

NM1 - 8

C-138

YEAR(S):

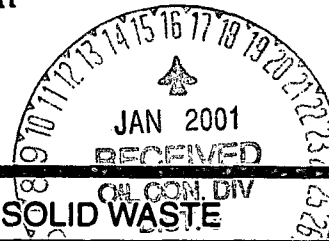
2001-1994

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811 S. First  
Artesia, NM 88210  
District III - (505) 334-6178  
Rio Brazos Road  
Alamogordo, NM 87410  
District IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Form C-138  
Originated 8/8/95

Submit Original  
Plus 1 Copy  
to appropriate  
District Office



REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4. Generator <i>American Energy Ser.</i> |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5. Originating Site <i>CR 405 mm 1</i>   |
| 2. Management Facility Destination <i>T-n-T Environmental</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 6. Transporter <i>Schmitz Const.</i>     |
| 3. Address of Facility Operator <i>HCR 74 Box 113 Lindrieth, NM 87029</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 8. State <i>N.M.</i>                     |
| 7. Location of Material (Street Address or ULSTR) <i>CR 405 mm 1</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                          |
| 9. <u>Circle One:</u><br>A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.<br>B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved.<br><br>All transporters must certify the wastes delivered are only those consigned for transport. |                                          |

BRIEF DESCRIPTION OF MATERIAL:

*American Energy Truck ran of County Rd. 405, wrecked and perforated diesel tank and spilled diesel into barrow ditch, don't know how much, maybe 20 gal.*

Estimated Volume 3 yd. cy Known Volume (to be entered by the operator at the end of the haul) \_\_\_\_\_ cy

SIGNATURE: *Darlene Schmitz* TITLE: *Sec. Tres.* DATE: *1/11/01*  
Waste Management Facility Authorized Agent  
TYPE OR PRINT NAME: *Darlene Schmitz* TELEPHONE NO. *774-6504*

(This space for State Use)

APPROVED BY: *Denny Kent* TITLE: *Geologist* DATE: *01/17/01*

APPROVED BY: *Monty J. Kuh* TITLE: *Environmental Geologist* DATE: *01/29/01*



# NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

DR. CONSERVATION DIVISION  
AT&EC DISTRICT OFFICE  
42700 NM 87-10  
(505) 334-6178 FAX: (505) 334-6179  
HIGHTOWER, 1000 N. MESA DRIVE, ALBUQUERQUE, NM 87102

GARY E. JOHNSON  
GOVERNOR

Jennifer A. Salisbury  
CABINET SECRETARY

## CERTIFICATE OF WASTE STATUS

|                                                                                                           |                                                                   |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1. Generator Name and Address:<br><i>American Energy Services<br/>708 Stucker Av. Farmington NM 87401</i> | 2. Destination Name:<br><i>TELT LAND FARM</i>                     |
| 3. Originating Site (name):<br><i>1/4 mile North of Schmitz Ranch</i>                                     | Location of the Waste (Street address &/or ULSTI):<br><i>Same</i> |
| Attach list of originating sites as appropriate                                                           |                                                                   |
| 4. Source and Description of Waste:<br><i>Diesel soaked dirt</i>                                          |                                                                   |

I, *Steve Rahm* (Print Name) representative for:  
*American Energy Services* do hereby certify that,  
according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,  
1988, regulatory determination, the above described waste is: (Check appropriate classification)

☐ EXEMPT oilfield waste ☒ NON-EXEMPT oilfield waste which is non-hazardous by characteristic  
analysis or by product identification

and that nothing has been added to the exempt or non-exempt non-hazardous waste defined above.

For NON-EXEMPT waste the following documentation is attached (check appropriate items):

☒ MSDS Information ☐ Other (description):  
☐ RCRA Hazardous Waste Analysis  
☐ Chain of Custody

This waste is in compliance with Regulated Levels of Naturally Occurring Radioactive Material (NORM) pursuant  
to 20 NMAC 3.1 subpart 1403.C and D.

Name (Original Signature): *Steve Rahm*

Title: *Operations Manager*

Date: *1-8-01*



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diesel

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## NO. 1 DIESEL FUEL, NO. 1 FUEL OIL

### # 1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

No. 1 Diesel Fuel, No. 1 Fuel Oil

MSDS Code: GASC0210

Revised: 18-Oct-2000

Synonyms: Diesel Fuel, No. 1, Low Sulfur  
Kerosene, Low Sulfur  
Conoco Product Codes: 3501, 3511, 3554, 4195

#### MANUFACTURER/DISTRIBUTOR

Conoco Inc.  
PO Box 2197  
Houston, TX 77252

#### PHONE NUMBERS

Product Information : 1-281-293-5550  
Transport Emergency : CHEMTREC 1-800-424-9300 (domestic)  
1-703-527-3887 (international; call collect)  
Medical Emergency : 1-800-342-5119 or 1-281-493-2767

WEB SITE : [www.conoco.com](http://www.conoco.com)

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

#### Components

| Material                                                      | CAS Number |
|---------------------------------------------------------------|------------|
| Straight Run Kerosene                                         | 8008-20-6  |
| and/or                                                        |            |
| Hydrodesulfurized Kerosene                                    | 64742-81-0 |
| Petroleum distillate exposure limit applies. (See Section 8.) |            |

### 3. HAZARDS IDENTIFICATION

#### --- EMERGENCY OVERVIEW ---

#### APPEARANCE / ODOR

Undyed (clear or straw-colored); low sulfur diesel may be dyed red /  
paraffinic odor.

#### OSHA REGULATORY STATUS

This material is hazardous as defined under OSHA regulations.  
Combustible.  
See below for health hazards.

#### HMIS RATING

Health: 1; Flammability: 2; Reactivity: 0



**Potential Health Effects**

**Primary Routes of Entry:** Skin, inhalation

The product may cause irritation to the eyes, nose, throat, lungs, and skin after prolonged or repeated exposure. Extreme overexposure or aspiration into the lungs may cause lung damage or death. Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness, and other nervous system effects; greater overexposure may cause dizziness, slurred speech, flushed face, aortic plaques, heart beat irregularities, unconsciousness, and convulsions.

Pulmonary fibrosis has been reported in cable plant workers exposed to mist and vapors of mineral oils and kerosene for 5-35 years. Because of mixed exposures to mineral oils as well as kerosene, it is difficult to attribute these effects to kerosene alone.

Individuals with pre-existing diseases of the lungs, liver, or kidneys may have increased susceptibility to the toxicity of excessive exposures.

**Combustion Product - Carbon Monoxide:**

Carbon monoxide decreases the ability of the blood to carry oxygen. Inhalation may cause headache, nausea, rapid respirations, vomiting, dizziness, confusion, impaired judgement, personality changes, memory impairment, weakness, shortness of breath, unconsciousness, convulsions and death if not treated. It may cause chest pains in persons with heart disease. Carbon monoxide poisoning can cause pallor (whiteness) or cyanosis (blueness) of the skin and extremities.

High exposures to carbon monoxide may cause heart irregularities. Carbon monoxide may adversely affect the unborn babies of pregnant women.

**Carcinogenicity Information**

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

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**4. FIRST AID MEASURES**

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**First Aid****INHALATION**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**SKIN CONTACT**

Wash skin thoroughly with soap and water. If irritation develops and persists, consult a physician.

**EYE CONTACT**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

**INGESTION**

If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

**Notes to Physicians**

Activated charcoal mixture may be administered. To prepare activated charcoal mixture, suspend 50 grams activated charcoal in 400 mL water and mix thoroughly. Administer 5 mL/kg, or 350 mL for an average adult.

Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances. Activated charcoal may induce vomiting, but may be given after emesis

or lavage to absorb toxic additives. Steroid therapy in mild to moderate cases does not improve outcome. Bacterial pneumonia often occurs after exposure, but prophylactic antibiotics are not indicated and should be reserved for documented bacterial pneumonia.

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## 5. FIRE FIGHTING MEASURES

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### Flammable Properties

Flash Point : 115 F (46 C)  
Method : TCC  
Flammable limits in Air, % by Volume  
LEL : 0.5  
UEL : 6  
Autoignition : 410 F (210 C)  
NFPA Classification : Class II Combustible Liquid.  
NFPA Rating : Health 0; Flammability 2; Reactivity 0.  
Vapor forms explosive mixture with air. Vapors or gases may travel considerable distances to ignition source and flash back.

### Extinguishing Media

Water Spray, Foam, Dry Chemical, CO2.

### Fire Fighting Instructions

Use water to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for personnel attempting to stop a leak. Water spray may be used to flush spills away from sources of potential ignition. Products of combustion may contain carbon monoxide, carbon dioxide, and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection.

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## 6. ACCIDENTAL RELEASE MEASURES

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### Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Remove source of heat, sparks, flame, impact, friction, and electricity including internal combustion engines and power tools. If equipment is used for spill cleanup, it must be explosion-proof and suitable for flammable liquid and vapors.

NOTE: Vapors released from the spill may create an explosive atmosphere.

### Initial Containment

Dike spill. Prevent material from entering sewers, waterways, or low areas.

### Spill Clean Up

Soak up with sawdust, sand, oil dry or other absorbent material.

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## 7. HANDLING AND STORAGE

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### Handling (Personnel)

Avoid breathing vapors or mist. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Wash clothing after use.

### Handling (Physical Aspects)

Ground container when pouring. Keep away from heat, sparks and flames. Close container after each use. Do not pressurize, cut, weld, braze, solder, grind, or drill on or near full or empty

container. Empty container retains residue (liquid and/or vapor) and may explode in heat of a fire.

#### Storage

Store in accordance with National Fire Protection Association recommendations. Keep container tightly closed. Store in a well ventilated place. Store away from oxidizers, heat, sparks and flames.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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#### Engineering Controls

Use only with adequate ventilation. Keep container tightly closed.

#### Personal Protective Equipment

##### RESPIRATORY PROTECTION

None normally required except in emergencies or when conditions cause excessive airborne levels of mists or vapors. Select appropriate NIOSH-approved respiratory protective equipment when exposed to sprays or mists. Proper respirator selection should be determined by adequately trained personnel and based on the contaminant(s), the degree of potential exposure, and published respirator protection factors.

##### PROTECTIVE GLOVES

Should be worn when the potential exists for prolonged or repeated skin contact. NBR or neoprene recommended.

##### EYE/FACE PROTECTION

Wear safety glasses. Wear coverall chemical splash goggles and face shield when the possibility exists for eye and face contact due to splashing or spraying of material.

##### OTHER PROTECTIVE EQUIPMENT

Coveralls with long sleeves if splashing is probable. Launder contaminated clothing before reuse. Extremely contaminated leather shoes should be discarded.

#### Applicable Exposure Limits

##### Straight Run Kerosene

TLV (ACGIH) : None Established

Petroleum distillate exposure limit applies.

PEL (OSHA) : 500 ppm, 2000 mg/m3, 8 Hr. TWA

TLV (ACGIH) : None Established

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

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#### Physical Data

Boiling Point : 330-572 F (166-300 C)  
Vapor Pressure : 2 mm Hg @ 68 F (20 C)  
Vapor Density : >1 (Air = 1)  
& Volatiles : (by volume) Nil  
Solubility in Water : Insoluble  
Odor : Paraffinic  
Form : Liquid  
Color : Undyed (clear or straw-colored)  
Low sulfur diesel may be dyed red.  
Specific Gravity : 0.81

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### 10. STABILITY AND REACTIVITY

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#### Chemical Stability

Stable at normal temperatures and storage conditions.

#### Conditions to Avoid

Avoid heat, sparks, and flame.

Incompatibility with Other Materials  
Incompatible with oxidizing materials.  
Decomposition  
Incomplete combustion may produce carbon monoxide.  
Polymerization  
Polymerization will not occur.

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## 11. TOXICOLOGICAL INFORMATION

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### Animal Data

Animal studies have shown that prolonged or repeated inhalation exposures to high concentrations of some petroleum distillates have caused liver tumors in mice and kidney damage and tumors in male rats. However, kidney effects were not seen in similar studies involving female rats, guinea pigs, dogs, or monkeys. Present studies indicate the kidney effects will only occur in male rats. Also, human studies do not indicate this peculiar sensitivity for kidney damage and studies reported in 1992 showed that this particular type of rat kidney damage is not useful in predicting a human health hazard. The significance of liver tumors in mice exposed to high doses of chemicals is highly speculative and probably not a good indicator for predicting a potential human carcinogenic hazard.

Mouse skin painting studies have shown that petroleum middle distillates (boiling range 100-700 F; naphtha, jet fuel, diesel fuel, kerosene, etc.) can cause skin cancer when repeatedly applied and never washed from the animal's skin. The relative significance of this to human health is uncertain since the petroleum distillates were not washed from the skin and resulting skin effects (irritation, cell damage, etc.) may play a role in the tumorigenic response. A few studies have shown that washing the animal's skin with soap and water between treatments greatly reduces the carcinogenic effect of some petroleum oils. Other laboratory studies indicate that middle distillates caused the skin tumors by promoting, rather than initiating, the formation of tumors, so the effect is probably dose-related and low level exposure should not be carcinogenic.

Acute toxicity data from studies on a sample of API defined kerosene -

|                                        |                   |
|----------------------------------------|-------------------|
| Oral LD50 (rats)                       | : > 5 g/kg        |
| Skin LD50 (rabbits)                    | : > 2 g/kg        |
| Inhalation LC50 (rats, 4 hours)        | : > 5 mg/L        |
| Skin irritation (rabbits; index, 0-8)  | : 4.4 - 5.5       |
| Eye irritation (rabbits; index, 0-110) | : 0 - 0.3         |
| Skin sensitization (guinea pigs)       | : Non-sensitizing |

Studies in mice and rats have shown that chronic exposure (8 hours/day, 7 days/week, 24 months) to unfiltered diesel exhaust produced tumors of the lungs and also lymphomas. On the basis of these studies, NIOSH recommends that whole diesel exhaust be regarded as a potential carcinogen.

