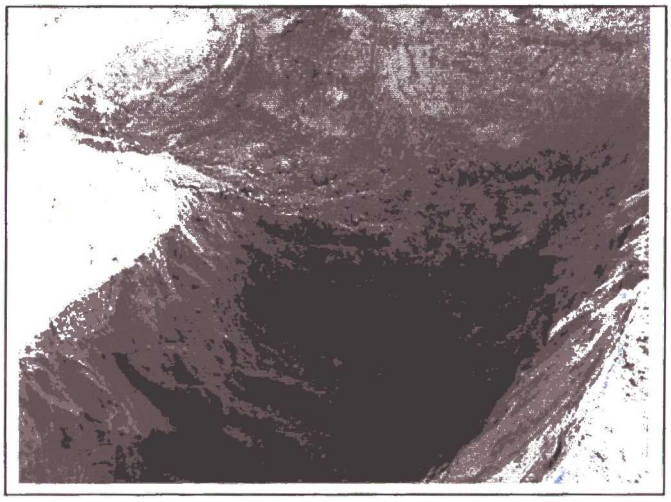
Site Map

1.) View of initial activities.

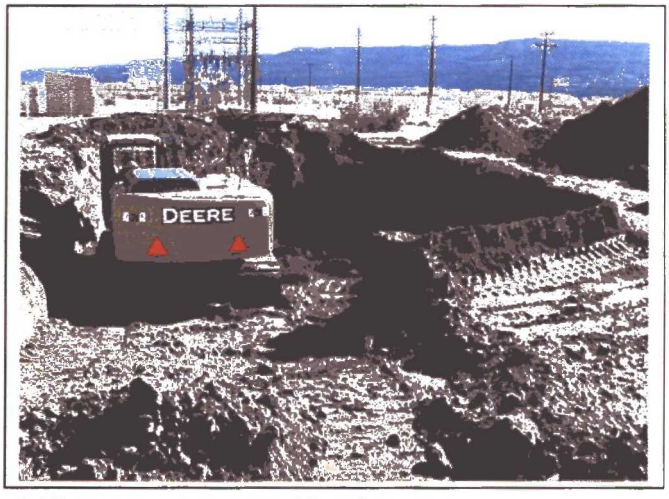
2.) View of trench sampling location.



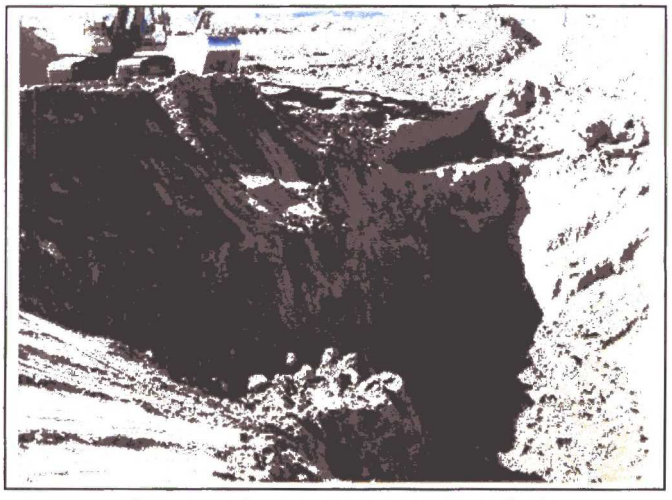
3.) General view of historical staining.



4.) Excavation immediately before sloping of sidewalls.



5.) Excavator ramp to provide safer access.



6.) Deepening second excavator ramp prior to final excavation activities.

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TABLE 1

Valve City Slug Reciever Tank Release
SOIL ANALYTICAL and PID RESULTS

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	PID Measurement (ppm)
New Mexico Energy, Minerals & Natural Resources Department, Oil Conservation Division, Remediation Action Level (Groundwater <50'bgs)			10	NE	NE	NE	50	100		100
Confirmation Samples From Soils Which Were Subsequently Removed										
CS-27	1.14.11	6.0	3.72	58.2	12.6	119.8	194	5580	520	NA
CS-28	11.14.11	5.0	0.547	2.58	0.572	12.45	15.6	540	4280	NA
CS-29	11.14.11	10.0	<0.0009	0.0285	0.0096	0.1819	0.221	4.9	520	NA
CS-30	11.14.11	10.0	0.16	11.2	1.56	27.93	40.9	171	50.4	NA
Confirmation Analytical and PID Headspace Samples From Soils Remaining in Place										
CS-1	11.14.11	3.0	NA	NA	NA	NA	NA	NA	NA	0
CS-11	11.14.11	3.0	NA	NA	NA	NA	NA	NA	NA	1
CS-12	11.14.11	5.0	NA	NA	NA	NA	NA	NA	NA	2
CS-13	11.14.11	8.0	<0.0009	<0.001	<0.001	0.0115	0.0115	<0.2	<0.1	2
CS-14	11.14.11	10.0	NA	NA	NA	NA	NA	NA	NA	1
CS-15	11.14.11	3.0	<0.0009	<0.001	<0.001	<0.0021	ND	<0.2	<0.1	27
CS-16	11.14.11	5.0	NA	NA	NA	NA	NA	NA	NA	14
CS-17	11.14.11	8.0	NA	NA	NA	NA	NA	NA	NA	9
CS-18	11.14.11	10.0	NA	NA	NA	NA	NA	NA	NA	4
CS-19	11.14.11	3.0	NA	NA	NA	NA	NA	NA	NA	4
CS-20	11.14.11	5.0	NA	NA	NA	NA	NA	NA	NA	4
CS-21	11.14.11	8.0	<0.0009	<0.001	<0.001	<0.0021	ND	<0.2	<0.1	4
CS-22	11.14.11	10.0	NA	NA	NA	NA	NA	NA	NA	3
CS-23	11.14.11	3.0	NA	NA	NA	NA	NA	NA	NA	32
CS-24	11.14.11	5.0	NA	NA	NA	NA	NA	NA	NA	7
CS-25	11.14.11	8.0	<0.0009	<0.001	<0.001	<0.0021	ND	<0.2	<0.1	9
CS-26	11.14.11	10.0	NA	NA	NA	NA	NA	NA	NA	2
CS-31	11.15.11	12.0	0.0031	<0.001	<0.001	<0.0021	ND	3	3.9	NA
CS-32	11.15.11	16.0	0.0011	<0.001	<0.001	<0.0021	0.0011	5.1	1.1	13
CS-33	11.16.11	16.0	<0.0009	<0.001	<0.001	<0.0021	ND	<0.2	1.4	NA
CS-34	11.17.11	16.0	<0.0009	<0.001	<0.001	<0.0021	ND	<0.2	<0.1	NA
CS-35	11.17.11	22.0	<0.0009	<0.001	<0.001	<0.0021	ND	<0.2	<0.1	NA
CS-36	11.17.11	15.0	0.003	0.0231	0.0079	0.095	0.129	<0.2	0.7	NA
CS-37	11.17.11	10.0	<0.0009	<0.001	<0.0012	0.007	0.007	<0.2	<0.1	NA
CS-38*	11.16.11	12.0	NA	NA	NA	NA	NA	NA	NA	0
CS-39*	11.16.11	12.0	NA	NA	NA	NA	NA	NA	NA	0

Southwest GEOSCIENCE

TABLE 1
Valve City Slug Reciever Tank Release
SOIL ANALYTICAL and PID RESULTS

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	PID Measurement (ppm)
New Mexico Energy, Minerals & Natural Resources Department, Oil Conservation Division, Remediation Action Level (Groundwater <50'bgs)			**10**	**NE**	**NE**	**NE**	**50**	**100**		**100**
CS-40*	11.16.11	12.0	NA	NA	NA	NA	NA	NA	NA	3
CS-41*	11.16.11	12.0	NA	NA	NA	NA	NA	NA	NA	2
CS-42*	11.16.11	11.0	NA	NA	NA	NA	NA	NA	NA	2
CS-43*	11.17.11	11.0	NA	NA	NA	NA	NA	NA	NA	0
CS-44*	11.17.11	16.0	NA	NA	NA	NA	NA	NA	NA	12
CS-45*	11.17.11	14.0	NA	NA	NA	NA	NA	NA	NA	9
CS-46*	11.17.11	16.0	NA	NA	NA	NA	NA	NA	NA	4

Note: Concentrations in bold and yellow exceed the applicable OCD Remediation Action Level

NE = Not Established

* = These headspace PID screenings were re-designated as "CS" sample numbers for report continuity.