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicological Information

#### Aquatic tox data for kerosene -

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Fish (Rainbow Trout) | : LC50 (96 hr*), 18-25 mg/L**                    |
| Daphnia (Water Flea) | : 50% Immobilization (48 hr*),<br>1.4-21 mg/L**  |
| Algae                | : 50% Growth Inhibition (72 hr*),<br>4-15 mg/L** |

\* Exposure time.

\*\* Tests reported by CONCAWE, 1996, Report No. 96/55; sample

tested as a sweet, desulfurized kerosene with a bp of  
300-550 degrees F.

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### 13. DISPOSAL CONSIDERATIONS

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#### Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

By itself, the liquid is expected to be a RCRA ignitable hazardous waste, when disposed.

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### 14. TRANSPORTATION INFORMATION

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#### Shipping Information

##### INTERNATIONAL HM-181

Proper Shipping Name : Gas Oil  
Hazard Class : 3  
UN/NA Number : UN 1202  
Packing Group : III  
Label : Flammable liquid  
Placard : Flammable

##### DOMESTIC HM-181

Proper Shipping Name : Fuel oil (or) Diesel fuel  
Hazard Class : Combustible liquid  
UN/NA Number : NA 1993  
Packing Group : III  
Label : None  
Placard : Combustible

#### Special Information:

Material must be shipped as a flammable liquid in accordance with the international description if shipped by vessel or air.

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### 15. REGULATORY INFORMATION

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#### U.S. Federal Regulations

##### OSHA HAZARD DETERMINATION

This material is hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

##### CERCLA/SUPERFUND

Not applicable; this material is covered by the CERCLA petroleum exclusion.

##### SARA, TITLE III, 302/304

This material is not known to contain extremely hazardous substances.

##### SARA, TITLE III, 311/312

Acute : Yes  
Chronic : Yes  
Fire : Yes  
Reactivity : No  
Pressure : No

##### SARA, TITLE III, 313

This material is not known to contain any chemical(s) at a level of 1.0% or greater (0.1% for carcinogens) on the list of Toxic Chemicals and subject to release reporting requirements.

##### TSCA

Material and/or components are listed in the TSCA Inventory of Chemical Substances (40 CFR 710).

##### RCRA

This material, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however, it could be considered hazardous if it meets criteria for being toxic, corrosive, ignitable, or reactive according to U.S. definitions (40 CFR 261). This material could also become a hazardous waste if it is mixed with or comes in contact with a listed hazardous waste. If it is a hazardous waste, regulations 40 CFR 262-266 and 268 may apply.

**CLEAN WATER ACT**

The material contains the following ingredient(s) which is considered hazardous if spilled into navigable waters and therefore reportable to the National Response Center (1-800-424-8802).

Ingredient(s) : Petroleum Hydrocarbons  
Reportable Quantity : Film or sheen upon, or discoloration of, any water surface

**State Regulations (U.S.)**

**CALIFORNIA "PROP 65"**

This material is not known to contain any ingredient(s) subject to the Act.

**PENNSYLVANIA WORKER & COMMUNITY RIGHT TO KNOW ACT**

This material may contain the following ingredient(s) subject to the Pennsylvania Worker and Community Right to Know Hazardous Substances List.

Ingredient : Kerosene (Petroleum)  
Category : Hazardous Substance

**Canadian Regulations**

CLASS B Division 3 - Combustible Liquid.

CLASS D Division 2 Subdivision B - Toxic Material.  
Chronic Toxic Effects.

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**16. OTHER INFORMATION**  
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Additional Information: None.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : MSDS Coordinator

Address : Conoco Inc.

> : PO Box 2197

> : Houston, TX 77252

Telephone : 1-281-293-5550

\* Indicates updated section.

End of MSDS

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Refer all MSDS questions to the Conoco MSDS administrator.



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## NO. 2 DIESEL FUEL

### # 1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

MSDS Code: GASC0220 No. 2 Diesel Fuel Revised: 12-Oct-2000  
CAS Number: 68476-34-6  
Tradenames: Diesel Fuel No. 2, Low Sulfur  
Diesel Fuel No. 2, High Sulfur  
MANUFACTURER/DISTRIBUTOR  
Conoco Inc.  
PO Box 2197  
Houston, TX 77252  
PHONE NUMBERS  
Product Information : 1-281-293-5550  
Transport Emergency : CHEMTREC 1-800-424-9300 or  
1-703-527-3887 (international; call collect)  
Medical Emergency : 1-800-342-5119 or 1-281-493-2767  
WEB SITE : www.conoco.com

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

| Components                                              | CAS Number | %   |
|---------------------------------------------------------|------------|-----|
| Diesel Fuel, No. 2                                      | 68476-34-6 | 100 |
| Petroleum distillate standard applies. (See Section 8.) |            |     |

### 3. HAZARDS IDENTIFICATION

#### --- EMERGENCY OVERVIEW ---

#### APPEARANCE / ODOR

Red or Undyed (Clear or Straw-Colored) Liquid / Aromatic Odor

#### OSHA REGULATORY STATUS

This material is hazardous as defined under OSHA regulations.  
Combustible.  
See below for health effects.

#### HMIS RATING

Health: 1; Flammability: 2; Reactivity: 0

#### Potential Health Effects

Primary Routes of Entry: Skin, inhalation

The product may cause irritation to the eyes, nose, throat, lungs, and skin after prolonged or repeated exposure. Extreme overexposure or aspiration into the lungs may cause lung damage or death. Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness, and other nervous system effects; greater overexposure may cause dizziness, slurred speech, flushed face, unconsciousness, and convulsions.

**Combustion Product - Carbon Monoxide:**

Carbon monoxide decreases the ability of the blood to carry oxygen. Inhalation may cause headache, nausea, rapid respirations, vomiting, dizziness, confusion, impaired judgement, personality changes, memory impairment, weakness, shortness of breath, unconsciousness, convulsions and death if not treated. It may cause chest pains in persons with heart disease. Carbon monoxide poisoning can cause pallor (whiteness) or cyanosis (blueness) of the skin and extremities.

High exposures to carbon monoxide may cause heart irregularities. Carbon monoxide may adversely affect the unborn babies of pregnant women.

**Carcinogenicity Information**

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

**4. FIRST AID MEASURES**

**First Aid**

**INHALATION**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**SKIN CONTACT**

Wash skin thoroughly with soap and water. If irritation develops and persists, consult a physician.

**EYE CONTACT**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

**INGESTION**

If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

**Notes to Physicians**

Activated charcoal mixture may be administered. To prepare activated charcoal mixture, suspend 50 grams activated charcoal in 400 mL water and mix thoroughly. Administer 5 mL/kg, or 350 mL for an average adult.

**# 5. FIRE FIGHTING MEASURES**

**Flammable Properties**

Flash Point : 130 F (54 C)

Method : PMCC

Flammable limits in Air, % by Volume

LEL : 0.4

UEL : 6

Autoignition : 494 F (257 C)

Vapor forms explosive mixture with air. Vapors or gases may travel considerable distances to ignition source and flash back.

NEPA Classification : Class II Combustible Liquid.

NEPA Rating : Health 0; Flammability 2; Reactivity 0.

**Extinguishing Media**

Water Spray, Foam, Dry Chemical, CO2.

**Fire Fighting Instructions**

Use water to keep fire-exposed containers cool. If a leak or



spill has not ignited, use water spray to disperse the vapors and to provide protection for personnel attempting to stop a leak. Water spray may be used to flush spills away from sources of potential ignition. Products of combustion may contain carbon monoxide, carbon dioxide, and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection.

---

## 6. ACCIDENTAL RELEASE MEASURES

---

### Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Remove source of heat, sparks, flame, impact, friction and electricity including internal combustion engines and power tools. If equipment is used for spill cleanup, it must be explosion proof and suitable for flammable liquid and vapor.

NOTE: Vapors released from the spill may create an explosive atmosphere.

### Initial Containment

Dike spill. Prevent material from entering sewers, waterways, or low areas.

### Spill Clean Up

Soak up with sawdust, sand, oil dry or other absorbent material.

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## 7. HANDLING AND STORAGE

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### Handling (Personnel)

Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling. Wash clothing after use.

### Handling (Physical Aspects)

Ground container when pouring. Keep away from heat, sparks and flames. Close container after each use. Do not pressurize, cut, weld, braze, solder, grind, or drill on or near full or empty container. Empty container retains residue (liquid and/or vapor) and may explode in heat of fire.

### Storage

Store in a well ventilated place. Keep container tightly closed. Store in accordance with National Fire Protection Association recommendations. Store away from heat, sparks and flames, oxidizers.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Engineering Controls

Use only with adequate ventilation. Keep container tightly closed.

### Personal Protective Equipment

#### RESPIRATORY PROTECTION

Select appropriate NIOSH-approved respiratory protective equipment when exposed to sprays or mists. Select appropriate NIOSH-approved respiratory protection where necessary to maintain exposures below acceptable limits. Proper respirator selection should be determined by adequately trained personnel and based on the contaminant(s), the degree of potential exposure, and published respirator protection factors.

#### PROTECTIVE GLOVES

Should be worn when the potential exists for prolonged or repeated skin contact. NBR or neoprene recommended.

#### EYE PROTECTION

Safety glasses with side shields. Chemical splash goggles or face shield for spray/mists or if splashing can occur.

#### OTHER PROTECTIVE EQUIPMENT

Coveralls with long sleeves if splashing is probable.

Applicable Exposure Limits

Petroleum distillate standard applies.

PEL (OSHA) : 500 ppm, 2000 mg/m3, 8 Hr. TWA  
TLV (ACGIH) : None Established

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point : 350-690 F (177-366 C)  
Vapor Pressure : 1 mm Hg @ 68 F (20 C)  
Vapor Density : >1 (Air=1.0)  
Volatiles : Nil  
Solubility in Water : Insoluble  
Odor : Aromatic.  
Form : Liquid.  
Color : Red or Undyed (Clear or Straw-Colored)  
Specific Gravity : 0.84-0.88 @ 60 F (16 C)

10. STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Conditions to Avoid

Heat, sparks, and flames.

Incompatibility with Other Materials

Incompatible or can react with strong oxidizers.

Decomposition

Carbon monoxide may be formed from incomplete combustion.

Polymerization

Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Animal Data

Animal studies have shown that prolonged or repeated inhalation exposures to high concentrations of some petroleum distillates have caused liver tumors in mice and kidney damage and tumors in male rats. However, kidney effects were not seen in similar studies involving female rats, guinea pigs, dogs, or monkeys. Present studies indicate the kidney effects will only occur in male rats. Also, human studies do not indicate this peculiar sensitivity for kidney damage and studies reported in 1992 showed that this particular type of rat kidney damage is not useful in predicting a human health hazard. The significance of liver tumors in mice exposed to high doses of chemicals is highly speculative and probably not a good indicator for predicting a potential human carcinogenic hazard.

Mouse skin painting studies have shown that petroleum middle distillates (boiling range 100-700 F; naphtha, jet fuel, diesel fuel, kerosene, etc.) can cause skin cancer when repeatedly applied and never washed from the animal's skin. The relative significance of this to human health is uncertain since the petroleum distillates were not washed from the skin and resulting skin effects (irritation, cell damage, etc.) may play a role in the tumorigenic response. A few studies have shown that washing the animal's skin with soap and water between treatments greatly reduces the carcinogenic effect of some petroleum oils. Other laboratory studies indicate that middle distillates caused the skin tumors by promoting, rather than initiating, the formation of tumors, so the effect is probably dose-related and low level exposure should not be carcinogenic.

Studies in mice and rats have shown that chronic exposure (8 hours/day, 7 days/week, 24 months) to unfiltered diesel exhaust

produced tumors of the lungs and also lymphomas. On the basis of these studies, NIOSH recommends that whole diesel exhaust be regarded as a potential carcinogen.

Acute toxicity data from studies supported by the American Petroleum Institute with a generic #2 fuel oil sample:

|                                        |                   |
|----------------------------------------|-------------------|
| Oral, LD50 (rats)                      | : 7-21 mL/kg      |
| Skin, LD50 (rabbits)                   | : >5 mL/kg        |
| Skin Irritation (rabbits; index, 0-8)  | : 3-4             |
| Eye Irritation (rabbits; index, 0-110) | : 1               |
| Skin Sensitization (guinea pigs)       | : Non-sensitizing |

## 12. ECOLOGICAL INFORMATION

### Ecotoxicological Information

No specific aquatic data available for this product.

## 13. DISPOSAL CONSIDERATIONS

### Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

By itself, the liquid is expected to be a RCRA ignitable hazardous waste.

### Container Disposal

Empty drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All other containers should be disposed of in an environmentally safe manner.

## 14. TRANSPORTATION INFORMATION

### Shipping Information

#### DOT

|                      |                      |
|----------------------|----------------------|
| Proper Shipping Name | : Diesel fuel        |
| Hazard Class         | : Combustible liquid |
| I.D. No. (UN/NA)     | : NA1993             |
| Packing Group        | : III                |
| DOT Label(s)         | : None               |
| DOT Placard          | : Combustible        |
| ICAO/IMO             |                      |

|                      |                    |
|----------------------|--------------------|
| Proper Shipping Name | : Gas Oil          |
| Hazard Class         | : 3                |
| UN/NA Number         | : UN1202           |
| Packing Group        | : III              |
| Label                | : Flammable liquid |
| Placard              | : Flammable        |

## 15. REGULATORY INFORMATION

### U.S. Federal Regulations

#### OSHA HAZARD DETERMINATION

This material is hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

#### CERCLA/SUPERFUND

Not applicable; this material is covered by the CERCLA petroleum exclusion.

#### SARA, TITLE III, 302/304

This material is not known to contain extremely hazardous substances.

#### SARA, TITLE III, 311/ 312

|         |       |
|---------|-------|
| Acute   | : Yes |
| Chronic | : Yes |
| Fire    | : Yes |

Reactivity : No

Pressure : No

SARA, TITLE III, 313

This material is not known to contain any chemical(s) at a level of 1.0% or greater (0.1% for carcinogens) on the list of Toxic Chemicals and subject to release reporting requirements.

TSCA

This material is in the TSCA Inventory of Chemical Substances (40 CFR 710) and/or is otherwise in compliance with TSCA.

RCRA

This material, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however, it meets criteria for being ignitable according to U. S. EPA definitions (40 CFR 261). This material could also become a hazardous waste if it is mixed with or comes in contact with a listed hazardous waste. If it is a hazardous waste, regulations at 40 CFR 262-266 and 268 may apply.

CLEAN WATER ACT

The material contains the following ingredient(s) which is considered hazardous if spilled into navigable waters and therefore reportable to the National Response Center (1-800-424-8802).

Ingredient : Petroleum Hydrocarbons.

Reportable Quantity : Film or sheen upon or discoloration of any water surface.

State Regulations (U.S.)

CALIFORNIA "PROP 65"

This material is not known to contain any ingredient(s) subject to the Act.

PENNSYLVANIA WORKER & COMMUNITY RIGHT TO KNOW ACT

This material may contain the following ingredient(s) subject to the Pennsylvania Worker and Community Right to Know Hazardous Substances List.

Ingredient : Diesel Fuel Oil

Category : Hazardous Substance.

Canadian Regulations

CLASS B Division 3 - Combustible Liquid.

CLASS D Division 2 Subdivision B - Toxic Material.

Chronic Toxic Effects.

-----  
16. OTHER INFORMATION  
-----

Additional Information: None.

-----  
The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : MSDS Coordinator  
Conoco Inc.

Address : PO Box 2197  
Houston, TX 77252

Telephone : 1-281-293-4386

# Indicates updated section.

End of MSDS

about conoco | buy conoco | investor information | news & views | global business |

District I - (505) 393-6161  
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811 S. First  
Artesia, NM 88210  
District III - (505) 334-6178  
Rio Brazos Road  
Alamogordo, NM 87410  
District IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Form C-138  
Originated 8/8/95

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JUN 1 1999

Submit Original  
Plus 1 Copy  
to appropriate  
District Office

Environmental Bureau

Oil Conservation Division

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 1. RCRA Exempt: <input checked="" type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 4. Generator <i>Elaves Pipeline - B m + G</i>         |
| Verbal Approval Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5. Originating Site <i>537 Truck</i>                  |
| 2. Management Facility Destination <i>T-N-T Landfarm</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 6. Transporter <i>Receiving Station Schmitz Const</i> |
| 3. Address of Facility Operator <i>HCR 74 Box 113 - Lindrick, NM</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 8. State <i>N.M.</i>                                  |
| 7. Location of Material (Street Address or ULSTR) <i>Sec. 18 T 25 N R 3 W</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                       |
| 9. <u>Circle One</u> :<br>A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.<br>B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved.<br><br>All transporters must certify the wastes delivered are only those consigned for transport. |                                                       |

BRIEF DESCRIPTION OF MATERIAL:

*Oil from broken line at truck receiving Station*

RECEIVED  
JUN 10 1999  
OIL CON. DIV.  
DIST. 2

*This is a tank on a short pipeline system.*

Estimated Volume \_\_\_\_\_ cy Known Volume (to be entered by the operator at the end of the haul) *38 yds* cy

SIGNATURE: *Darlene Schmitz* TITLE: *Sec. Tres.* DATE: *6/7/98*  
Waste Management Facility Authorized Agent  
TYPE OR PRINT NAME: *Darlene Schmitz* TELEPHONE NO. *774-6504*

(This space for State Use)

APPROVED BY: *Deanna G. Kent* TITLE: *Geologist* DATE: *6/15/99*  
APPROVED BY: *Martina J. Kuf* TITLE: *Environmental Geologist* DATE: *6/16/99*



# NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
 ATEC DISTRICT OFFICE  
 ATEC NM 87410  
 (505) 334-6170 FAX: (505) 334-6170  
 http://www.dnr.state.nm.us/atec/District/Headline.htm

GARY E. JOHNSON  
GOVERNOR

Jennifer A. Salisbury  
CABINET SECRETARY

## CERTIFICATE OF WASTE STATUS

|                                                                                 |                                                    |
|---------------------------------------------------------------------------------|----------------------------------------------------|
| 1. Generator Name and Address:<br><i>LLAVES P/L LTD</i>                         | 2. Destination Name:<br><i>SLIPPITZ LARDO FARM</i> |
| 3. Originating Site (name):<br><i>LLAVES P/L - 537<br/>TRUCK RECEIVING STA.</i> | Location of the Waste (Street address &/or ULSTR): |
| Attach list of originating sites as appropriate                                 |                                                    |
| 4. Source and Description of Waste<br><i>LEAK IN P/L EQUIPMENT</i>              |                                                    |

**RECEIVED**  
 JUN 10 1999  
 OIL CON. DIV.  
 DIST. 3

I, *ALBERT R. GREEN* representative for:  
 (Print Name)

*BENSON-MONTIN CABINET LOCAL PARTNER & LLAVES* do hereby certify that, according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July, 1988, regulatory determination, the above described waste is: (Check appropriate classification)

☐ EXEMPT oilfield waste

☒ NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification

and that nothing has been added to the exempt or non-exempt non-hazardous waste defined above.

For NON-EXEMPT waste the following documentation is attached (check appropriate items):

☐ MSDS Information  
☐ RCRA Hazardous Waste Analysis  
☐ Chain of Custody

☒ Other (description):  
*SAMPLE ANALYSIS*

This waste is in compliance with Regulated Levels of Naturally Occurring Radioactive Material (NORM) pursuant to 20 NMAC 3.1 subpart 1403.C and D.

Name (Original Signature): *Albert R. Green*

Title: *pres.*

Date: *5-10-99*

# BMG

---

*BENSON-MONTIN-GREER DRILLING CORP.*

June 4, 1999

Mr. Tony Schmitz  
TNT Landfarm  
Star Route  
Lindrith, NM 87029

Dear Tony:

As discussed this morning, here's the sample analyses for the oil spill material that we had at the 537 truck receiving station. It is non-hazardous.

Let us know if you need anything else.

Regards,

A handwritten signature in black ink, appearing to be 'W. Greer' or similar, written in a cursive style.

ARG/tlp

Enclosures

4900 College Boulevard, Farmington, NM 87402

(505) 325-8874 Fax (505) 327-9207



Phone (505) 326-4737 Fax (505) 325-4182

Inter-Mountain Laboratories, Inc.

2506 West Main Street, Farmington, NM 87401

1001 - 000

Albert Greer  
Benson-Montin-Greer Drilling Company  
4900 College Blvd.  
Farmington , NM 87402

May 28, 1999

Mr. Greer:

Enclosed, please find the reports for the samples received by our laboratory for analysis on May 11, 1999.

If you have any questions about the results of these analyses, please don't hesitate to call me at your convenience.

Thanks for using IML for your analytical needs!

Sincerely,

Sharon Williams  
Organics Lab Supervisor

Enclosure

xc: File





Phone (505) 326-4737 Fax (505) 325-4182

Inter-Mountain Laboratories, Inc.

2506 West Main Street, Farmington, NM 87401

## ANALYTICAL RESULTS

Client: **Benson-Montin-Greer Drilling Company**  
Project: 537  
Sample ID: 537  
Laboratory ID: 0399W02429  
Sample Matrix: Soil  
Condition: Intact

Date Reported: 05/27/99  
Date Sampled: 05/10/99  
Date Received: 05/11/99

| Parameter        | Result | Units | PQL |
|------------------|--------|-------|-----|
| Ignitability     | 126    | ° F   | N/A |
| Corrosivity (pH) | 8.5    | s.u.  | 0.1 |
| Reactive Cyanide | ND     | mg/Kg | 10  |
| Reactive Sulfide | ND     | mg/Kg | 10  |

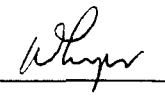
ND - Analyte not detected at stated detection level.

### References:

Analysis performed according to SW-846 "Test Methods for Evaluating Liquid/Solid Waste: Physical/Chemical Methods" United States Environmental Protection Agency 3rd Edition, Final Update, December, 1995.

ASTM Annual Book of Standards.

Reported by: 

Reviewed by: 



**Client:** Benson-Montin-Greer Drilling Co.  
**Project:** 537  
**Sample ID:** 537  
**Lab ID:** 0399W02429  
**Matrix:** Soil  
**Condition:** Intact

**Date Reported:** 05/19/99  
**Date Sampled:** 05/10/99  
**Date Received:** 05/11/99  
**Date Analyzed:** 05/18/99

| Parameter                           | Analytical Result | PQL | MCL   | Units |
|-------------------------------------|-------------------|-----|-------|-------|
| <b>TCLP VOLATILES - METHOD 1311</b> |                   |     |       |       |
| Benzene                             | <0.1              | 0.1 | 0.5   | mg/L  |
| Carbon Tetrachloride                | <0.1              | 0.1 | 0.5   | mg/L  |
| Chlorobenzene                       | <0.1              | 0.1 | 100.0 | mg/L  |
| Chloroform                          | <0.1              | 0.1 | 6.0   | mg/L  |
| 1,4-Dichlorobenzene                 | <0.1              | 0.1 | 7.5   | mg/L  |
| 1,2-Dichloroethane                  | <0.1              | 0.1 | 0.5   | mg/L  |
| 1,1-Dichloroethene                  | <0.1              | 0.1 | 0.7   | mg/L  |
| 2-Butanone (MEK)                    | <0.1              | 0.1 | 200.0 | mg/L  |
| Tetrachloroethene (PCE)             | <0.1              | 0.1 | 0.7   | mg/L  |
| Trichloroethene (TCE)               | <0.1              | 0.1 | 0.5   | mg/L  |
| Vinyl Chloride                      | <0.1              | 0.1 | 0.2   | mg/L  |

Reference: SW-846 - "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods", United States Environmental Protection Agency, November, 1986.

Reviewed By:

  
Sharon Williams, Organic Lab Supervisor



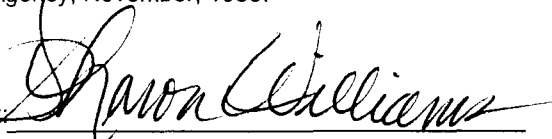
**Client:** Benson-Montin-Greer Drilling Co.  
**Project:** 537  
**Sample ID:** 537  
**Lab ID:** 0399W02429  
**Matrix:** Soil  
**Condition:** Intact

**Date Reported:** 05/19/99  
**Date Sampled:** 05/10/99  
**Date Received:** 05/11/99  
**Date Analyzed:** 05/18/99

| Parameter                                | Analytical Result | PQL | MCL   | Units |
|------------------------------------------|-------------------|-----|-------|-------|
| <b>TCLP SEMI-VOLATILES - METHOD 1311</b> |                   |     |       |       |
| m,p-Cresol                               | <1                | 1   | 200.0 | mg/L  |
| o-Cresol                                 | <1                | 1   | 200.0 | mg/L  |
| 2,4-Dinitrotoluene                       | <0.1              | 0.1 | 0.13  | mg/L  |
| Hexachlorobenzene                        | <0.1              | 0.1 | 0.13  | mg/L  |
| Hexachloro-1,3-butadiene                 | <0.2              | 0.2 | 0.5   | mg/L  |
| Hexachloroethane                         | <0.1              | 0.1 | 3.0   | mg/L  |
| Nitrobenzene                             | <0.5              | 0.5 | 2.0   | mg/L  |
| Pentachlorophenol                        | <0.2              | 0.2 | 100   | mg/L  |
| Pyridine                                 | <0.5              | 0.5 | 5.0   | mg/L  |
| 2,4,5-Trichlorophenol                    | <0.5              | 0.5 | 400.0 | mg/L  |
| 2,4,6-Trichlorophenol                    | <0.5              | 0.5 | 2.0   | mg/L  |

Reference: SW-846 - "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods", United States Environmental Protection Agency, November, 1986.