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-13 78	Date Reported:	11-16-11
Laboratory Number:	60304	Date Sampled:	11-14-11
Chain of Custody No:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Extracted:	11-14-11
Preservative:	Cool	Date Analyzed:	11-15-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

Review

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Analytical Laboratory

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-15 23	Date Reported:	11-16-11
Laboratory Number:	60305	Date Sampled:	11-14-11
Chain of Custody No:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Extracted:	11-14-11
Preservative:	Cool	Date Analyzed:	11-15-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-21 78	Date Reported:	11-16-11
Laboratory Number:	60306	Date Sampled:	11-14-11
Chain of Custody No:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Extracted:	11-14-11
Preservative:	Cool	Date Analyzed:	11-15-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-25 78	Date Reported:	11-16-11
Laboratory Number:	60307	Date Sampled:	11-14-11
Chain of Custody No:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Extracted:	11-14-11
Preservative:	Cool	Date Analyzed:	11-15-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-27 1011	Date Reported:	11-16-11
Laboratory Number:	60308	Date Sampled:	11-14-11
Chain of Custody No:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Extracted:	11-14-11
Preservative:	Cool	Date Analyzed:	11-15-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**5580**	**0.2**
Diesel Range (C10 - C28)	**520**	**0.1**
Total Petroleum Hydrocarbons	**6100**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-28 45	Date Reported:	11-16-11
Laboratory Number:	60309	Date Sampled:	11-14-11
Chain of Custody No:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Extracted:	11-14-11
Preservative:	Cool	Date Analyzed:	11-15-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**540**	**0.2**
Diesel Range (C10 - C28)	**4240**	**0.1**
Total Petroleum Hydrocarbons	**4780**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

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Analytical Laboratory

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-29 910	Date Reported:	11-16-11
Laboratory Number:	60310	Date Sampled:	11-14-11
Chain of Custody No:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Extracted:	11-14-11
Preservative:	Cool	Date Analyzed:	11-15-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**4.9**	**0.2**
Diesel Range (C10 - C28)	**520**	**0.1**
Total Petroleum Hydrocarbons	**525**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

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Analytical Laboratory

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-30 910	Date Reported:	11-16-11
Laboratory Number:	60311	Date Sampled:	11-14-11
Chain of Custody No:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Extracted:	11-14-11
Preservative:	Cool	Date Analyzed:	11-15-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**171**	**0.2**
Diesel Range (C10 - C28)	**50.4**	**0.1**
Total Petroleum Hydrocarbons	**221**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

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Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	11-15-11 QA/QC	Date Reported:	11-16-11
Laboratory Number:	60299	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-15-11
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	11-15-11	9.964E+02	9.968E+02	**0.04%**	**0 - 15%**
Diesel Range C10 - C28	11-15-11	9.996E+02	1.000E+03	**0.04%**	**0 - 15%**

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	**6.2**	**0.2**
Diesel Range C10 - C28	**5.3**	**0.1**

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Range
Gasoline Range C5 - C10	**1710**	**1630**	**4.65%**	**0 - 30%**
Diesel Range C10 - C28	**1100**	**1040**	**5.42%**	**0 - 30%**

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	**1710**	**250**	**1890**	**96.5%**	**75 - 125%**
Diesel Range C10 - C28	**1100**	**250**	**1370**	**102%**	**75 - 125%**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, December 1996.

Comments: **QA/QC for Samples 60299, 60301, 60304-60311 and 60314-60320**

Analyst

Review

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-13 78	Date Reported:	11-16-11
Laboratory Number:	60304	Date Sampled:	11-14-11
Chain of Custody:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Analyzed:	11-15-11
Preservative:	Cool	Date Extracted:	11-14-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**ND**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**9.0**	**1.2**
o-Xylene	**2.5**	**0.9**
Total BTEX	**11.5**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**95.1 %**
	1,4-difluorobenzene	**101 %**
	Bromochlorobenzene	**104 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-15 23	Date Reported:	11-16-11
Laboratory Number:	60305	Date Sampled:	11-14-11
Chain of Custody:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Analyzed:	11-15-11
Preservative:	Cool	Date Extracted:	11-14-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**ND**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**ND**	**1.2**
o-Xylene	**ND**	**0.9**
Total BTEX	**ND**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**84.4 %**
	1,4-difluorobenzene	**84.3 %**
	Bromochlorobenzene	**96.5 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-21 78	Date Reported:	11-16-11
Laboratory Number:	60306	Date Sampled:	11-14-11
Chain of Custody:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Analyzed:	11-15-11
Preservative:	Cool	Date Extracted:	11-14-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**ND**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**ND**	**1.2**
o-Xylene	**ND**	**0.9**
Total BTEX	**ND**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**96.3 %**
	1,4-difluorobenzene	**101 %**
	Bromochlorobenzene	**106 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-25 78	Date Reported:	11-16-11
Laboratory Number:	60307	Date Sampled:	11-14-11
Chain of Custody:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Analyzed:	11-15-11
Preservative:	Cool	Date Extracted:	11-14-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**ND**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**ND**	**1.2**
o-Xylene	**ND**	**0.9**
Total BTEX	**ND**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**91.3 %**
	1,4-difluorobenzene	**96.4 %**
	Bromochlorobenzene	**107 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-27 1011	Date Reported:	11-16-11
Laboratory Number:	60308	Date Sampled:	11-14-11
Chain of Custody:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Analyzed:	11-15-11
Preservative:	Cool	Date Extracted:	11-14-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**3,720**	**0.9**
Toluene	**58,200**	**1.0**
Ethylbenzene	**12,600**	**1.0**
p,m-Xylene	**89,400**	**1.2**
o-Xylene	**30,400**	**0.9**
Total BTEX	**194,000**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**89.1 %**
	1,4-difluorobenzene	**102 %**
	Bromochlorobenzene	**109 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-28 45	Date Reported:	11-16-11
Laboratory Number:	60309	Date Sampled:	11-14-11
Chain of Custody:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Analyzed:	11-15-11
Preservative:	Cool	Date Extracted:	11-14-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**54.7**	**0.9**
Toluene	**2,580**	**1.0**
Ethylbenzene	**572**	**1.0**
p,m-Xylene	**10,600**	**1.2**
o-Xylene	**1,850**	**0.9**
Total BTEX	**15,600**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**94.7 %**
	1,4-difluorobenzene	**93.0 %**
	Bromochlorobenzene	**110 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-29 910	Date Reported:	11-16-11
Laboratory Number:	60310	Date Sampled:	11-14-11
Chain of Custody:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Analyzed:	11-15-11
Preservative:	Cool	Date Extracted:	11-14-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**28.5**	**1.0**
Ethylbenzene	**9.6**	**1.0**
p,m-Xylene	**155**	**1.2**
o-Xylene	**26.9**	**0.9**
Total BTEX	**221**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**102 %**
	1,4-difluorobenzene	**111 %**
	Bromochlorobenzene	**109 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	07174-0003
Sample ID:	CS-30 910	Date Reported:	11-16-11
Laboratory Number:	60311	Date Sampled:	11-14-11
Chain of Custody:	12945	Date Received:	11-14-11
Sample Matrix:	Soil	Date Analyzed:	11-15-11
Preservative:	Cool	Date Extracted:	11-14-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**160**	**0.9**
Toluene	**11,200**	**1.0**
Ethylbenzene	**1,560**	**1.0**
p,m-Xylene	**24,300**	**1.2**
o-Xylene	**3,630**	**0.9**
Total BTEX	**40,900**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**106 %**
	1,4-difluorobenzene	**112 %**
	Bromochlorobenzene	**103 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	1115BBLK QA/QC	Date Reported:	11-16-11
Laboratory Number:	60301	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-15-11
Condition:	N/A	Analysis:	BTEX
		Dilution:	10

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Detect. Limit
Benzene	2.1386E+006	2.1429E+006	0.2%	ND	0.1
Toluene	7.9087E+005	7.9245E+005	0.2%	ND	0.1
Ethylbenzene	6.6914E+005	6.7048E+005	0.2%	ND	0.1
p,m-Xylene	1.4777E+006	1.4807E+006	0.2%	ND	0.1
o-Xylene	5.5975E+005	5.6087E+005	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	ND	ND	0.0%	0 - 30%	0.9
Toluene	2.1	2.2	4.8%	0 - 30%	1.0
Ethylbenzene	ND	ND	0.0%	0 - 30%	1.0
p,m-Xylene	11.9	11.2	5.9%	0 - 30%	1.2
o-Xylene	2.8	2.5	10.7%	0 - 30%	0.9

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	ND	500	464	92.9%	39 - 150
Toluene	2.1	500	566	113%	46 - 148
Ethylbenzene	ND	500	538	108%	32 - 160
p,m-Xylene	11.9	1000	1,090	108%	46 - 148
o-Xylene	2.8	500	506	101%	46 - 148

ND - Parameter not detected at the stated detection limit.

Dilution: Spike and spiked sample concentration represent a dilution proportional to sample dilution.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 60299, 60301, 60304-60311

Analyst

Review

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CHAIN OF CUSTODY RECORD

12945

Client:	Project Name / Location:	ANALYSIS / PARAMETERS
Southwest Geoscience	Valve City 04/10/17 gc	
Client Address:	**Sampler Name:**	
	Kyle Summers gc	
Client Phone No.:	**Client No.:**	
505 334 5200 gc cell (903) 821 5603	07174-0053 ~~11880-0001~~ gc	

Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative HgCl2	Preservative HCl	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
CS-13 7' gc	11/4/11 gc	1000 gc	60304	Soil Sludge Solid Aqueous	1 4oz gc			gc X	gc X	See attached COC											Y	Y
CS-15 23' gc		1100 gc	60305	Soil Sludge Solid Aqueous				gc X	gc X	from Geoscience											Y	Y
CS-21 7' gc		1130 gc	60306	Soil Sludge Solid Aqueous				gc X	gc X	TC 11/14/11												
CS-25 7' gc		1200 gc	60307	Soil Sludge Solid Aqueous				gc X	gc X													
CS-27 10' gc		1322 gc	60308	Soil Sludge Solid Aqueous				gc X	gc X													
CS-28 4' gc		1330 gc	60309	Soil Sludge Solid Aqueous				gc X	gc X													
CS-29 9' gc		1340 gc	60310	Soil Sludge Solid Aqueous				gc X	gc X													
CS-30 9' gc		1350 gc	60311	Soil Sludge Solid Aqueous				gc X	gc X													
				Soil Sludge Solid Aqueous																		
				Soil Sludge Solid Aqueous																		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	11/14/11	1627		11/14/11	4:26
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