Reviewed By:

  
Sharon Williams, Organic Lab Supervisor

District I - (505) 393-6161  
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Hobbs, NM 88241-1980  
District II - (505) 748-1283  
511 S. First  
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District III - (505) 334-6178  
Rio Brazos Road  
Alamogordo, NM 87410  
District IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Roger Anderson  
Form C-138  
Originated 8/8/95

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to appropriate  
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4. Generator P.N.M (DOE)      |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5. Originating Site Drip pits |
| 2. Management Facility Destination T-N-T Enviro.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 6. Transporter Phillip        |
| 3. Address of Facility Operator HCR 74 Box 113<br>Lindrieth N.M. 87029                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 8. State N.M.                 |
| 7. Location of Material (Street Address or ULSTR) S. 30, T23N, R5W, S. 18, T23N, R6W                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |
| 9. Circle One:<br>A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.<br>B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved.<br><br>All transporters must certify the wastes delivered are only those consigned for transport. | S. 7, T23N, R8W               |

BRIEF DESCRIPTION OF MATERIAL:

Drip Pits From 3 D.O.E site's

RECEIVED  
SEP 9 1998  
OIL CON. DIV.  
DIST. 2

Estimated Volume 600 cy Known Volume (to be entered by the operator at the end of the haul) \_\_\_\_\_ cy

SIGNATURE: Craig Schmitz TITLE: Owner DATE: 9-8-98  
Waste Management Facility Authorized Agent  
TYPE OR PRINT NAME: Craig Schmitz TELEPHONE NO. 774-6504

(This space for State Use)

APPROVED BY: Dennis G. Zent TITLE: Geologist DATE: 9/9/98  
APPROVED BY: Will [Signature] TITLE: WRES II DATE: 9/11/98



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
AZTEC DISTRICT OFFICE  
AZTEC NM 87410  
(505) 334-6178 FAX: (505) 334-6170  
[http://nemnr.d.state.nm.us/ocd/District II/District.htm](http://nemnr.d.state.nm.us/ocd/District%20II/District.htm)

GARY E. JOHNSON  
GOVERNOR

Jennifer A. Salisbury  
CABINET SECRETARY

## CERTIFICATE OF WASTE STATUS

|                                                                                                                                                                                                    |                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1. Generator Name and Address:<br><b>MAUREEN GANNON</b><br><b>PNM GAS SERVICES</b><br><b>603 W. ELM</b><br><b>FARMINGTON, NM</b>                                                                   | 2. Destination Name:<br><b>T-N-T DISPOSAL</b><br><b>STATE HIGHWAY 537 MM 21</b><br><b>NEW MEXICO 87029</b> |
| 3. Originating Site (name):<br><b>DOE DRIP PIT ON CR7890 (1/2 mile off HWAY 44)</b><br><b>S7 T23N RBW</b><br><b>Rio Arriba County, NM</b>                                                          | Location of the Waste (Street address &/or ULSTR):                                                         |
| Attach list of originating sites as appropriate                                                                                                                                                    |                                                                                                            |
| 4. Source and Description of Waste<br><b>(83 ppm Volatiles - PID) Hydrocarbon - contaminated soil farm, gas</b><br><b>mainline drip pit</b><br><b>S7 T23N RBW M4</b><br><b>San Juan County, NM</b> |                                                                                                            |

I, Maureen Gannon representative for:  
(Print Name)

PNM do hereby certify that,  
according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,  
1988, regulatory determination, the above described waste is: (Check appropriate classification)

☒ ~~EXEMPT~~ oilfield waste ☒ NON-EXEMPT oilfield waste which is non-hazardous by characteristic  
analysis or by product identification

and that nothing has been added to the exempt or non-exempt non-hazardous waste defined above.

For **NON-EXEMPT** waste the following documentation is attached (check appropriate items):

☐ MSDS Information ☐ Other (description):  
☒ RCRA Hazardous Waste Analysis  
☒ Chain of Custody

This waste is in compliance with Regulated Levels of Naturally Occurring Radioactive Material (NORM) pursuant  
to 20 NMAC 3.1 subpart 1403.C and D.

Name (Original Signature): Maureen Gannon

Title: Project Manager

Date: 9/08/98



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
AZTEC DISTRICT OFFICE  
AZTEC NM 87410  
(505) 334-6178 FAX: (505) 334-6170  
[http://emnr.state.nm.us/ocd/District III/district.htm](http://emnr.state.nm.us/ocd/District%20III/district.htm)

GARY E. JOHNSON  
GOVERNOR

Jennifer A. Salisbury  
CABINET SECRETARY

## CERTIFICATE OF WASTE STATUS

|                                                                                                                                                                                            |                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 1. Generator Name and Address:<br>Maurice Gannon<br>PNM<br>603 W Elm<br>Farmington NM                                                                                                      | 2. Destination Name:<br>T-N-T Disposal<br>State Highway 537 <del>MM 101</del><br>New Mexico 87029 |
| 3. Originating Site (name):<br>DOE Mainline Drip Pit, State Highway 44, MM 101.1<br>518 T23N R6W<br>Rio Arriba <del>PNM</del> County NM<br>Attach list of originating sites as appropriate | Location of the Waste (Street address &/or ULSTR):                                                |
| 4. Source and Description of Waste<br>Hydrocarbon-contaminated soil from gas mainline drip pit<br>(453 ppm PID)                                                                            |                                                                                                   |

I, Maurice Gannon representative for:  
PNM (Print Name)

PNM do hereby certify that,  
according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,  
1988, regulatory determination, the above described waste is: (Check appropriate classification)

☒ EXEMPT oilfield waste  
MS (see below)

☐ NON-EXEMPT oilfield waste which is non-hazardous by characteristic  
analysis or by product identification

and that nothing has been added to the exempt or non-exempt non-hazardous waste defined above.

For NON-EXEMPT waste the following documentation is attached (check appropriate items):

☐ MSDS Information ☐ Other (description):  
☐ RCRA Hazardous Waste Analysis  
☐ Chain of Custody

This waste is in compliance with Regulated Levels of Naturally Occurring Radioactive Material (NORM) pursuant  
to 20 NMAC 3.1 subpart 1403.C and D.

Name (Original Signature): Maurice Gannon

Title: Project Mgr

Date: 9/08/99



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
AZTEC DISTRICT OFFICE  
AZTEC NM 87410  
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<http://nemrds.state.nm.us/ocd/District/IIU3distric.htm>

GARY E. JOHNSON  
GOVERNOR

Jennifer A. Salisbury  
CABINET SECRETARY

## CERTIFICATE OF WASTE STATUS

|                                                                                                                                                                   |                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 1. Generator Name and Address:<br>Maureen Gannon<br>PNM Gas Services<br>603 W. Elm<br>Farmington, NM                                                              | 2. Destination Name:<br>T-N-T Disposal<br>State Highway 537 nm 21<br>Newmexico 87029 |
| 3. Originating Site (name):<br>DOE mainline Drip Pit (Highway 44, MM 94)<br>530 T23N R5W<br>Sandoval County NM<br>Attach list of originating sites as appropriate | Location of the Waste (Street address &/or ULSTR):                                   |
| 4. Source and Description of Waste<br>Hydrocarbon-contaminated soil from DOE gas mainline drip pit<br>(269 ppm PID)                                               |                                                                                      |

I, Maureen Gannon representative for:  
PNM (Print Name)

do hereby certify that,  
according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,  
1988, regulatory determination, the above described waste is: (Check appropriate classification)

☐ EXEMPT oilfield waste ☒ NON-EXEMPT oilfield waste which is non-hazardous by characteristic  
analysis or by product identification

and that nothing has been added to the exempt or non-exempt non-hazardous waste defined above.

For **NON-EXEMPT** waste the following documentation is attached (check appropriate items):

☐ MSDS Information ☐ Other (description):  
☒ RCRA Hazardous Waste Analysis  
☒ Chain of Custody

This waste is in compliance with Regulated Levels of Naturally Occurring Radioactive Material (NORM) pursuant  
to 20 NMAC 3.1 subpart 1403.C and D.

Name (Original Signature): Maureen Gannon

Title: Project Manager

Date: 9/08/98

OFF: (505) 325-5667

**ON SITE**  
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

June 10, 1998

Maureen Gannon  
PNM - Public Service Company of NM  
Alvarado Square Mail Stop 0408  
Albuquerque, NM 87158  
TEL: (505) 241-2974  
FAX (505) 241-2340

**RECEIVED**  
SEP 9 1998  
**OIL CON. DIV.**  
**DIST. 3**

RE: DOE Drip mm 94  
DOEDmp mm 101

Order No.: 9805051

Dear Maureen Gannon, **DOE Drip CR 7890**

On Site Technologies, LTD. received 3 samples on 5/18/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

Diesel Range Organics (SW8015)  
ICP METALS-RCRA, Total (SW6010A)  
Mercury, Total (SW7471)  
SEMIVOLATILE ORGANICS (SW8270A)  
SOPREP TOTAL METALS: ICP (SW3050A)  
VOLATILES by GC/MS (SW8260A)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



David Cox





OFF: (505) 325-5667

LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 10-Jun-98

---

**CLIENT:** PNM - Public Service Company of NM  
**Project:** DOE Drip  
**Lab Order:** 9805051

---

## **CASE NARRATIVE**

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

## ANALYTICAL REPORT

Date: 10-Jun-98

|                    |                                    |                            |                               |
|--------------------|------------------------------------|----------------------------|-------------------------------|
| <b>Client:</b>     | PNM - Public Service Company of NM | <b>Client Sample Info:</b> | DOE Drip CR 7890              |
| <b>Work Order:</b> | 9805051                            | <b>Client Sample ID:</b>   | 9805181122; 3pt. Comp., 40in. |
| <b>Lab ID:</b>     | 9805051-03A                        | <b>Matrix:</b>             | SOIL                          |
| <b>Project:</b>    | DOE Drip                           | <b>Collection Date:</b>    | 5/18/98 11:22:00 AM           |
|                    |                                    | <b>COC Record:</b>         | 7268                          |

| Parameter                    | Result | PQL           | Qual | Units | DF | Date Analyzed |
|------------------------------|--------|---------------|------|-------|----|---------------|
| <b>DIESEL RANGE ORGANICS</b> |        | <b>SW8015</b> |      |       |    | Analyst: DC   |
| T/R Hydrocarbons: C10-C28    | 17000  | 250           |      | mg/Kg | 10 | 5/27/98       |

**Qualifiers:**

- PQL - Practical Quantitation Limit
- ND - Not Detected at Practical Quantitation Limit
- f - Analyte detected below Practical Quantitation Limit
- B - Analyte detected in the associated Method Blank

- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

June 10, 1998

Maureen Gannon  
PNM - Public Service Company of NM  
Alvarado Square Mail Stop 0408  
Albuquerque, NM 87158  
TEL: (505) 241-2974  
FAX (505) 241-2340

RE: DOE Drip MM 94  
DOE Drip MM 101

Order No.: 9805051

Dear Maureen Gannon, DOE Drip CR 7890

On Site Technologies, LTD. received 3 samples on 5/18/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

- Diesel Range Organics (SW8015)
- ICP METALS-RCRA, Total (SW6010A)
- Mercury, Total (SW7471)
- SEMIVOLATILE ORGANICS (SW8270A)
- SOPREP TOTAL METALS: ICP (SW3050A)
- VOLATILES by GC/MS (SW8260A)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox

OFF: (505) 325-5667



**ON SITE**  
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 10-Jun-98

---

**CLIENT:** PNM - Public Service Company of NM  
**Project:** DOE Drip  
**Lab Order:** 9805051

---

**CASE NARRATIVE**

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste. Physical/Chemical Methods. SW846. 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

## ANALYTICAL REPORT

Date: 10-Jun-98

|             |                                    |                     |                               |
|-------------|------------------------------------|---------------------|-------------------------------|
| Client:     | PNM - Public Service Company of NM | Client Sample Info: | DOE Drip MM 94                |
| Work Order: | 9805051                            | Client Sample ID:   | 9805180942; 3pt. Comp., 52in. |
| Lab ID:     | 9805051-01A                        | Matrix:             | SOIL                          |
| Project:    | DOE Drip                           | Collection Date:    | 5/18/98 9:42:00 AM            |
|             |                                    | COC Record:         | 7268                          |

| Parameter                    | Result | PQL           | Qual | Units | DF | Date Analyzed |
|------------------------------|--------|---------------|------|-------|----|---------------|
| <b>DIESEL RANGE ORGANICS</b> |        | <b>SW8015</b> |      |       |    | Analyst: DC   |
| T/R Hydrocarbons: C10-C28    | 7300   | 250           |      | mg/Kg | 10 | 5/27/98       |

**Qualifiers:**  
PQL - Practical Quantitation Limit  
ND - Not Detected at Practical Quantitation Limit  
J - Analyte detected below Practical Quantitation Limit  
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

COMMITMENT TO SERVING THE ENERGY INDUSTRY WITH THE ENVIRONMENT

OFF: (505) 325-5667



LAB: (505) 325-1556

June 10, 1998

Maureen Gannon  
PNM - Public Service Company of NM  
Alvarado Square Mail Stop 0408  
Albuquerque, NM 87158  
TEL: (505) 241-2974  
FAX (505) 241-2340

RE: DOE Drip mm 94  
DOE Drip mm 101

Order No.: 9805051

Dear Maureen Gannon, DOE Drip CR 7890

On Site Technologies, LTD. received 3 samples on 5/18/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

Diesel Range Organics (SW8015)  
ICP METALS-RCRA, Total (SW6010A)  
Mercury, Total (SW7471)  
SEMIVOLATILE ORGANICS (SW8270A)  
SOPREP TOTAL METALS: ICP (SW3050A)  
VOLATILES by GC/MS (SW8260A)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 10-Jun-98

---

**CLIENT:** PNM - Public Service Company of NM

**Project:** DOE Drip

**Lab Order:** 9805051

---

## **CASE NARRATIVE**

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667

# ON SITE

TECHNOLOGIES, LTD.

LAB: (505) 325-1556

## ANALYTICAL REPORT

Date: 10-Jun-98

|                    |                                    |                            |                               |
|--------------------|------------------------------------|----------------------------|-------------------------------|
| <b>Client:</b>     | PNM - Public Service Company of NM | <b>Client Sample Info:</b> | DOE Drip MM 101               |
| <b>Work Order:</b> | 9805051                            | <b>Client Sample ID:</b>   | 9805181036; 3pt. Comp.. 40in. |
| <b>Lab ID:</b>     | 9805051-02A                        | <b>Matrix:</b>             | SOIL                          |
| <b>Project:</b>    | DOE Drip                           | <b>Collection Date:</b>    | 5/18/98 10:36:00 AM           |
|                    |                                    | <b>COC Record:</b>         | 7268                          |

| Parameter                    | Result | PQL           | Qual | Units | DF | Date Analyzed |
|------------------------------|--------|---------------|------|-------|----|---------------|
| <b>DIESEL RANGE ORGANICS</b> |        | <b>SW8015</b> |      |       |    | Analyst: DC   |
| T/R Hydrocarbons: C10-C28    | 2400   | 250           |      | mg/Kg | 10 | 5/27/98       |

**Qualifiers:**

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

✓ - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499



Date: 15-Jun-98

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM

Work Order: 9805051

Project: DOE Drip

QC SUMMARY REPORT

Method Blank

|                           |                       |                   |              |             |                        |          |                    |             |      |          |      |
|---------------------------|-----------------------|-------------------|--------------|-------------|------------------------|----------|--------------------|-------------|------|----------|------|
| Sample ID: MBlank         | Batch ID: 8015DR2_S-5 | Test Code: SW8015 | Units: mg/Kg |             | Analysis Date: 5/27/98 |          | Prep Date: 5/27/98 |             |      |          |      |
| Client ID: 9805051        | Run ID: GC-2_980527A  | SeqNo: 2397       |              |             |                        |          |                    |             |      |          |      |
| Analyte                   | Result                | PQL               | SPK value    | SPK Ref Val | %REC                   | LowLimit | HighLimit          | RPD Ref Val | %RPD | RPDLimit | Qual |
| T/R Hydrocarbons: C10-C28 | 23.13                 |                   |              |             |                        |          |                    |             |      |          | J    |

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 15-Jun 98

CLIENT: PNM - Public Service Company of NM

Work Order: 9805051

Project: DOE Drip

QC SUMMARY REPORT

Sample Duplicate

|                           |                       |                   |              |                        |            |          |           |             |       |          |      |
|---------------------------|-----------------------|-------------------|--------------|------------------------|------------|----------|-----------|-------------|-------|----------|------|
| Sample ID: 9805071-02AD   | Batch ID: 8015DR2_S-5 | Test Code: SW8015 | Units: mg/Kg | Analysis Date: 5/27/98 | Prep Date: |          |           |             |       |          |      |
| Client ID: 9805051        | Run ID: GC-2_980527A  | SeqNo: 2423       |              |                        |            |          |           |             |       |          |      |
| Analyte                   | Result                | PQL               | SPK value    | SPK Ref Val            | %REC       | LowLimit | HighLimit | RPD Ref Val | %RPD  | RPDLimit | Qual |
| T/R Hydrocarbons: C10-C28 | 624.1                 | 25                | 0            | 0                      | 0.0%       | 0        | 0         | 542.6       | 14.0% | 15       |      |

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 15-Jun-98

CLIENT: PNM - Public Service Company of NM

Work Order: 9805051

Project: DOE Drip

QC SUMMARY REPORT

Sample Matrix Spike

|                           |                       |                   |              |                        |             |
|---------------------------|-----------------------|-------------------|--------------|------------------------|-------------|
| Sample ID: 9805066-02AMS  | Batch ID: 8015DR2_S-5 | Test Code: SW8015 | Units: mg/Kg | Analysis Date: 5/27/98 | Prep Date:  |
| Client ID: 9805051        | Run ID: GC-2_980527A  |                   |              | SeqNo: 2422            |             |
| Analyte                   | Result                | PQL               | SPK value    | SPK Ref Val            | %REC        |
|                           | 538.1                 | 25                | 502          | 10.82                  | 105.0%      |
| T/R Hydrocarbons: C10-C28 |                       |                   |              | 70                     | 130         |
|                           |                       |                   |              | HighLimit              | RPD Ref Val |
|                           |                       |                   |              | %RPD                   | RPDLimit    |
|                           |                       |                   |              |                        | Qual        |

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Date: 15-Jun-98

On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM

Work Order: 9805051

Project: DOE Drip

QC SUMMARY REPORT  
Laboratory Control Spike - generic

|                           |                       |                   |              |                        |                    |
|---------------------------|-----------------------|-------------------|--------------|------------------------|--------------------|
| Sample ID: LCS            | Batch ID: 8015DR2_S-5 | Test Code: SW8015 | Units: mg/Kg | Analysis Date: 5/27/98 | Prep Date: 5/27/98 |
| Client ID: 9805051        | Run ID: GC-2_980527A  |                   |              | SeqNo: 2399            |                    |
| Analyte                   | Result                | PQL               | SPK value    | SPK Ref Val            | %REC               |
| T/R Hydrocarbons: C10-C28 | 430.6                 | 25                | 502          | 23.13                  | 81.2%              |
|                           |                       |                   |              | 70                     | 130                |
|                           |                       |                   |              | HighLimit              | RPDLimit           |
|                           |                       |                   |              | RPD Ref Val            | %RPD               |
|                           |                       |                   |              |                        | Qual               |

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank  
1 of 1

# On Site Technologies, LTD.

CLIENT: PNM - Public Service Company of NM  
 Work Order: 9805051  
 Project: DOE Drip

Date: 15-Jun-98

## QC SUMMARY REPORT

Continuing Calibration Verification Standard

|                           |                       |                   |              |                        |            |
|---------------------------|-----------------------|-------------------|--------------|------------------------|------------|
| Sample ID: CCV CCV2 QC059 | Batch ID: 8015DR2_S-5 | Test Code: SW8015 | Units: mg/Kg | Analysis Date: 5/27/98 | Prep Date: |
| Client ID: 9805051        | Run ID: GC-2_980527A  |                   |              | SeqNo: 2424            |            |
| Analyte                   | Result                | PQL               | SPK value    | SPK Ref Val            | %REC       |
| T/R Hydrocarbons: C10-C28 | 485.3                 | 25                | 502          | 0                      | 96.7%      |
|                           |                       |                   |              | 85                     | 115        |

|                           |                       |                   |              |                        |            |
|---------------------------|-----------------------|-------------------|--------------|------------------------|------------|
| Sample ID: CCV CCV3 QC059 | Batch ID: 8015DR2_S-5 | Test Code: SW8015 | Units: mg/Kg | Analysis Date: 5/27/98 | Prep Date: |
| Client ID: 9805051        | Run ID: GC-2_980527A  |                   |              | SeqNo: 2425            |            |
| Analyte                   | Result                | PQL               | SPK value    | SPK Ref Val            | %REC       |
| T/R Hydrocarbons: C10-C28 | 487.3                 | 25                | 502          | 0                      | 97.1%      |
|                           |                       |                   |              | 85                     | 115        |

|                           |                       |                   |              |                        |            |
|---------------------------|-----------------------|-------------------|--------------|------------------------|------------|
| Sample ID: CCV CCV4 QC059 | Batch ID: 8015DR2_S-5 | Test Code: SW8015 | Units: mg/Kg | Analysis Date: 5/27/98 | Prep Date: |
| Client ID: 9805051        | Run ID: GC-2_980527A  |                   |              | SeqNo: 2426            |            |
| Analyte                   | Result                | PQL               | SPK value    | SPK Ref Val            | %REC       |
| T/R Hydrocarbons: C10-C28 | 461.5                 | 25                | 502          | 0                      | 91.9%      |
|                           |                       |                   |              | 85                     | 115        |

|                           |                       |                   |              |                        |            |
|---------------------------|-----------------------|-------------------|--------------|------------------------|------------|
| Sample ID: CCV1 QC0598    | Batch ID: 8015DR2_S-5 | Test Code: SW8015 | Units: mg/Kg | Analysis Date: 5/27/98 | Prep Date: |
| Client ID: 9805051        | Run ID: GC-2_980527A  |                   |              | SeqNo: 2398            |            |
| Analyte                   | Result                | PQL               | SPK value    | SPK Ref Val            | %REC       |
| T/R Hydrocarbons: C10-C28 | 487.5                 | 25                | 502          | 0                      | 97.1%      |
|                           |                       |                   |              | 85                     | 115        |

Qualifiers: ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

RECEIVED 15 1998



## Mountain States Analytical, Inc.

*The Quality Solution*

June 9, 1998

Mr. David Cox  
On Site Technologies, Ltd.  
612 E Murray Drive  
Farmington, NM 87401

Reference:  
Project: Soil Analysis  
MSAI Group: 22394

Dear Mr. Cox:

Enclosed are the analytical results for your project referenced above. The following samples are included in the report.

9805051-01A  
9805051-03A

9805051-02A

All holding times were met for the tests performed on these samples.

If the report is acceptable, please approve the associated invoice and forward it for payment.

Thank you for selecting Mountain States Analytical, Inc. to serve as your analytical laboratory on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

With Regards,

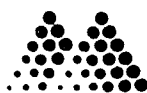
Rolf E. Larsen  
Project Manager

10  
Years of  
Quality  
Service

Corporate Office  
1645 West 2200 South, Salt Lake City, Utah 84119  
301-973-0050 • 1-800-973-6724(MSAI) • FAX 801-972-6278  
e-mail: service@msailabs.com

Southwest States Region  
6223 Bayonne, Spring, Texas 77389  
281-320-2842 • FAX 281-320-0989  
e-mail: gbrewer@msailabs.com





## Mountain States Analytical, Inc.

The Quality Solution

On Site Technologies, Ltd.  
612 E Murray Drive  
Farmington, NM 87401

Attn: Mr. David Cox  
Project: Soil Analysis

Sample ID: 9805051-02A DOE Drip MM 101  
Matrix: Soil

MSAI Sample: 80186  
MSAI Group: 22394  
Date Reported: 06/09/98  
Discard Date: 07/09/98  
Date Submitted: 05/19/98  
Date Sampled: 05/18/98  
Collected by:  
Purchase Order:  
Project No.:

9805181036; 3pt. Comp. 40in.

| Test Analysis                                              | Results<br>as Received | Units | Limit of<br>Quantitation |
|------------------------------------------------------------|------------------------|-------|--------------------------|
| 03901 Flame/ICP Prep, sw, 3050A<br>Method: SW-846 3050A    | Batch. s428            |       |                          |
| 0408 Mercury Prep CVAA, sw, 7471A<br>Method: SW-846 7471A  | Batch. s023            |       |                          |
| 13006 Metals by hrICP, 6010A, s/sw<br>Method: SW-846 6010A |                        |       |                          |
| Arsenic                                                    | ND                     | mg/kg | 8                        |
| Barium                                                     | 48                     | mg/kg | 2                        |
| Cadmium                                                    | ND                     | mg/kg | 1                        |
| Chromium                                                   | ND                     | mg/kg | 5                        |
| Lead                                                       | ND                     | mg/kg | 10                       |
| Selenium                                                   | ND                     | mg/kg | 20                       |
| Silver                                                     | ND                     | mg/kg | 3                        |
| 1522 Mercury by CVAA, sw, 7471A<br>Method: SW-846 7471A    | 0.116                  | mg/kg | 0.083                    |
| 1198 Semi-VOA, PPL, 8270A, sw<br>Method: SW-846 8270A      |                        |       |                          |
| Acenaphthene                                               | ND                     | ug/kg | (1) 1,700                |
| Acenaphthylene                                             | ND                     | ug/kg | 1,700                    |
| Anthracene                                                 | ND                     | ug/kg | 1,700                    |
| Benzidine                                                  | ND                     | ug/kg | 9,000                    |
| Benz(a)anthracene                                          | ND                     | ug/kg | 1,700                    |
| Benzo(a)pyrene                                             | ND                     | ug/kg | 4,200                    |
| Benzo(b)fluoranthene                                       | ND                     | ug/kg | 1,700                    |
| Benzo(ghi)perylene                                         | ND                     | ug/kg | 1,700                    |
| Benzo(k)fluoranthene                                       | ND                     | ug/kg | 1,700                    |
| bis(2-Chloroethoxy)methane                                 | ND                     | ug/kg | 1,700                    |
| bis(2-Chloroethyl)ether                                    | ND                     | ug/kg | 1,700                    |

10  
Years of  
Quality  
Service

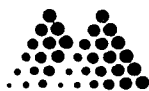
## Corporate Office

1645 West 2200 South, Salt Lake City, Utah 84119  
801-973-0050 • 1-800-973-6724(MSAI) • FAX 801-972-6278  
e-mail: service@msailabs.com

## Southwest States Region

6223 Bayonne, Spring, Texas 77389  
281-320-2842 • FAX 281-320-0989  
e-mail: gbrewer@msailabs.com





## Mountain States Analytical, Inc.

Page 2

On Site Technologies, Ltd.