RUSH

Kyle.summers@southwestgeoscience.com

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-31	Date Reported:	11-18-11
Laboratory Number:	60342	Date Sampled:	11-15-11
Chain of Custody No:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Extracted:	11-17-11
Preservative:	Cool	Date Analyzed:	11-18-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**3.0**	**0.2**
Diesel Range (C10 - C28)	**3.9**	**0.1**
Total Petroleum Hydrocarbons	**6.9**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

Review

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-32	Date Reported:	11-18-11
Laboratory Number:	60343	Date Sampled:	11-15-11
Chain of Custody No:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Extracted:	11-17-11
Preservative:	Cool	Date Analyzed:	11-18-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**5.1**	**0.2**
Diesel Range (C10 - C28)	**1.1**	**0.1**
Total Petroleum Hydrocarbons	**6.2**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

Review

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-33	Date Reported:	11-18-11
Laboratory Number:	60344	Date Sampled:	11-16-11
Chain of Custody No:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Extracted:	11-17-11
Preservative:	Cool	Date Analyzed:	11-18-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**1.4**	**0.1**
Total Petroleum Hydrocarbons	**1.4**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-34	Date Reported:	11-18-11
Laboratory Number:	60345	Date Sampled:	11-17-11
Chain of Custody No:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Extracted:	11-17-11
Preservative:	Cool	Date Analyzed:	11-18-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-35	Date Reported:	11-18-11
Laboratory Number:	60346	Date Sampled:	11-17-11
Chain of Custody No:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Extracted:	11-17-11
Preservative:	Cool	Date Analyzed:	11-18-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

Review

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc.com envirotech-inc.com

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Analytical Laboratory

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-36	Date Reported:	11-18-11
Laboratory Number:	60347	Date Sampled:	11-17-11
Chain of Custody No:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Extracted:	11-17-11
Preservative:	Cool	Date Analyzed:	11-18-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**0.7**	**0.1**
Total Petroleum Hydrocarbons	**0.7**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

Review

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-37	Date Reported:	11-18-11
Laboratory Number:	60348	Date Sampled:	11-17-11
Chain of Custody No:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Extracted:	11-17-11
Preservative:	Cool	Date Analyzed:	11-18-11
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

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EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	1118CAL QA/QC	Date Reported:	11-18-11
Laboratory Number:	60342	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-18-11
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	40865	9.996E+02	1.000E+03	**0.04%**	**0 - 15%**
Diesel Range C10 - C28	40865	9.989E+02	9.993E+02	**0.04%**	**0 - 15%**

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	**0.9**	**0.2**
Diesel Range C10 - C28	**1.1**	**0.1**

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Range
Gasoline Range C5 - C10	**3.0**	**3.3**	**9.8%**	**0 - 30%**
Diesel Range C10 - C28	**3.9**	**3.8**	**1.7%**	**0 - 30%**

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	**3.0**	**250**	**256**	**101%**	**75 - 125%**
Diesel Range C10 - C28	**3.9**	**250**	**249**	**98.0%**	**75 - 125%**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, December 1996.

Comments: **QA/QC for Samples 60342-60348.**

Analyst

Review

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-31	Date Reported:	11-18-11
Laboratory Number:	60342	Date Sampled:	11-15-11
Chain of Custody:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Analyzed:	11-18-11
Preservative:	Cool	Date Extracted:	11-17-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**3.1**	**0.9**
Toluene	**ND**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**ND**	**1.2**
o-Xylene	**ND**	**0.9**
Total BTEX	**3.1**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**93.3 %**
	1,4-difluorobenzene	**107 %**
	Bromochlorobenzene	**103 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-32	Date Reported:	11-18-11
Laboratory Number:	60343	Date Sampled:	11-15-11
Chain of Custody:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Analyzed:	11-18-11
Preservative:	Cool	Date Extracted:	11-17-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**1.1**	**0.9**
Toluene	**ND**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**ND**	**1.2**
o-Xylene	**ND**	**0.9**
Total BTEX	**1.1**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**96.1 %**
	1,4-difluorobenzene	**92.6 %**
	Bromochlorobenzene	**95.8 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

Review

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-33	Date Reported:	11-18-11
Laboratory Number:	60344	Date Sampled:	11-16-11
Chain of Custody:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Analyzed:	11-18-11
Preservative:	Cool	Date Extracted:	11-17-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**ND**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**ND**	**1.2**
o-Xylene	**ND**	**0.9**
Total BTEX	**ND**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**84.3 %**
	1,4-difluorobenzene	**84.1 %**
	Bromochlorobenzene	**84.8 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

Review

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-34	Date Reported:	11-18-11
Laboratory Number:	60345	Date Sampled:	11-17-11
Chain of Custody:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Analyzed:	11-18-11
Preservative:	Cool	Date Extracted:	11-17-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**ND**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**ND**	**1.2**
o-Xylene	**ND**	**0.9**
Total BTEX	**ND**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**104 %**
	1,4-difluorobenzene	**108 %**
	Bromochlorobenzene	**108 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

Review

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-35	Date Reported:	11-18-11
Laboratory Number:	60346	Date Sampled:	11-17-11
Chain of Custody:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Analyzed:	11-18-11
Preservative:	Cool	Date Extracted:	11-17-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**ND**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**ND**	**1.2**
o-Xylene	**ND**	**0.9**
Total BTEX	**ND**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**93.5 %**
	1,4-difluorobenzene	**105 %**
	Bromochlorobenzene	**105 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

Analyst

Review

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-36	Date Reported:	11-18-11
Laboratory Number:	60347	Date Sampled:	11-17-11
Chain of Custody:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Analyzed:	11-18-11
Preservative:	Cool	Date Extracted:	11-17-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**3.0**	**0.9**
Toluene	**23.1**	**1.0**
Ethylbenzene	**7.9**	**1.0**
p,m-Xylene	**79.6**	**1.2**
o-Xylene	**15.4**	**0.9**
Total BTEX	**129**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**106 %**
	1,4-difluorobenzene	**101 %**
	Bromochlorobenzene	**95.3 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Southwest Geoscience	Project #:	04001-0002
Sample ID:	CS-37	Date Reported:	11-18-11
Laboratory Number:	60348	Date Sampled:	11-17-11
Chain of Custody:	12969	Date Received:	11-17-11
Sample Matrix:	Soil	Date Analyzed:	11-18-11
Preservative:	Cool	Date Extracted:	11-17-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**ND**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**3.7**	**1.2**
o-Xylene	**3.3**	**0.9**
Total BTEX	**7.0**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**107 %**
	1,4-difluorobenzene	**100 %**
	Bromochlorobenzene	**95.1 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Valve City**

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	1118BBLK QA/QC	Date Reported:	11-18-11
Laboratory Number:	60342	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-18-11
Condition:	N/A	Analysis:	BTEX
		Dilution:	10

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Detect. Limit
Benzene	4.3644E+006	4.3732E+006	0.2%	ND	0.1
Toluene	1.5068E+006	1.5098E+006	0.2%	ND	0.1
Ethylbenzene	1.0958E+006	1.0980E+006	0.2%	ND	0.1
p,m-Xylene	2.4996E+006	2.5047E+006	0.2%	ND	0.1
o-Xylene	9.2823E+005	9.3009E+005	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	3.1	2.4	22.6%	0 - 30%	0.9
Toluene	ND	ND	0.0%	0 - 30%	1.0
Ethylbenzene	ND	ND	0.0%	0 - 30%	1.0
p,m-Xylene	ND	ND	0.0%	0 - 30%	1.2
o-Xylene	ND	ND	0.0%	0 - 30%	0.9

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	3.1	500	580	115%	39 - 150
Toluene	ND	500	566	113%	46 - 148
Ethylbenzene	ND	500	577	115%	32 - 160
p,m-Xylene	ND	1000	1,150	115%	46 - 148
o-Xylene	ND	500	572	114%	46 - 148

ND - Parameter not detected at the stated detection limit.

Dilution: Spike and spiked sample concentration represent a dilution proportional to sample dilution.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 60342-60348.

Analyst

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CHAIN OF CUSTODY RECORD

12969

Client: Southwest Geoscience	Project Name / Location: Value City	ANALYSIS / PARAMETERS
Client Address:	Sampler Name: Kyle Summers	
Client Phone No.:	Client No.: 04001-0002	

Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative HgCl2	Preservative HCl	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
CS-31	11/15/11	10:30	60342	Soil Solid Sludge Aqueous				X	X												X	X
CS-32	11/15/11	1400	60343	Soil Solid Sludge Aqueous																		
CS-33	11/16/11	1110	60344	Soil Solid Sludge Aqueous																		
CS-34	11/17/11	0930	60345	Soil Solid Sludge Aqueous																		
CS-35	11/17/11	1115	60346	Soil Solid Sludge Aqueous																		
CS-36	11/17/11	1130	60347	Soil Solid Sludge Aqueous																		
CS-37	11/17/11	1300	60348	Soil Solid Sludge Aqueous																		
				Soil Solid Sludge Aqueous																		
				Soil Solid Sludge Aqueous																		
				Soil Solid Sludge Aqueous																		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	11/17/11	1430		11/17/11	1430
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

RUSH

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District II
811 S. First St., 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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report REVISED ☐ Final Report

Name of Company Enterprise Products	Contact Aaron Dailey
Address 614 Reilly Avenue, Farmington NM 87401	Telephone No. (505)599-2286
Facility Name Lateral 2B-24 Pipeline	Facility Type Natural gas gathering line

Surface Owner BLM	Mineral Owner BLM	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	22	28N	10W					San Juan

Latitude_N 36*64831__ **Longitude**_W 107*88369 (decimal degrees)__

RCVD AUG 9 '12
OIL CONS. DIV.
DIST. 3

NATURE OF RELEASE

Type of Release Natural gas	Volume of Release: 700 MCF (estimated over time)	Volume Recovered None—Remediation TBD based on soil impact
Source of Release corrosion leak on pipeline	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 7.24.2012 @ 11:00
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Brandon Powell (left message), Jonathan Kelly	
By Whom? Aaron Dailey	Date and Hour 7.24.2012 @ 16:00 hours	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Multiple corrosion leaks were discovered on the lateral 2B-24 pipeline. This pipeline has been locked out, tagged out and rendered out of service. Repairs are being conducted the week of August 6, 2012. Soil confirmation samples have been pulled at the leak sites and results are pending and will be submitted in a third party corrective action report.

Describe Area Affected and Cleanup Action Taken.*Soils immediately adjacent to the leak locations appear to be lightly impacted with hydrocarbons. A third party environmental contractor is involved with the cleanup efforts at this location.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION
Printed Name: Aaron Dailey	Approved by Environmental Specialist: Jonathan D Kelly
Title: Field Environmental Scientist	Approval Date: 9/06/2012 Expiration Date:
E-mail Address: amdailey@eprod.com	Conditions of Approval: Attached ☐
Date: 8.8.2012 Phone: (505)599-2286	

* Attach Additional Sheets If Necessary

nJR1225056965

CORRECTIVE ACTION REPORT

Property:

Blanco Storage Vent Tank Release
NW ¼ Section 14, T29N R11W
Bloomfield, San Juan County, New Mexico

January 6, 2012
SWG Project No. 0411018

Prepared for:

Enterprise Products Operating LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Aaron Dailey

Prepared by:

Kyle Summers, C.P.G.
Manager, Four Corners Office

B. Chris Mitchell, P.G.
Principal Geoscientist

Southwest
606 S. Rio Grande Avenue
Unit A, Downstairs West
Aztec, NM 87410
Ph: (505) 334-5200
Fax: (505) 334-5204

TABLE OF CONTENTS

LIST OF APPENDICES

CORRECTIVE ACTION REPORT

Blanco Storage Vent Tank Release
NW ¼ Section 14, T29N R11W
Bloomfield, San Juan County, New Mexico

SWG Project No. 0411018

1.0 INTRODUCTION

1.1 Site Description & Background

The Blanco Storage Vent Tank Release Site is located within the Enterprise Products Operating LLC (Enterprise) Blanco Storage facility in Section 14, Township 29 North and Range 11 West in Bloomfield, San Juan County, New Mexico, referred to hereinafter as the "Site" or "subject Site". The Site is located on private land within the Enterprise Blanco Storage facility. The immediate surroundings are predominantly characterized by petroleum gathering and processing facilities.

On December 7th, 2011, evidence of a release was identified at the Site. An unknown quantity of natural gas condensate (condensate) and water was released into the unlined secondary containment as a result of an overflow from the storage tank. Soil discoloration indicates that the released fluids primarily pooled in the southern half of the containment, with the deepest pooling occurring in the southwest corner of the containment. Free liquids were not observed when corrective actions commenced. The tank's remaining inventory of liquids was recovered, and the condensate tank, in addition to a small methanol storage tank, was removed from the secondary containment structure to allow effective soil removal from the area impacted by the release. A temporary tank was installed at an alternate location within a lined secondary containment, and plumbed into the fluid stream to allow continued operation of the pipeline during corrective action. Excavation activities were initiated on December 14th, 2011.

A topographic map depicting the location of the Site is included as Figure 1, and a Site Vicinity Map is included as Figure 2 in Appendix A.

1.2 Project Objective

The primary objective of the corrective actions was to reduce the concentration of constituents of concern (COCs) in the on-Site soils to below the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

1.3 Standard of Care

Southwest Geoscience's (SWG's) services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. SWG makes no warranties, express or implied, as to the services performed hereunder. Additionally, SWG does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client.

1.4 Additional Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and SWG cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. SWG's findings and recommendations are based solely upon data available to SWG at the time of these services.

1.5 Reliance

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of Enterprise and SWG. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and SWG's Agreement. The limitation of liability defined in the agreement is the aggregate limit of SWG's liability to the client.

2.0 SITE RANKING

In accordance with the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, SWG utilized the general site characteristics obtained during the completion of corrective action activities to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the table below:

Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	20
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area • <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	0
	No	0	
Distance to Surface Water Body	<200 feet	20	10
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			30

Based on SWG's evaluation of the scoring criteria, the Site would have a Total Ranking Score of 30. This ranking is based on the following:

- Numerous wells are documented within a 1.5 mile radius of the site. The closest well, based on information obtained from the New Mexico State Engineer's Office is >1,000 feet to the southeast of the Site. Groundwater was not encountered during the excavation activities, and the actual depth to groundwater is unknown.
- No water sources were identified in the immediate area.
- Bloomfield Canyon Arroyo, though generally dry, is located approximately 2,450 feet west of the Site, and a seasonal irrigation ditch is located approximately 850 feet west of the Site.

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

Soil removal activities were initiated on December 14th, 2011 by Enterprise and OFT Construction, Inc. (OFT). Kyle Summers, a SWG environmental professional, was present during corrective action activities. During excavation activities, air in the breathing zone was monitored to ensure that the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) of 200 parts per million (ppm) Time Weighted Average (TWA) for an 8-hour work day was not exceeded. Additionally, Enterprise monitored the excavation for benzene concentrations.

A track hoe was utilized to remove hydrocarbon impacted soils from the excavation. During early stages of the excavation, it became apparent that soils at the site had been impacted by historical releases. A shaley sandstone was encountered in the excavation at depths ranging from 1 feet bgs to 5 feet bgs, inhibiting deeper excavation. Excavation activities were halted on December 20th, 2011.

Due to operational and safety considerations, lateral advancement of the excavation was terminated prior to the removal of all petroleum hydrocarbon impacted soils. These operational and safety considerations included the need to return the site to full service status, and the encroachment of the excavation into active pipeline right-of-ways (ROWs) , not owned or operated by Enterprise, to the east and west of the Site.

The final dimensions of the excavation measured approximately 63 feet wide by 97 feet long, with depths ranging from 1 foot to 5 feet bgs. Approximately 1,077 cubic yards of soil from the excavation was transported to the Envirotech land farm facility near Angel Peak in San Juan County, New Mexico for treatment/disposal. The excavation was backfilled with clean imported fill. Following backfill activities, a new secondary containment structure was constructed and a liner installed. The original tank was replaced with a 1,000 bbl tank, and the Site was returned to service.

The lithology encountered during the completion of corrective action activities consisted primarily of sands and silty sands, underlain by a shaley sandstone at depths ranging from 1 foot to 5 feet bgs. The sandstone appears to have limited vertical migration of COCs. Groundwater was not encountered during the excavation activities.

Figure 3 is a Site map that indicates the approximate location of the excavated area in relation to pertinent land features (Appendix A). Photographic documentation of the field activities is included in Appendix B.

3.2 Soil Sampling Program

SWG screened head-space samples of the impacted soils with a photoionziation detector (PID) fitted with a 10.6 eV lamp to guide excavation limits.

SWG's soil sampling program included the collection of eleven (11) discrete confirmation samples from the side walls and bottom of the excavation for laboratory analysis. The soil sample locations were selected based on visual, olfactory and/or PID evidence of potential impairment and excavation dimensions. The highest observed PID readings occurred between 0 feet and 5 feet bgs, generally in the southern portion of the excavation. Due to the presence of bedrock on the floor of the excavation, ten (10) of the confirmation samples were collected from the shallow excavation's sidewalls. One sample, confirmation soil sample CS-55, was collected from approximately 2 feet below the top of the sandstone bedrock, near the source of the release, to determine if the bedrock provided a vertical barrier to downward COC migration.

Due to operational and safety considerations, lateral advancement of the excavation was terminated prior to the removal of all petroleum hydrocarbon impacted soils. These operational and safety considerations included the need to return the site to full service status, and the encroachment of the excavation into active pipeline ROWs (not owned or operated by Enterprise) to the east and west of the Site.

Figure 3 depicts the approximate dimensions of the excavated areas and the analytical sample locations for soils remaining in place. (Appendix A).

The soil samples selected for laboratory analysis were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied label, and placed on ice in a cooler, which was secured with a custody seal. The sample cooler and completed chain-of-custody form were relinquished to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico.

4.0 LABORATORY ANALYTICAL METHODS

The soil samples selected for laboratory analysis were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA SW-846 Method #8021B, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (GRO) using EPA SW-846 Method #8015.

Laboratory results for soils remaining in place are summarized in Table 1, included in Appendix C. The executed chain-of-custody form and laboratory data sheets are provided in Appendix D.

5.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.30 *Remediation*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

5.1 Confirmation Soil Samples

SWG compared the BTEX and TPH concentrations or practical quantitation limits (PQLs) associated with the eleven (11) confirmation samples collected from the excavated area to the OCD *Remediation Action Levels* for sites having a total ranking score of 20 or greater.