The Quality Solution

MSAI Sample: 80186

MSAI Group: 22394

Sample ID: 9805051-02A

| Test Analysis                                         | Results<br>as Received | Units | Limit of<br>Quantitation |
|-------------------------------------------------------|------------------------|-------|--------------------------|
| 1198 Semi-VOA, PPL, 8270A, sw<br>Method: SW-846 8270A |                        |       |                          |
| bis(2-Chloroisopropyl)ether                           | ND                     | ug/kg | 1,700                    |
| bis(2-Ethylhexyl)phthalate                            | ND                     | ug/kg | 1,700                    |
| 4-Bromophenyl-phenyl ether                            | ND                     | ug/kg | 1,700                    |
| Butylbenzyl phthalate                                 | ND                     | ug/kg | 4,200                    |
| 2-Chloronaphthalene                                   | ND                     | ug/kg | 1,700                    |
| 4-Chlorophenyl-phenyl ether                           | ND                     | ug/kg | 1,700                    |
| Chrysene                                              | ND                     | ug/kg | 1,700                    |
| Dibenz(a,h)anthracene                                 | ND                     | ug/kg | 1,700                    |
| 1,2-Dichlorobenzene                                   | ND                     | ug/kg | 1,700                    |
| 1,3-Dichlorobenzene                                   | ND                     | ug/kg | 1,700                    |
| 1,4-Dichlorobenzene                                   | ND                     | ug/kg | 1,700                    |
| 3,3'-Dichlorobenzidine                                | ND                     | ug/kg | 1,700                    |
| Diethyl phthalate                                     | ND                     | ug/kg | 1,700                    |
| Dimethyl phthalate                                    | ND                     | ug/kg | 1,700                    |
| Di-N-butyl phthalate                                  | ND                     | ug/kg | 4,200                    |
| 2,4-Dinitrotoluene                                    | ND                     | ug/kg | 1,700                    |
| 2,6-Dinitrotoluene                                    | ND                     | ug/kg | 1,700                    |
| Di-N-octyl phthalate                                  | ND                     | ug/kg | 1,700                    |
| 1,2-Diphenylhydrazine                                 | ND                     | ug/kg | 1,700                    |
| Fluoranthene                                          | ND                     | ug/kg | 1,700                    |
| Fluorene                                              | ND                     | ug/kg | 1,700                    |
| Hexachlorobenzene                                     | ND                     | ug/kg | 1,700                    |
| Hexachlorobutadiene                                   | ND                     | ug/kg | 1,700                    |
| Hexachlorocyclopentadiene                             | ND                     | ug/kg | 1,700                    |
| Hexachloroethane                                      | ND                     | ug/kg | 1,700                    |
| Indeno(1,2,3-cd)pyrene                                | ND                     | ug/kg | 1,700                    |
| Isophorone                                            | ND                     | ug/kg | 1,700                    |
| Naphthalene                                           | 5,580                  | ug/kg | 1,700                    |
| Nitrobenzene                                          | ND                     | ug/kg | 1,700                    |
| N-Nitrosodimethylamine                                | ND                     | ug/kg | 1,700                    |
| N-Nitrosodi-N-propylamine                             | ND                     | ug/kg | 1,700                    |
| N-Nitrosodiphenylamine                                | ND                     | ug/kg | 1,700                    |
| Phenanthrene                                          | ND                     | ug/kg | 1,700                    |
| Pyrene                                                | ND                     | ug/kg | 1,700                    |
| 1,2,4-Trichlorobenzene                                | ND                     | ug/kg | 1,700                    |
| 2-Chlorophenol                                        | ND                     | ug/kg | 4,200                    |
| 2,4-Dichlorophenol                                    | ND                     | ug/kg | 4,200                    |

10  
Years of  
Quality  
Service

## Corporate Office

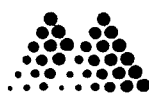
1645 West 2200 South, Salt Lake City, Utah 84119  
801-973-0050 • 1-800-973-6724(MSAI) • FAX 801-972-6278  
e-mail: service@msailabs.com

## Southwest States Region

6223 Bayonne, Spring, Texas 77389  
281-320-2842 • FAX 281-320-0989  
e-mail: gbrewer@msailabs.com







## Mountain States Analytical, Inc.

Page 3

On Site Technologies, Ltd.

The Quality Solution

MSAI Sample: 80186

MSAI Group: 22394

Sample ID: 9805051-02A

| Test | Analysis                                          | Results<br>as Received | Units | Limit of<br>Quantitation |
|------|---------------------------------------------------|------------------------|-------|--------------------------|
| 1198 | Semi-VOA, PPL, 8270A, sw<br>Method: SW-846 8270A  |                        |       |                          |
|      | 2,4-Dimethylphenol                                | ND                     | ug/kg | 4,200                    |
|      | 4,6-Dinitro-2-methylphenol                        | ND                     | ug/kg | 4,200                    |
|      | 2,4-Dinitrophenol                                 | ND                     | ug/kg | 4,200                    |
|      | 2-Nitrophenol                                     | ND                     | ug/kg | 4,200                    |
|      | 4-Nitrophenol                                     | ND                     | ug/kg | 4,200                    |
|      | 4-Chloro-3-methylphenol                           | ND                     | ug/kg | 4,200                    |
|      | Pentachlorophenol                                 | ND                     | ug/kg | 4,200                    |
|      | Phenol                                            | ND                     | ug/kg | 4,200                    |
|      | 2,4,6-Trichlorophenol                             | ND                     | ug/kg | 4,200                    |
|      | 2-Methylphenol (o-Cresol)                         | ND                     | ug/kg | 4,200                    |
| 3005 | SVOA Extraction, s/sw<br>Method: SW-846 3550A     | Complete               |       |                          |
| 8713 | Volatiles, PPL, 8260A, sw<br>Method: SW-846 8260A |                        |       |                          |
|      | Acrolein                                          | ND                     | ug/kg | 25,000                   |
|      | Acrylonitrile                                     | ND                     | ug/kg | 25,000                   |
|      | Benzene                                           | ND                     | ug/kg | 630                      |
|      | Bromoform                                         | ND                     | ug/kg | 630                      |
|      | Bromomethane                                      | ND                     | ug/kg | 630                      |
|      | Carbon tetrachloride                              | ND                     | ug/kg | 630                      |
|      | Chlorobenzene                                     | ND                     | ug/kg | 630                      |
|      | Dibromochloromethane                              | ND                     | ug/kg | 630                      |
|      | Chloroethane                                      | ND                     | ug/kg | 630                      |
|      | Chloroform                                        | ND                     | ug/kg | 630                      |
|      | Chloromethane                                     | ND                     | ug/kg | 630                      |
|      | 2-Chloroethyl Vinyl Ether                         | ND                     | ug/kg | 1,250                    |
|      | Bromodichloromethane                              | ND                     | ug/kg | 630                      |
|      | 1,1-Dichloroethane                                | ND                     | ug/kg | 630                      |
|      | 1,2-Dichloroethane                                | ND                     | ug/kg | 630                      |
|      | 1,1-Dichloroethene                                | ND                     | ug/kg | 630                      |
|      | 1,2-Dichloropropane                               | ND                     | ug/kg | 630                      |
|      | cis-1,3-Dichloropropene                           | ND                     | ug/kg | 630                      |
|      | trans-1,3-Dichloropropene                         | ND                     | ug/kg | 630                      |
|      | Ethylbenzene                                      | 1,240                  | ug/kg | 630                      |
|      | Methylene chloride (Dichloromethane)              | ND                     | ug/kg | 630                      |

10  
Years of  
Quality  
Service

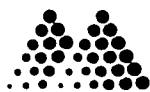
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## Mountain States Analytical, Inc.

Page 4

On Site Technologies, Ltd.

The Quality Solution

MSAI Sample: 80186

MSAI Group: 22394

Sample ID: 9805051-02A

| Test Analysis                                          | Results<br>as Received | Units | Limit of<br>Quantitation |
|--------------------------------------------------------|------------------------|-------|--------------------------|
| 8713 Volatiles, PPL, 8260A, SW<br>Method: SW-846 8260A |                        |       |                          |
| 1,1,2,2-Tetrachloroethane                              | ND                     | ug/kg | 630                      |
| Tetrachloroethene                                      | ND                     | ug/kg | 630                      |
| Toluene                                                | 2,440                  | ug/kg | 630                      |
| 1,1,1-Trichloroethane                                  | ND                     | ug/kg | 630                      |
| 1,1,2-Trichloroethane                                  | ND                     | ug/kg | 630                      |
| Trichloroethene                                        | ND                     | ug/kg | 630                      |
| Trichlorofluoromethane                                 | ND                     | ug/kg | 630                      |
| Vinyl chloride                                         | ND                     | ug/kg | 630                      |
| cis-1,2-Dichloroethene                                 | ND                     | ug/kg | 630                      |
| trans-1,2-Dichloroethene                               | ND                     | ug/kg | 630                      |
| m+p-Xylene                                             | 10,800                 | ug/kg | 1,250                    |
| o-Xylene                                               | 4,800                  | ug/kg | 630                      |

- (1) Sample 80186 was diluted by a factor of 5 due to the dark color of the sample extract. High levels of non-target compounds were present. The LOQs were adjusted accordingly.

ND - Not detected at the Limit of Quantitation.

This report consists of the following items: A cover letter, a signed analytical report for each sample specified on the cover letter, and if applicable, an inorganic quality control summary. Organic sample reports contain footnotes which describe any quality control anomalies which may have occurred.

Respectfully Submitted,  
Reviewed and Approved by:

Rolf E. Larsen  
Project Manager

10  
Years of  
Quality  
Service

## Corporate Office

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e-mail: [gbrewer@msailabs.com](mailto:gbrewer@msailabs.com)



Mountain States Analytical

Data file : /chem/HP\_2.i/980529sm.b/X4230.d  
Lab Smp Id: 980529sm**b** Client Smp ID: vblk1  
Inj Date : 29-MAY-1998 18:06  
Operator : MS Inst ID: HP\_2.i  
Smp Info : vblk1 ;980529sm**b**  
Misc Info : [980529sm];1 ; ;980529sm;980529sm;all.sub  
Comment :  
Method : /chem/HP\_2.i/980529sm.b/voa2.m  
Meth Date : 01-Jun-1998 10:43 mike Quant Type: ISTD  
Cal Date : 29-MAY-1998 15:09 Cal File: C2802.d  
Als bottle: 1 QC Sample: BLANK  
Dil Factor: 125.00000  
Integrator: HP RTE Compound Sublist: all.sub  
Target Version: 3.40  
Processing Host: chemserv

Concentration Formula: Amt \* DF \* 100/(100-Mo) (Wt/Wt)

| Name | Value   | Description     |
|------|---------|-----------------|
| DF   | 125.000 | Dilution Factor |
| Mo   | 0.000   | Moisture        |
| DF   | 125.000 | Dilution Factor |
| Wt   | 4.000   | Sample Weight   |

| Compounds                    | QUANT SIG |        |                | RESPONSE | CONCENTRATIONS       |                  |
|------------------------------|-----------|--------|----------------|----------|----------------------|------------------|
|                              | MASS      | RT     | EXP RT REL RT  |          | ON-COLUMN<br>( ug/L) | FINAL<br>(ug/Kg) |
| \$ 110 1,2-Dichloroethane-d4 | 65        | 6.333  | 6.318 (0.905)  | 57341    | 52.9600              | 53.0(a)          |
| * 36 Pentafluorobenzene      | 168       | 5.885  | 5.889 (1.000)  | 127705   | 50.0000              |                  |
| * 44 1,4-Difluorobenzene     | 114       | 6.995  | 6.980 (1.000)  | 164234   | 50.0000              |                  |
| \$ 57 Toluene-d8             | 98        | 9.546  | 9.532 (1.365)  | 177627   | 51.5471              | 51.5(a)          |
| * 67 Chlorobenzene-d5        | 117       | 12.622 | 12.607 (1.000) | 162044   | 50.0000              |                  |
| \$ 78 Bromofluorobenzene     | 95        | 15.561 | 15.532 (2.225) | 82630    | 52.4962              | 52.5(a)          |
| * 92 1,4-Dichlorobenzene-d4  | 152       | 18.462 | 18.450 (1.000) | 96661    | 50.0000              |                  |
| 101 Naphthalene              | 128       | 22.687 | 22.682 (1.229) | 5801     | 2.42727              | 303(a)           |

QC Flag Legend

a - Target compound detected but, quantitated amount  
Below Limit Of Quantitation(BLOQ).

2B  
SOIL VOLATILE SURROGATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 980529SM

Level: (low/med) MED

|    | EPA<br>SAMPLE NO. | S1<br>(TOL) # | S2<br>(BFB) # | S3<br>(DCE) # | OTHER | TOT<br>OUT |
|----|-------------------|---------------|---------------|---------------|-------|------------|
|    | =====             | =====         | =====         | =====         | ===== | =====      |
| 01 | VBLK1             | 103           | 105           | 106           |       | 0          |
| 02 | VBLK1LCS          | 107           | 109           | 111           |       | 0          |
| 03 | VBLK1LCSD         | 106           | 107           | 108           |       | 0          |
| 04 | 01A               | 125           | 105           | 110           |       | 0          |
| 05 | 02A               | 128           | 116           | 118           |       | 0          |
| 06 | 03A               | 114           | 113           | 115           |       | 0          |
| 07 | M02054            | 11D           | 13D           | 11D           |       | 0          |
| 08 | M02054MS          | 11D           | 14D           | 11D           |       | 0          |
| 09 | M02054MSD         | 11D           | 13D           | 11D           |       | 0          |
| 10 | 2S83              | 10D           | 11D           | 12D           |       | 0          |
| 11 | SEPSLUDGE         | 6D            | 6D            | 9D            |       | 0          |
| 12 | 2S84              | 0D            | 0D            | 0D            |       | 0          |
| 13 | 3703              | 0D            | 0D            | 0D            |       | 0          |
| 14 | 8486              | 0D            | 0D            | 0D            |       | 0          |
| 15 | 8487              | 0D            | 0D            | 0D            |       | 0          |
| 16 |                   |               |               |               |       |            |
| 17 |                   |               |               |               |       |            |
| 18 |                   |               |               |               |       |            |
| 19 |                   |               |               |               |       |            |
| 20 |                   |               |               |               |       |            |
| 21 |                   |               |               |               |       |            |
| 22 |                   |               |               |               |       |            |
| 23 |                   |               |               |               |       |            |
| 24 |                   |               |               |               |       |            |
| 25 |                   |               |               |               |       |            |
| 26 |                   |               |               |               |       |            |
| 27 |                   |               |               |               |       |            |
| 28 |                   |               |               |               |       |            |
| 29 |                   |               |               |               |       |            |
| 30 |                   |               |               |               |       |            |