- The laboratory analysis of the confirmation soil samples CS-49, CS-50, CS-51, CS-52, and CS-53 indicate benzene concentrations ranging from 29 mg/Kg to 140 mg/Kg, which exceed the OCD *Remediation Action Level* of 10 mg/Kg.

- The laboratory analysis of the confirmation soil samples CS-49, CS-50, CS-51, CS-52, and CS-53 indicate total BTEX concentrations ranging from 862 mg/Kg to 2,760 mg/Kg, which exceed the OCD *Remediation Action Level* of 50 mg/Kg.

- The laboratory analysis of the confirmation soil samples CS-48, CS-49, CS-50, CS-51, CS-52, and CS-53 indicate combined TPH GRO/DRO concentrations ranging from 247 mg/Kg to 17,770 mg/Kg which exceed the OCD *Remediation Action Level* of 100 parts per million (ppm).

- The laboratory analyses of samples CS-45, CS-46, CS-47, CS-54, and CS-55 indicate total BTEX and TPH GRO/DRO levels that are below the OCD *Remediation Action Levels*.

Based on analytical and screening results, a portion of the soils which remain in-place at the Site exceed the OCD *Remediation Action Levels*.

The floor of the excavation was determined by the presence of the shaley sandstone bedrock. Analytical results from confirmation sample CS-55 indicate that the sandstone is limiting vertical migration of the COCs at the Site.

Soils remaining in-place at the south, southeast, and southwest sidewalls of the former Site excavation exhibited BTEX and TPH concentrations that exceed the OCD *Remediation Action Levels*. However, due to operational and safety considerations, lateral advancement of the excavation was terminated prior to the removal of all petroleum hydrocarbon impacted soils.

Confirmation sample results are provided in Table 1 in Appendix C.

6.0 FINDINGS AND RECOMMENDATIONS

The Blanco Storage Vent Tank Release Site is located within the Enterprise Blanco Storage facility in Section 14, Township 29 North and Range 11 West in Bloomfield, San Juan County, New Mexico. The Site is located on private land within the Enterprise Blanco Storage facility. The immediate surroundings are predominantly characterized by petroleum gathering and processing facilities.

On December 7th, 2011, evidence of a release was identified at the Site. An unknown quantity of condensate and water was released into the unlined secondary containment a result of an overflow from the storage tank. Soil discoloration indicates that the released fluids primarily pooled in the southern half

of the containment, with the deepest pooling occurring in the southwest corner of the containment. Free liquids were not observed when corrective actions commenced. The tank's remaining inventory of liquids was recovered, and the condensate tank, in addition to a small methanol storage tank, was removed from the secondary containment structure to allow effective soil removal from the area of release. A temporary tank was installed at an alternate location within a lined secondary containment, and plumbed into the fluid stream to allow continued operation of the pipeline during corrective action. Excavation activities were initiated on December 14th, 2011 and halted on December 20th, 2011.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD *Remediation Action Levels* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

- Due to operational and safety considerations, lateral advancement of the excavation was terminated prior to the removal of all petroleum hydrocarbon impacted soils. These operational and safety considerations included the need to return the site to full service status, and the encroachment of the excavation into active pipeline ROWs (not owned or operated by Enterprise) to the east and west of the Site.

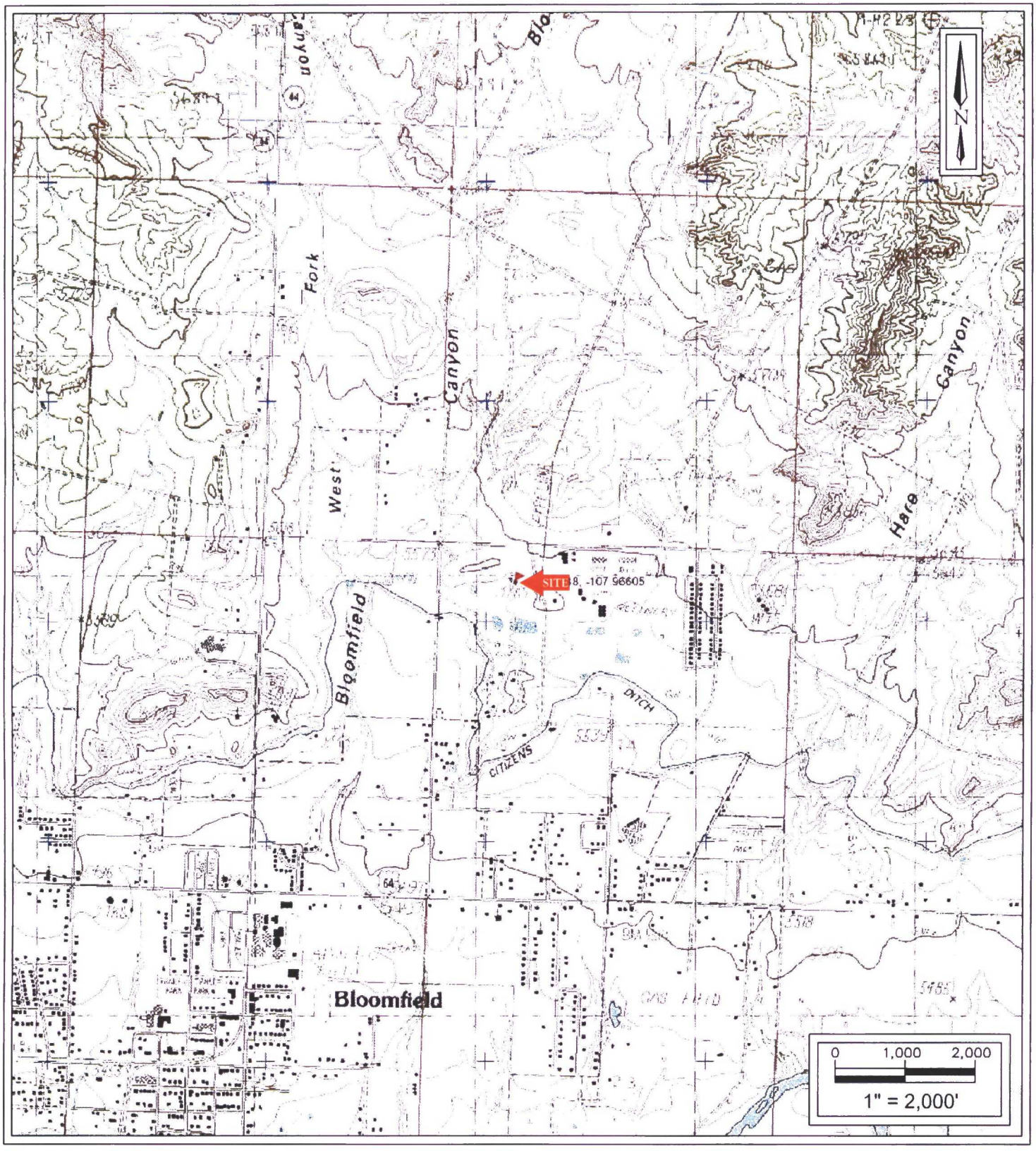
- The final dimensions of the main excavation measured approximately 63 feet wide by 97 feet long, with depths ranging from 1 foot to 5 feet bgs. Approximately 1,077 cubic yards of soil from the excavation was transported to the Envirotech land farm facility near Angel Peak in San Juan County, New Mexico for treatment/disposal. The excavation was backfilled with unaffected imported fill. Following backfill activities, a new secondary containment structure was built and a liner installed. The original tank was replaced with a newer 1,000 bbl tank, and the Site was returned to service.

- The lithology encountered during the completion of corrective action activities consisted primarily of sands and silty sands, underlain by a shaley sandstone at depths ranging from 1 foot to 5 feet bgs. The sandstone appears to have limited vertical migration of COCs. Groundwater was not encountered during the excavation activities.

- The floor of the excavation is determined by the presence of the shaley sandstone bedrock. Analytical results from confirmation sample CS-55 indicate that the sandstone is limiting vertical migration of the COCs at the Site.

- Soils at the south, southeast, and southwest sidewalls of the former Site excavation maintain BTEX and TPH concentrations that exceed the OCD *Remediation Action Levels*. Confirmation sample results are provided in Table 1 in Appendix C.

Based on the laboratory analytical results, additional investigation and/or remediation of this Site may be warranted at this time or in the future.



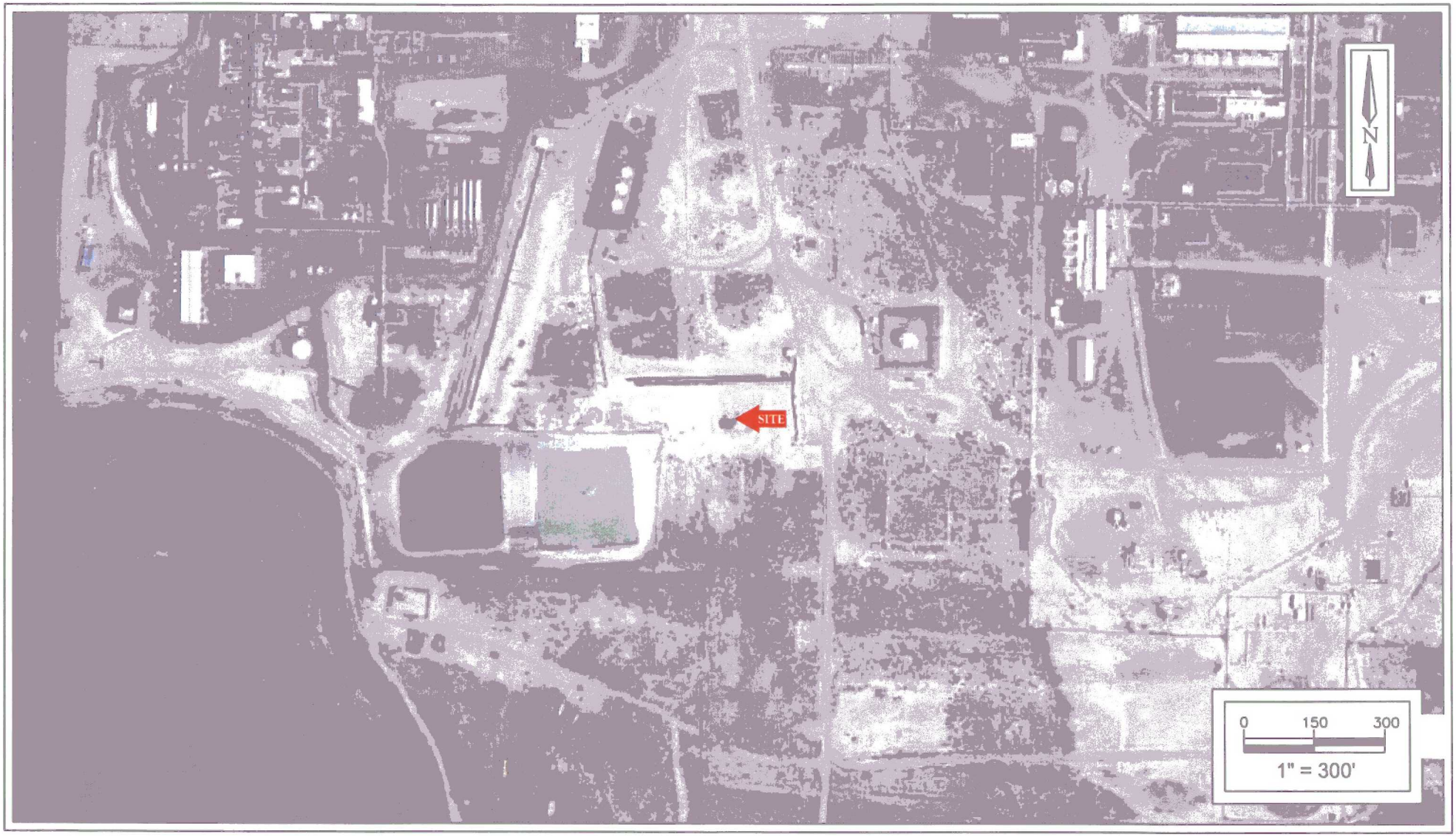
Enterprise Field Services
Blanco Vent Tank
NW ¼ S14, T29N, R11W
County Road 4900
San Juan County, NM

SWG Project No. 0411018

Southwest GEOSCIENCE

FIGURE 1

TOPOGRAPHIC MAP
BLOOMFIELD QUADRANGLE, NM
1985
CONTOUR INTERVAL = 20 FEET



Enterprise Field Services
Blanco Vent Tank
NW ¼ S14, T29N, R11W
County Road 4900
San Juan County, NM

SWG Project No. 0411018

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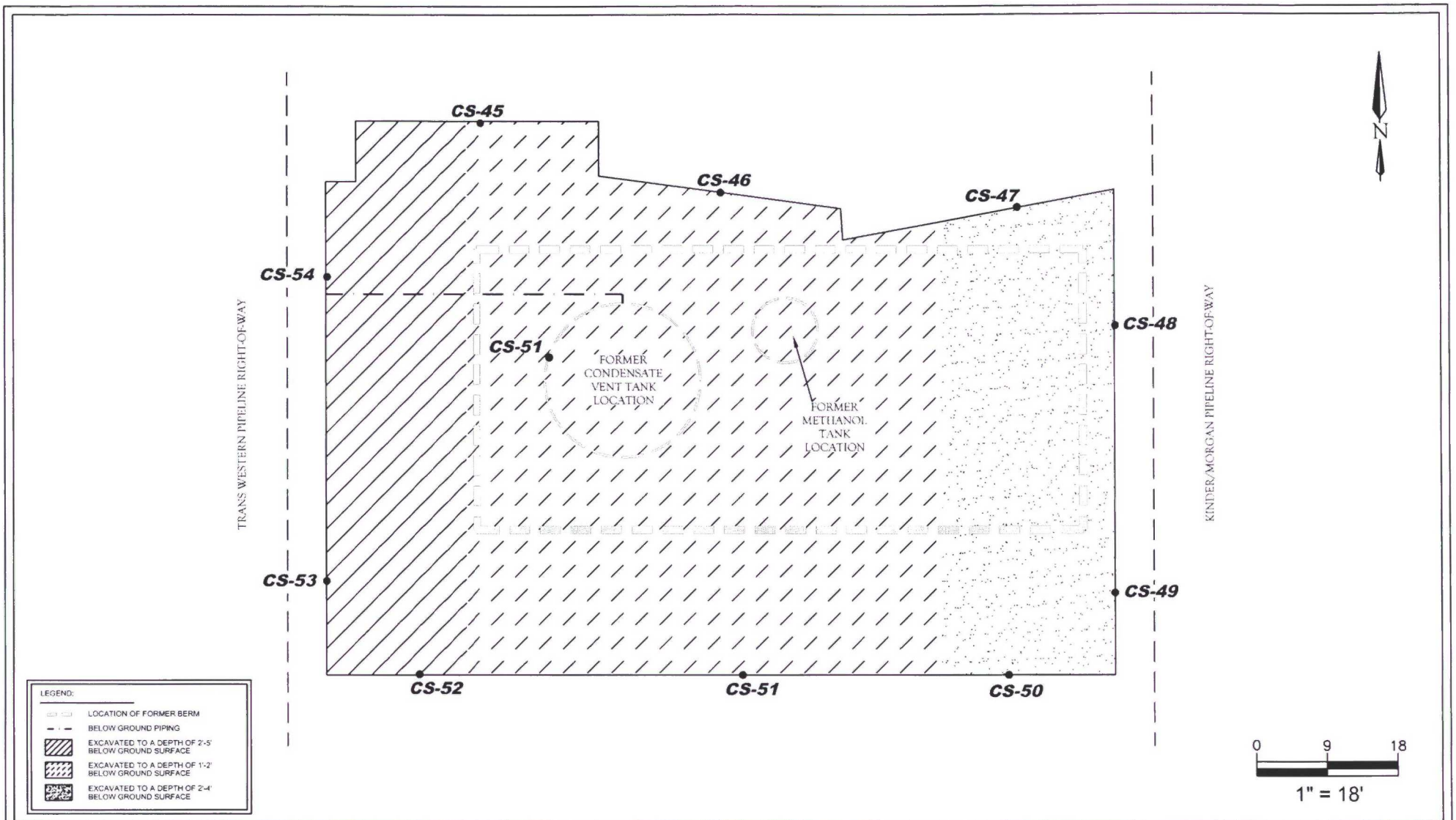
FIGURE 2

SITE VICINITY MAP



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Blanco Vent Tank
NW ¼ S14, T29N, R11W
County Road 4900
San Juan County, NM

SWG Project No. 0411018

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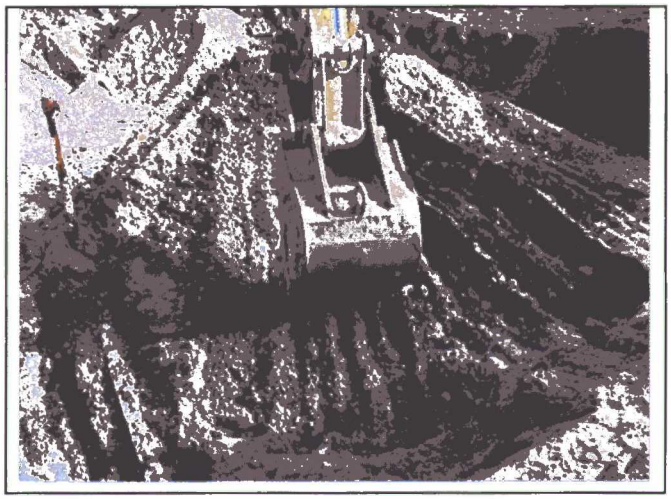
FIGURE 3

SITE MAP

1.) View of initial activities.

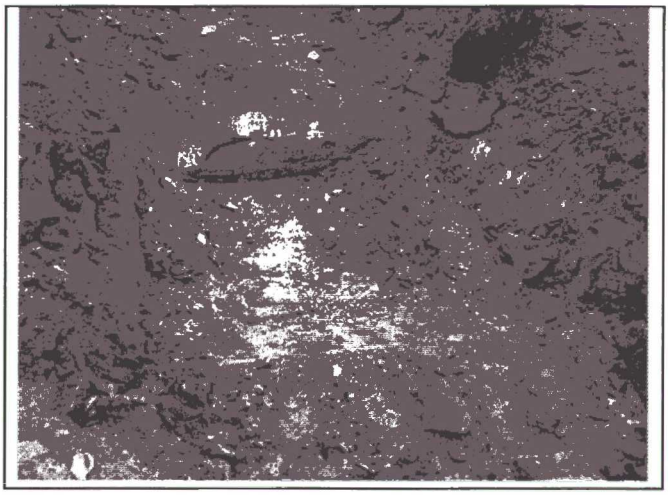


2.) View of historic impact.

3.) General view excavation facing east.