QC LIMITS

S1 (TOL) = Toluene-d8 (66-128)  
 S2 (BFB) = Bromofluorobenzene (40-136)  
 S3 (DCE) = 1,2-Dichloroethane-d4 (72-138)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogates diluted out

3B  
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATION RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 980529SM

Matrix Spike - EPA Sample No.: M02054

Level: (low/med) MED

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>AMOUNT<br>(ug/L) | MS<br>AMOUNT<br>(ug/L) | MS<br>%<br>REC # | QC.<br>LIMITS<br>REC. |
|--------------------|--------------------------|----------------------------|------------------------|------------------|-----------------------|
| 1,1-Dichloroethene | 5.0                      | 0.00                       | 5.4                    | 108              | 73-137                |
| Benzene            | 5.0                      | 0.00                       | 4.5                    | 90               | 83-127                |
| Trichloroethene    | 5.0                      | 0.00                       | 4.5                    | 90               | 61-133                |
| Toluene            | 5.0                      | 0.00                       | 4.7                    | 94               | 67-127                |
| Chlorobenzene      | 5.0                      | 0.00                       | 4.6                    | 92               | 73-117                |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | MSD<br>AMOUNT<br>(ug/L) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD REC. |
|--------------------|--------------------------|-------------------------|-------------------|------------|-----------------------|
| 1,1-Dichloroethene | 5.0                      | 5.2                     | 104               | 4          | 15 73-137             |
| Benzene            | 5.0                      | 4.5                     | 90                | 0          | 11 83-127             |
| Trichloroethene    | 5.0                      | 4.5                     | 90                | 0          | 18 61-133             |
| Toluene            | 5.0                      | 4.8                     | 96                | 2          | 15 67-127             |
| Chlorobenzene      | 5.0                      | 4.9                     | 98                | 6          | 11 73-117             |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

FORM 3  
SOIL VOLATILE LAB CONTROL SAMPLE

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 980529SM

Matrix Spike - Sample No.: vblk1

Level: (low/med) MED

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>AMOUNT<br>(ug/L) | LCS<br>AMOUNT<br>(ug/L) | LCS<br>%<br>REC # | QC.<br>LIMITS<br>REC. |
|--------------------|--------------------------|----------------------------|-------------------------|-------------------|-----------------------|
| 1,1-Dichloroethene | 50.0                     | 0.00                       | 47.9                    | 96                | 74-134                |
| Benzene            | 50.0                     | 0.00                       | 43.7                    | 87                | 80-124                |
| Trichloroethene    | 50.0                     | 0.00                       | 45.2                    | 90                | 70-126                |
| Toluene            | 50.0                     | 0.00                       | 46.9                    | 94                | 76-116                |
| Chlorobenzene      | 50.0                     | 0.00                       | 45.1                    | 90                | 73-117                |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | LCSD<br>AMOUNT<br>(ug/L) | LCSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD | REC.   |
|--------------------|--------------------------|--------------------------|--------------------|------------|------------------|--------|
| 1,1-Dichloroethene | 50.0                     | 50.4                     | 101                | 5          | 14               | 74-134 |
| Benzene            | 50.0                     | 43.4                     | 87                 | 0          | 11               | 80-124 |
| Trichloroethene    | 50.0                     | 44.6                     | 89                 | 1          | 14               | 70-126 |
| Toluene            | 50.0                     | 47.8                     | 96                 | 2          | 11               | 76-116 |
| Chlorobenzene      | 50.0                     | 45.5                     | 91                 | 1          | 11               | 73-117 |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

Mountain States Analytical

Mountain States Analytical

Data file : /chem/HP\_3.i/980526c.b/X3608.d  
Lab Smp Id: 980521SB Client Smp ID: SBLK2  
Inj Date : 26-MAY-1998 21:49  
Operator : KELLY SUPER GRP. Inst ID: HP\_3.i  
Smp Info : SBLK2 ;980521SB ;2  
Misc Info : [980526C];980521SL; ;30;1000;PPL.sub;; ;;; BTL#  
Comment :  
Method : /chem/HP\_3.i/980526c.b/bna3.m  
Meth Date : 27-May-1998 13:55 target Quant Type: ISTD  
Cal Date : 26-MAY-1998 13:51 Cal File: C9351.d  
Als bottle: 1 QC Sample: BLANK  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: PPL.sub  
Target Version: 3.40  
Processing Host: chemserv

Concentration Formula:  $\text{Amt} * \text{DF} * \text{Uf} * \text{Vt} / (\text{Vi} * \text{Ws} * (100 - \text{M}) / 100)$

| Name | Value    | Description                               |
|------|----------|-------------------------------------------|
| DF   | 1.000    | Dilution Factor                           |
| Uf   | 1.000    | ng unit correction factor                 |
| Vt   | 1000.000 | Volume of final extract (uL) (1000 low, 2 |
| Vi   | 1.000    | Volume injected (uL)                      |
| Ws   | 30.000   | Weight of sample extracted (g)            |
| M    | 0.000    | % Moisture                                |

| Compounds                   | QUANT SIG | MASS | RT     | EXP RT | REL RT  | RESPONSE | CONCENTRATIONS        |                  | SIMILARITY |
|-----------------------------|-----------|------|--------|--------|---------|----------|-----------------------|------------------|------------|
|                             |           |      |        |        |         |          | ON-COLUMN<br>( MG/L ) | FINAL<br>(ug/Kg) |            |
| \$ 12 2-Fluorophenol        | =====     | 112  | 5.534  | 5.503  | (0.689) | 176303   | 137.134               | 4570             | 8980       |
| \$ 20 Phenol-d6             | =====     | 99   | 7.587  | 7.556  | (0.944) | 226436   | 151.195               | 5040             | 8338       |
| * 23 1,4-Dichlorobenzene-d4 | =====     | 152  | 8.034  | 8.044  | (1.000) | 35552    | 40.0000               |                  | 9077       |
| \$ 36 Nitrobenzene-d5       | =====     | 82   | 9.371  | 9.384  | (0.857) | 118537   | 78.4936               | 2620             | 8835       |
| * 49 Naphthalene-d8         | =====     | 136  | 10.937 | 10.953 | (1.000) | 115561   | 40.0000               |                  | 9421       |
| \$ 69 2-Fluorobiphenyl      | =====     | 172  | 13.560 | 13.579 | (0.898) | 152705   | 74.9251               | 2500             | 9298       |
| * 80 Acenaphthene-d10       | =====     | 164  | 15.105 | 15.127 | (1.000) | 61943    | 40.0000               |                  | 9504       |
| \$ 102 2,4,6-Tribromophenol | =====     | 330  | 17.034 | 17.029 | (1.128) | 42205    | 189.177               | 6300             | 7263       |
| * 115 Phenanthrene-d10      | =====     | 188  | 18.590 | 18.617 | (1.000) | 107236   | 40.0000               |                  | 9609       |
| \$ 133 Terphenyl-d14        | =====     | 244  | 22.499 | 22.487 | (0.902) | 156708   | 66.3730               | 2210             | 9569       |
| * 144 Chrysene-d12          | =====     | 240  | 24.949 | 24.967 | (1.000) | 80156    | 40.0000               |                  | 9383       |
| * 154 Perylene-d12          | =====     | 264  | 28.147 | 28.157 | (1.000) | 71213    | 40.0000               |                  | 8783       |

2D  
SOIL SEMI-VOLATILE SURROGATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 980526C

Level: (low/med) LOW

|    | EPA<br>SAMPLE NO. | S1<br>(2FP) # | S2<br>(PHL) # | S3<br>(NBZ) # | S4<br>(FBP) # | S5<br>(TBP) # | S6<br>(TPH) # | S7<br># | S8<br># | TOT<br>OUT |
|----|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------|---------|------------|
| 01 | SBLK2             | 62            | 74            | 60            | 71            | 89            | 66            |         |         | 0          |
| 02 | SBLK2LCS          | 63            | 60            | 56            | 67            | 92            | 73            |         |         | 0          |
| 03 | 02A               | 72            | 78            | 102           | 76            | 79            | 66            |         |         | 0          |
| 04 | 03A               | 75            | 91            | 62            | 92            | 79            | 93            |         |         | 0          |
| 05 | 01A               | 40            | 51            | 0D            | 70            | 40            | 56            |         |         | 0          |
| 06 |                   |               |               |               |               |               |               |         |         |            |
| 07 |                   |               |               |               |               |               |               |         |         |            |
| 08 |                   |               |               |               |               |               |               |         |         |            |
| 09 |                   |               |               |               |               |               |               |         |         |            |
| 10 |                   |               |               |               |               |               |               |         |         |            |
| 11 |                   |               |               |               |               |               |               |         |         |            |
| 12 |                   |               |               |               |               |               |               |         |         |            |
| 13 |                   |               |               |               |               |               |               |         |         |            |
| 14 |                   |               |               |               |               |               |               |         |         |            |
| 15 |                   |               |               |               |               |               |               |         |         |            |
| 16 |                   |               |               |               |               |               |               |         |         |            |
| 17 |                   |               |               |               |               |               |               |         |         |            |
| 18 |                   |               |               |               |               |               |               |         |         |            |
| 19 |                   |               |               |               |               |               |               |         |         |            |
| 20 |                   |               |               |               |               |               |               |         |         |            |
| 21 |                   |               |               |               |               |               |               |         |         |            |
| 22 |                   |               |               |               |               |               |               |         |         |            |
| 23 |                   |               |               |               |               |               |               |         |         |            |
| 24 |                   |               |               |               |               |               |               |         |         |            |
| 25 |                   |               |               |               |               |               |               |         |         |            |
| 26 |                   |               |               |               |               |               |               |         |         |            |
| 27 |                   |               |               |               |               |               |               |         |         |            |
| 28 |                   |               |               |               |               |               |               |         |         |            |
| 29 |                   |               |               |               |               |               |               |         |         |            |
| 30 |                   |               |               |               |               |               |               |         |         |            |

QC LIMITS

S1 (2FP) = 2-Fluorophenol (25-121)  
 S2 (PHL) = Phenol-d6 (24-113)  
 S3 (NBZ) = Nitrobenzene-d5 (23-120)  
 S4 (FBP) = 2-Fluorobiphenyl (30-115)  
 S5 (TBP) = 2,4,6-Tribromophenol (19-122)  
 S6 (TPH) = Terphenyl-d14 (18-137)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits  
 D Surrogate diluted out



2D  
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 980531C

Level: (low/med) LOW

|    | EPA<br>SAMPLE NO. | S1<br>(2FP) # | S2<br>(PHL) # | S3<br>(NBZ) # | S4<br>(FBP) # | S5<br>(TBP) # | S6<br>(TPH) # | S7<br># | S8<br># | TOT<br>OUT |
|----|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------|---------|------------|
| 01 | 03AR              | OD            | 76            | OD            | OD            | 95            | OD            |         |         | 0          |
| 02 |                   |               |               |               |               |               |               |         |         |            |
| 03 |                   |               |               |               |               |               |               |         |         |            |
| 04 |                   |               |               |               |               |               |               |         |         |            |
| 05 |                   |               |               |               |               |               |               |         |         |            |
| 06 |                   |               |               |               |               |               |               |         |         |            |
| 07 |                   |               |               |               |               |               |               |         |         |            |
| 08 |                   |               |               |               |               |               |               |         |         |            |
| 09 |                   |               |               |               |               |               |               |         |         |            |
| 10 |                   |               |               |               |               |               |               |         |         |            |
| 11 |                   |               |               |               |               |               |               |         |         |            |
| 12 |                   |               |               |               |               |               |               |         |         |            |
| 13 |                   |               |               |               |               |               |               |         |         |            |
| 14 |                   |               |               |               |               |               |               |         |         |            |
| 15 |                   |               |               |               |               |               |               |         |         |            |
| 16 |                   |               |               |               |               |               |               |         |         |            |
| 17 |                   |               |               |               |               |               |               |         |         |            |
| 18 |                   |               |               |               |               |               |               |         |         |            |
| 19 |                   |               |               |               |               |               |               |         |         |            |
| 20 |                   |               |               |               |               |               |               |         |         |            |
| 21 |                   |               |               |               |               |               |               |         |         |            |
| 22 |                   |               |               |               |               |               |               |         |         |            |
| 23 |                   |               |               |               |               |               |               |         |         |            |
| 24 |                   |               |               |               |               |               |               |         |         |            |
| 25 |                   |               |               |               |               |               |               |         |         |            |
| 26 |                   |               |               |               |               |               |               |         |         |            |
| 27 |                   |               |               |               |               |               |               |         |         |            |
| 28 |                   |               |               |               |               |               |               |         |         |            |
| 29 |                   |               |               |               |               |               |               |         |         |            |
| 30 |                   |               |               |               |               |               |               |         |         |            |

QC LIMITS

S1 (2FP) = 2-Fluorophenol (25-121)  
 S2 (PHL) = Phenol-d6 (24-113)  
 S3 (NBZ) = Nitrobenzene-d5 (23-120)  
 S4 (FBP) = 2-Fluorobiphenyl (30-115)  
 S5 (TBP) = 2,4,6-Tribromophenol (19-122)  
 S6 (TPH) = Terphenyl-d14 (18-137)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogate diluted out