4.) View of final excavation, southwest corner.

5.) View of final excavation facing east.



6.) View of sandstone sampling location.

Southwest GEOSCIENCE

TABLE 1
Blanco Storage Vent Tank Release
SOIL ANALYTICAL and PID RESULTS

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
New Mexico Energy, Minerals & Natural Resources Department, Oil Conservation Division, Remediation Action Level (Groundwater <50'bgs)			10	NE	NE	NE	50	100	
Confirmation Analytical Samples From Soils Remaining in Place									
CS-45	12.19.2011	2.0	<0.049	<0.049	<0.049	<0.097	<0.25	<4.9	<10
CS-46	12.19.2011	2.0	<0.048	<0.048	<0.048	<0.096	<0.24	<4.8	<10
CS-47	12.19.2011	3.0	<0.048	<0.048	<0.048	<0.096	<0.24	<4.8	<10
CS-48	12.19.2011	3.0	<0.095	3.8	1.4	19	24.2	**170**	**77**
CS-49	12.19.2011	3.0	**51**	450	57	610	**1,168**	**8,500**	**500**
CS-50	12.19.2011	2.0	**62**	470	57	620	**1,209**	**8,600**	**470**
CS-51	12.19.2011	1.0	**55**	480	59	650	**1,244**	**11,000**	**490**
CS-52	12.19.2011	2.5	**29**	300	43	490	**862**	**6,500**	**500**
CS-53	12.19.2011	3.5	**140**	1,100	120	1,400	**2,760**	**17,000**	**770**
CS-54	12.19.2011	3.0	<0.048	<0.048	<0.048	<0.096	<0.24	<4.8	<9.7
CS-55	12.19.2011	3.0	<0.047	<0.047	<0.047	<0.094	<0.24	6.5	11

Note: Concentrations in bold and yellow exceed the applicable OCD Remediation Action Level

NE = Not Established

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Thursday, December 29, 2011

Kyle Summers
Southwest Geoscience
606 S. Rio Grande Unit A
Aztec, NM 87410

TEL: (214) 350-5469
FAX (214) 350-2914

RE: Blanco Vent Tank

Order No.: 1112851

Dear Kyle Summers:

Hall Environmental Analysis Laboratory, Inc. received 11 sample(s) on 12/20/2011 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682

Hall Environmental Analysis Laboratory, Inc. **Date:** *29-Dec-11*

CLIENT:	Southwest Geoscience
Project:	Blanco Vent Tank
Lab Order:	1112851

CASE NARRATIVE

Analytical Comments for METHOD 8015DRO_S, SAMPLE 1112851-09A: DNOP not recovered due to dilution

Hall Environmental Analysis Laboratory, Inc.

Date: *29-Dec-11*
Analytical Report

CLIENT:	Southwest Geoscience	**Client Sample ID:**	CS-45
Lab Order:	1112851	**Collection Date:**	12/19/2011 12:30:00 PM
Project:	Blanco Vent Tank	**Date Received:**	12/20/2011
Lab ID:	1112851-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/22/2011 11:15:25 AM
Surr: DNOP	117	77.4-131		%REC	1	12/22/2011 11:15:25 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/26/2011 6:06:27 PM
Surr: BFB	110	69.7-121		%REC	1	12/26/2011 6:06:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.049		mg/Kg	1	12/26/2011 6:06:27 PM
Toluene	ND	0.049		mg/Kg	1	12/26/2011 6:06:27 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/26/2011 6:06:27 PM
Xylenes, Total	ND	0.097		mg/Kg	1	12/26/2011 6:06:27 PM
Surr: 4-Bromofluorobenzene	112	80-120		%REC	1	12/26/2011 6:06:27 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

CLIENT:	Southwest Geoscience	**Client Sample ID:**	CS-46
Lab Order:	1112851	**Collection Date:**	12/19/2011 12:35:00 PM
Project:	Blanco Vent Tank	**Date Received:**	12/20/2011
Lab ID:	1112851-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/22/2011 11:49:35 AM
Surr: DNOP	118	77.4-131		%REC	1	12/22/2011 11:49:35 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/26/2011 6:36:44 PM
Surr: BFB	86.7	69.7-121		%REC	1	12/26/2011 6:36:44 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.048		mg/Kg	1	12/26/2011 6:36:44 PM
Toluene	ND	0.048		mg/Kg	1	12/26/2011 6:36:44 PM
Ethylbenzene	ND	0.048		mg/Kg	1	12/26/2011 6:36:44 PM
Xylenes, Total	ND	0.096		mg/Kg	1	12/26/2011 6:36:44 PM
Surr: 4-Bromofluorobenzene	88.6	80-120		%REC	1	12/26/2011 6:36:44 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Estimated value
J	Analyte detected below quantitation limits
NC	Non-Chlorinated
PQL	Practical Quantitation Limit
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *29-Dec-11*
Analytical Report

CLIENT:	Southwest Geoscience	**Client Sample ID:**	CS-47
Lab Order:	1112851	**Collection Date:**	12/19/2011 12:40:00 PM
Project:	Blanco Vent Tank	**Date Received:**	12/20/2011
Lab ID:	1112851-03	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/22/2011 12:23:59 PM
Surr: DNOP	107	77.4-131		%REC	1	12/22/2011 12:23:59 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/26/2011 7:06:58 PM
Surr: BFB	103	69.7-121		%REC	1	12/26/2011 7:06:58 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.048		mg/Kg	1	12/26/2011 7:06:58 PM
Toluene	ND	0.048		mg/Kg	1	12/26/2011 7:06:58 PM
Ethylbenzene	ND	0.048		mg/Kg	1	12/26/2011 7:06:58 PM
Xylenes, Total	ND	0.096		mg/Kg	1	12/26/2011 7:06:58 PM
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	12/26/2011 7:06:58 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *29-Dec-11*
Analytical Report

CLIENT:	Southwest Geoscience	**Client Sample ID:**	CS-48
Lab Order:	1112851	**Collection Date:**	12/19/2011 12:45:00 PM
Project:	Blanco Vent Tank	**Date Received:**	12/20/2011
Lab ID:	1112851-04	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	77	10		mg/Kg	1	12/22/2011 12:58:20 PM
Surr: DNOP	111	77.4-131		%REC	1	12/22/2011 12:58:20 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	170	95		mg/Kg	20	12/26/2011 10:08:03 PM
Surr: BFB	132	69.7-121	S	%REC	20	12/26/2011 10:08:03 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.95		mg/Kg	20	12/26/2011 10:08:03 PM
Toluene	3.8	0.95		mg/Kg	20	12/26/2011 10:08:03 PM
Ethylbenzene	1.4	0.95		mg/Kg	20	12/26/2011 10:08:03 PM
Xylenes, Total	19	1.9		mg/Kg	20	12/26/2011 10:08:03 PM
Surr: 4-Bromofluorobenzene	117	80-120		%REC	20	12/26/2011 10:08:03 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *29-Dec-11*
Analytical Report

CLIENT:	Southwest Geoscience	**Client Sample ID:**	CS-49
Lab Order:	1112851	**Collection Date:**	12/19/2011 12:50:00 PM
Project:	Blanco Vent Tank	**Date Received:**	12/20/2011
Lab ID:	1112851-05	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	500	9.9		mg/Kg	1	12/22/2011 1:32:44 PM
Surr: DNOP	113	77.4-131		%REC	1	12/22/2011 1:32:44 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	8500	480		mg/Kg	100	12/26/2011 11:08:26 PM
Surr: BFB	146	69.7-121	S	%REC	100	12/26/2011 11:08:26 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	51	4.8		mg/Kg	100	12/26/2011 11:08:26 PM
Toluene	450	4.8		mg/Kg	100	12/26/2011 11:08:26 PM
Ethylbenzene	57	4.8		mg/Kg	100	12/26/2011 11:08:26 PM
Xylenes, Total	610	9.5		mg/Kg	100	12/26/2011 11:08:26 PM
Surr: 4-Bromofluorobenzene	127	80-120	S	%REC	100	12/26/2011 11:08:26 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *29-Dec-11*
Analytical Report

CLIENT:	Southwest Geoscience	**Client Sample ID:**	CS-50
Lab Order:	1112851	**Collection Date:**	12/19/2011 12:55:00 PM
Project:	Blanco Vent Tank	**Date Received:**	12/20/2011
Lab ID:	1112851-06	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	470	9.7		mg/Kg	1	12/22/2011 2:07:08 PM
Surr: DNOP	108	77.4-131		%REC	1	12/22/2011 2:07:08 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	8600	490		mg/Kg	100	12/27/2011 12:08:48 AM
Surr: BFB	144	69.7-121	S	%REC	100	12/27/2011 12:08:48 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	62	4.9		mg/Kg	100	12/27/2011 12:08:48 AM
Toluene	470	4.9		mg/Kg	100	12/27/2011 12:08:48 AM
Ethylbenzene	57	4.9		mg/Kg	100	12/27/2011 12:08:48 AM
Xylenes, Total	620	9.7		mg/Kg	100	12/27/2011 12:08:48 AM
Surr: 4-Bromofluorobenzene	122	80-120	S	%REC	100	12/27/2011 12:08:48 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

CLIENT:	Southwest Geoscience	**Client Sample ID:**	CS-51
Lab Order:	1112851	**Collection Date:**	12/19/2011 1:00:00 PM
Project:	Blanco Vent Tank	**Date Received:**	12/20/2011
Lab ID:	1112851-07	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	490	10		mg/Kg	1	12/22/2011 3:15:57 PM
Surr: DNOP	116	77.4-131		%REC	1	12/22/2011 3:15:57 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	11000	230		mg/Kg	50	12/27/2011 1:09:04 AM
Surr: BFB	233	69.7-121	S	%REC	50	12/27/2011 1:09:04 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	55	2.3		mg/Kg	50	12/27/2011 1:09:04 AM
Toluene	480	9.4		mg/Kg	200	12/28/2011 3:21:00 AM
Ethylbenzene	59	2.3		mg/Kg	50	12/27/2011 1:09:04 AM
Xylenes, Total	650	19		mg/Kg	200	12/28/2011 3:21:00 AM
Surr: 4-Bromofluorobenzene	134	80-120	S	%REC	50	12/27/2011 1:09:04 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *29-Dec-11*
Analytical Report

CLIENT:	Southwest Geoscience	**Client Sample ID:**	CS-52
Lab Order:	1112851	**Collection Date:**	12/19/2011 1:05:00 PM
Project:	Blanco Vent Tank	**Date Received:**	12/20/2011
Lab ID:	1112851-08	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	500	9.6		mg/Kg	1	12/22/2011 3:50:05 PM
Surr: DNOP	107	77.4-131		%REC	1	12/22/2011 3:50:05 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	6500	240		mg/Kg	50	12/27/2011 2:09:39 AM
Surr: BFB	190	69.7-121	S	%REC	50	12/27/2011 2:09:39 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	29	2.4		mg/Kg	50	12/27/2011 2:09:39 AM
Toluene	300	4.7		mg/Kg	100	12/28/2011 4:21:31 AM
Ethylbenzene	43	2.4		mg/Kg	50	12/27/2011 2:09:39 AM
Xylenes, Total	490	4.7		mg/Kg	50	12/27/2011 2:09:39 AM
Surr: 4-Bromofluorobenzene	127	80-120	S	%REC	50	12/27/2011 2:09:39 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *29-Dec-11*
Analytical Report

CLIENT:	Southwest Geoscience	**Client Sample ID:**	CS-53
Lab Order:	1112851	**Collection Date:**	12/19/2011 1:10:00 PM
Project:	Blanco Vent Tank	**Date Received:**	12/20/2011
Lab ID:	1112851-09	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	770	100		mg/Kg	10	12/22/2011 8:20:52 PM
Surr: DNOP	0	77.4-131	S	%REC	10	12/22/2011 8:20:52 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	17000	2000		mg/Kg	400	12/28/2011 5:21:54 AM
Surr: BFB	127	69.7-121	S	%REC	400	12/28/2011 5:21:54 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	140	2.5		mg/Kg	50	12/27/2011 3:10:02 AM
Toluene	1100	20		mg/Kg	400	12/28/2011 5:21:54 AM
Ethylbenzene	120	2.5		mg/Kg	50	12/27/2011 3:10:02 AM
Xylenes, Total	1400	39		mg/Kg	400	12/28/2011 5:21:54 AM
Surr: 4-Bromofluorobenzene	107	80-120		%REC	50	12/27/2011 3:10:02 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

CLIENT:	Southwest Geoscience	**Client Sample ID:**	CS-54
Lab Order:	1112851	**Collection Date:**	12/19/2011 1:15:00 PM
Project:	Blanco Vent Tank	**Date Received:**	12/20/2011
Lab ID:	1112851-10	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/22/2011 4:24:10 PM
Surr: DNOP	106	77.4-131		%REC	1	12/22/2011 4:24:10 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/28/2011 2:51:01 AM
Surr: BFB	110	69.7-121		%REC	1	12/28/2011 2:51:01 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.048		mg/Kg	1	12/27/2011 4:10:06 AM
Toluene	ND	0.048		mg/Kg	1	12/27/2011 4:10:06 AM
Ethylbenzene	ND	0.048		mg/Kg	1	12/27/2011 4:10:06 AM
Xylenes, Total	ND	0.096		mg/Kg	1	12/27/2011 4:10:06 AM
Surr: 4-Bromofluorobenzene	110	80-120		%REC	1	12/27/2011 4:10:06 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *29-Dec-11*
Analytical Report

CLIENT:	Southwest Geoscience	**Client Sample ID:**	CS-55
Lab Order:	1112851	**Collection Date:**	12/19/2011 1:20:00 PM
Project:	Blanco Vent Tank	**Date Received:**	12/20/2011
Lab ID:	1112851-11	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	11	10		mg/Kg	1	12/22/2011 4:58:34 PM
Surr: DNOP	108	77.4-131		%REC	1	12/22/2011 4:58:34 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	6.5	4.7		mg/Kg	1	12/27/2011 4:40:10 AM
Surr: BFB	118	69.7-121		%REC	1	12/27/2011 4:40:10 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.047		mg/Kg	1	12/27/2011 4:40:10 AM
Toluene	0.049	0.047		mg/Kg	1	12/27/2011 4:40:10 AM
Ethylbenzene	ND	0.047		mg/Kg	1	12/27/2011 4:40:10 AM
Xylenes, Total	ND	0.094		mg/Kg	1	12/27/2011 4:40:10 AM
Surr: 4-Bromofluorobenzene	113	80-120		%REC	1	12/27/2011 4:40:10 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Southwest Geoscience
Project: Blanco Vent Tank **Work Order:** 1112851

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range Organics											
Sample ID: MB-29849		*MBLK*				Batch ID:	**29849**	Analysis Date:	12/22/2011 9:32:32 AM		
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Sample ID: LCS-29849		*LCS*				Batch ID:	**29849**	Analysis Date:	12/22/2011 10:08:57 AM		
Diesel Range Organics (DRO)	41.67	mg/Kg	10	50	0	83.3	62.7	139			
Method: EPA Method 8015B: Gasoline Range											
Sample ID: MB-29846		*MBLK*				Batch ID:	**29846**	Analysis Date:	12/26/2011 11:32:54 AM		
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-29846		*LCS*				Batch ID:	**29846**	Analysis Date:	12/26/2011 10:32:43 AM		
Gasoline Range Organics (GRO)	31.99	mg/Kg	5.0	25	0	128	86.4	132			
Method: EPA Method 8021B: Volatiles											
Sample ID: MB-29846		*MBLK*				Batch ID:	**29846**	Analysis Date:	12/26/2011 11:32:54 AM		
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: LCS-29846		*LCS*				Batch ID:	**29846**	Analysis Date:	12/26/2011 11:02:50 AM		
Benzene	1.030	mg/Kg	0.050	1	0.0041	103	80	120			
Toluene	1.001	mg/Kg	0.050	1	0.0062	99.4	80	120			
Ethylbenzene	1.066	mg/Kg	0.050	1	0.0084	106	80	120			
Xylenes, Total	3.278	mg/Kg	0.10	3	0	109	80	120			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **SOUTHWEST GEOSCIENCE** Date Received: **12/20/2011**

Work Order Number **1112851** Received by: AMG

Sample ID labels checked by: MG (Initials)

Checklist completed by: Michelle Garcia (Signature) 12/20/11 (Date)

Matrix: Carrier name: Courier

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☐	Not Shipped ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	**1.0°**	*<6° C Acceptable* If given sufficient time to cool.		

Number of preserved bottles checked for pH: _____

<2 >12 unless noted below.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

CHAIN OF CUSTODY RECORD

Southwest GEOSCIENCE
Environmental & Hydrogeologic Consultants

Office Location: Aztec
Project Manager: R. Simmons

Laboratory: Hall
Address:
Contact:
Phone:
PO/SO #:

Sampler's Name: Kyle Summers
Sampler's Signature:

Proj. No: 04110 18
Project Name: Blanco Ven + Tank
No/Type of Containers

ANALYSIS REQUESTED: BTEX 8021, TPH GRO/DRO 8015

Lab use only
Due Date:
Temp. of coolers when received (C°): 1.0 on IC
1 | 2 | 3 | 4 | 5
Page 1 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	P/O	Lab Sample ID (Lab Use Only)
S	12/19/11	1230		X	CS-45						1	1
		1235			CS-46							2
		1240			CS-47							3
		1245			CS-48							4
		1250			CS-49							5
		1255			CS-50							6
		1300			CS-51							7
		1305			CS-52							8
		1310			CS-53							9
		1315			CS-54							10

111285 1

Turn around time: ☑ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	12/19/11	1431	Mustine Deete	12/19/11	1431
Mustine Deete	12/20/11	637		12/20/11	1435
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

NOTES:

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil
Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

CHAIN OF CUSTODY RECORD

Southwest GEOSCIENCE
Environmental & Hydrogeologic Consultants

Office Location: Aztec
Project Manager: Ky Summers

Laboratory: Hall
Address:
Contact:
Phone:
PO/SO #:

Sampler's Name: Kyle Summers
Sampler's Signature:

Proj. No: 04101 P
Project Name: Blanco Vent Tank
No/Type of Containers

ANALYSIS REQUESTED: BTEX 8021 / TPH GRO/DRO 8015

Lab use only
Due Date:
Temp. of coolers when received (C°): 1.8 on ICE
1 | 2 | 3 | 4 | 5
Page 2 of 2

Lab Sample ID (Lab Use Only): 1112853-11

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	P/O
S	12/9/11	1320			CS-5S						1

NFS
KS

Turn around time: ☑ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	12/9/11	1431	Mystie Walter	12/9/11	1431
Mystie Walter	12/10/11	637		12/10/11	1435
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

NOTES:

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil
Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other