FORM 3  
SOIL SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 980526C

Matrix Spike - Sample No.: SBLK2

Level: (low/med) LOW

| COMPOUND                | SPIKE<br>ADDED<br>(ug/Kg) | SAMPLE<br>CONCENTRATION<br>(ug/Kg) | LCS<br>CONCENTRATION<br>(ug/Kg) | LCS<br>%<br>REC # | QC.<br>LIMITS<br>REC. |
|-------------------------|---------------------------|------------------------------------|---------------------------------|-------------------|-----------------------|
| Phenol                  | 3330                      | 0.00                               | 2640                            | 79                | 5-112                 |
| 2-Chlorophenol          | 3330                      | 0.00                               | 2740                            | 82                | 23-134                |
| 1,4-Dichlorobenzene     | 3330                      | 0.00                               | 2610                            | 78                | 20-124                |
| N-Nitrosodi-N-propylami | 3330                      | 0.00                               | 2870                            | 86                | 1-230                 |
| 1,2,4-Trichlorobenzene  | 3330                      | 0.00                               | 2660                            | 80                | 44-142                |
| 4-Chloro-3-methylphenol | 3330                      | 0.00                               | 3090                            | 93                | 22-147                |
| Acenaphthene            | 3330                      | 0.00                               | 3050                            | 92                | 47-145                |
| 4-Nitrophenol           | 3330                      | 0.00                               | 2520                            | 76                | 1-132                 |
| 2,4-Dinitrotoluene      | 3330                      | 0.00                               | 3460                            | 104               | 39-139                |
| Pentachlorophenol       | 3330                      | 0.00                               | 2420                            | 73                | 14-176                |
| Pyrene                  | 3330                      | 0.00                               | 3290                            | 99                | 52-115                |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 11 outside limits

COMMENTS:

3D  
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 980527C

Matrix Spike - EPA Sample No.: 980517

Level: (low/med) LOW

| COMPOUND                | SPIKE<br>ADDED<br>(ug/Kg) | SAMPLE<br>CONCENTRATION<br>(ug/Kg) | MS<br>CONCENTRATION<br>(ug/Kg) | MS<br>%<br>REC # | QC.<br>LIMITS<br>REC. |
|-------------------------|---------------------------|------------------------------------|--------------------------------|------------------|-----------------------|
| Phenol                  | 3330                      |                                    | 3750                           | 113*             | 5-112                 |
| 2-Chlorophenol          | 3330                      |                                    | 1160                           | 35               | 23-134                |
| 1,4-Dichlorobenzene     | 3330                      |                                    | 2290                           | 69               | 20-124                |
| N-Nitrosodi-N-propylami | 3330                      |                                    | 2820                           | 85               | 1-230                 |
| 1,2,4-Trichlorobenzene  | 3330                      |                                    | 2470                           | 74               | 44-142                |
| 4-Chloro-3-methylphenol | 3330                      |                                    | 2430                           | 73               | 22-147                |
| Acenaphthene            | 3330                      |                                    | 3040                           | 91               | 47-145                |
| 4-Nitrophenol           | 3330                      |                                    | 2040                           | 61               | 1-132                 |
| 2,4-Dinitrotoluene      | 3330                      |                                    | 2310                           | 69               | 39-139                |
| Pentachlorophenol       | 3330                      |                                    | 2970                           | 89               | 14-176                |
| Pyrene                  | 3330                      |                                    | 2860                           | 86               | 52-115                |

| COMPOUND                | SPIKE<br>ADDED<br>(ug/Kg) | MSD<br>CONCENTRATION<br>(ug/Kg) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS |        |
|-------------------------|---------------------------|---------------------------------|-------------------|------------|-----------|--------|
|                         |                           |                                 |                   |            | RPD       | REC.   |
| Phenol                  | 3330                      | 4110                            | 123*              | 8          | 42        | 5-112  |
| 2-Chlorophenol          | 3330                      | 1270                            | 38                | 8          | 40        | 23-134 |
| 1,4-Dichlorobenzene     | 3330                      | 2380                            | 71                | 3          | 28        | 20-124 |
| N-Nitrosodi-N-propylami | 3330                      | 3180                            | 95                | 11         | 38        | 1-230  |
| 1,2,4-Trichlorobenzene  | 3330                      | 2560                            | 77                | 4          | 28        | 44-142 |
| 4-Chloro-3-methylphenol | 3330                      | 2620                            | 79                | 8          | 42        | 22-147 |
| Acenaphthene            | 3330                      | 3220                            | 97                | 6          | 31        | 47-145 |
| 4-Nitrophenol           | 3330                      | 2520                            | 76                | 22         | 50        | 1-132  |
| 2,4-Dinitrotoluene      | 3330                      | 2570                            | 77                | 11         | 38        | 39-139 |
| Pentachlorophenol       | 3330                      | 3300                            | 99                | 11         | 50        | 14-176 |
| Pyrene                  | 3330                      | 3010                            | 90                | 4          | 31        | 52-115 |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 2 out of 22 outside limits

COMMENTS:

Mountain States Analytical, Inc.  
Daily QC Batching Data  
Data Released for Reporting

06/09/98  
17:04:00  
Group: 22394

Analysis Batch Number: 13006-06/08/98-114 -1

Test Identification : 13006-Metals by hrICP, 6010A, s/sw

Sequence : DATP159

Number of Samples : 3

Batch Data-Date/Time : 06/09/98 / 08:09:50

| BLANK#     | ANALYTE  | CONC FOUND # | CONC LIMIT |
|------------|----------|--------------|------------|
| PBW1-428   | Silver   | ND           | 0.0050     |
|            | Arsenic  | 0.0000       | 0.0150     |
|            | Barium   | 0.0000       | 0.0030     |
|            | Cadmium  | ND           | 0.0020     |
|            | Chromium | ND           | 0.0100     |
|            | Lead     | 0.0000       | 0.0200     |
|            | Selenium | 0.0000       | 0.0300     |
| PBW2-428-2 | Silver   | ND           | 0.0050     |
|            | Arsenic  | 0.0000       | 0.0150     |
|            | Barium   | 0.0000       | 0.0030     |
|            | Cadmium  | ND           | 0.0020     |
|            | Chromium | ND           | 0.0100     |
|            | Lead     | 0.0000       | 0.0200     |
|            | Selenium | ND           | 0.0300     |

| SPIKE       |          |            |             |            |         | QC LIMITS |       |
|-------------|----------|------------|-------------|------------|---------|-----------|-------|
| SAMPLE#     | ANALYTE  | CONC ADDED | CONC SAMPLE | CONC SPIKE | % REC # | LOWER     | UPPER |
| 22436-80328 | Silver   | 0.0500     | -0.0034     | 0.0432     | 93.3    | 80.0      | 120.0 |
|             | Arsenic  | 2.0000     | 0.0871      | 2.0224     | 96.8    | 80.0      | 120.0 |
|             | Barium   | 2.0000     | 0.9739      | 2.8948     | 96.0    | 80.0      | 120.0 |
|             | Cadmium  | 0.0500     | 0.0026      | 0.0474     | 89.6    | 80.0      | 120.0 |
|             | Chromium | 0.2000     | 0.1421      | 0.3449     | 101.4   | 80.0      | 120.0 |
|             | Lead     | 0.5000     | 0.2229      | 0.7149     | 98.4    | 80.0      | 120.0 |
|             | Selenium | 2.0000     | 0.0045      | 1.9733     | 98.4    | 80.0      | 120.0 |

| MSD         |          |            |             |          |         | QC LIMITS |       |       |       |
|-------------|----------|------------|-------------|----------|---------|-----------|-------|-------|-------|
| SAMPLE#     | ANALYTE  | CONC ADDED | CONC SAMPLE | RESULT 2 | %REC2 # | LOWER     | UPPER | RPD # | LIMIT |
| 22436-80328 | Silver   | 0.0500     | -0.0034     | 0.0448   | 96.4    | 80.0      | 120.0 | 3.5   | 20.0  |
|             | Arsenic  | 2.0000     | 0.0871      | 2.0562   | 98.5    | 80.0      | 120.0 | 1.7   | 20.0  |
|             | Barium   | 2.0000     | 0.9739      | 2.7856   | 90.6    | 80.0      | 120.0 | 3.8   | 20.0  |
|             | Cadmium  | 0.0500     | 0.0026      | 0.0471   | 89.0    | 80.0      | 120.0 | 0.6   | 20.0  |
|             | Chromium | 0.2000     | 0.1421      | 0.3041   | 81.0    | 80.0      | 120.0 | 12.6  | 20.0  |
|             | Lead     | 0.5000     | 0.2229      | 0.6684   | 89.1    | 80.0      | 120.0 | 6.7   | 20.0  |
|             | Selenium | 2.0000     | 0.0045      | 1.9982   | 99.7    | 80.0      | 120.0 | 1.3   | 20.0  |

| DUPLICATE   |          |          |          |           |       |          |
|-------------|----------|----------|----------|-----------|-------|----------|
| SAMPLE#     | ANALYTE  | RESULT 1 | RESULT 2 | RPD #     | LIMIT | DILUTION |
| 22436-80328 | Silver   | -0.0034  | 0.0000   | 200.0(11) | 20.0  | 1.00     |
|             | Arsenic  | 0.0871   | 0.2491   | 96.4(5a)  | 20.0  | 1.00     |
|             | Barium   | 0.9739   | 1.1045   | 12.6      | 20.0  | 1.00     |
|             | Cadmium  | 0.0026   | 0.0035   | 28.0(5a)  | 20.0  | 1.00     |
|             | Chromium | 0.1421   | 0.1441   | 1.4       | 20.0  | 1.00     |
|             | Lead     | 0.2229   | 0.2415   | 8.0       | 20.0  | 1.00     |
|             | Selenium | 0.0045   | 0.0012   | 117.3(11) | 20.0  | 1.00     |

| CONTROL  |         |            |            |         | QC LIMITS |       |
|----------|---------|------------|------------|---------|-----------|-------|
| SAMPLE#  | ANALYTE | CONC FOUND | CONC KNOWN | % REC # | LOWER     | UPPER |
| LCSW-428 | Silver  | 0.0477     | 0.0500     | 95.3    | 80.0      | 120.0 |
|          | Arsenic | 1.8964     | 2.0000     | 94.8    | 80.0      | 120.0 |
|          | Barium  | 1.9098     | 2.0000     | 95.5    | 80.0      | 120.0 |

Analysis Batch Number: 13006-06/08/98-114 -1

Test Identification : 13006-Metals by hrICP, 6010A, s/sw

Sequence : DATP159

Number of Samples : 3

Batch Data-Date/Time : 06/09/98 / 08:09:50

| CONTROL    |          |            |            |           | QC LIMITS |       |
|------------|----------|------------|------------|-----------|-----------|-------|
| SAMPLE#    | ANALYTE  | CONC FOUND | CONC KNOWN | % REC #   | LOWER     | UPPER |
| LCSW-428   | Cadmium  | 0.0467     | 0.0500     | 93.5      | 80.0      | 120.0 |
|            | Chromium | 0.1860     | 0.2000     | 93.0      | 80.0      | 120.0 |
|            | Lead     | 0.4694     | 0.5000     | 93.9      | 80.0      | 120.0 |
|            | Selenium | 1.9309     | 2.0000     | 96.5      | 80.0      | 120.0 |
| LCSS-428-2 | Silver   | 43.5000    | 36.6000    | 118.9     | 78.5      | 121.5 |
|            | Arsenic  | 11.5000    | 6.9100     | 166.4(8a) | 44.9      | 154.8 |
|            | Barium   | 1214.0000  | 852.9000   | 142.3     | 11.4      | 188.5 |
|            | Cadmium  | 15.9000    | 13.7000    | 116.1     | 78.8      | 121.2 |
|            | Chromium | 44.9500    | 41.3000    | 108.8     | 72.6      | 127.1 |
|            | Lead     | 98.8000    | 89.2000    | 110.8     | 70.5      | 128.9 |
|            | Selenium | 26.0000    | 19.9000    | 130.7     | 4.2       | 196.0 |

|         |          |            |            |         | QC LIMITS |       |
|---------|----------|------------|------------|---------|-----------|-------|
| CCV #   | ANALYTE  | TRUE VALUE | BATCH READ | % REC # | LOWER     | UPPER |
| ICV-    | Silver   | 0.1000     | 0.0939     | 93.9    | 90.0      | 110.0 |
|         | Arsenic  | 0.4000     | 0.3937     | 98.4    | 90.0      | 110.0 |
|         | Barium   | 1.0000     | 1.0050     | 100.5   | 90.0      | 110.0 |
|         | Cadmium  | 1.0000     | 0.9750     | 97.5    | 90.0      | 110.0 |
|         | Chromium | 1.0000     | 0.9916     | 99.2    | 90.0      | 110.0 |
|         | Lead     | 5.0000     | 4.8778     | 97.6    | 90.0      | 110.0 |
|         | Selenium | 0.4000     | 0.3864     | 96.6    | 90.0      | 110.0 |
| CCV2--2 | Silver   | 0.1000     | 0.0935     | 93.5    | 90.0      | 110.0 |
|         | Arsenic  | 0.4000     | 0.3868     | 96.7    | 90.0      | 110.0 |
|         | Barium   | 1.0000     | 0.9882     | 98.8    | 90.0      | 110.0 |
|         | Cadmium  | 1.0000     | 0.9690     | 96.9    | 90.0      | 110.0 |
|         | Chromium | 1.0000     | 0.9811     | 98.1    | 90.0      | 110.0 |
|         | Lead     | 5.0000     | 4.8125     | 96.3    | 90.0      | 110.0 |
|         | Selenium | 0.4000     | 0.3928     | 98.2    | 90.0      | 110.0 |
| CCV3--3 | Silver   | 0.1000     | 0.0902     | 90.2    | 90.0      | 110.0 |
|         | Arsenic  | 0.4000     | 0.3833     | 95.8    | 90.0      | 110.0 |
|         | Barium   | 1.0000     | 1.0249     | 102.5   | 90.0      | 110.0 |
|         | Cadmium  | 1.0000     | 0.9535     | 95.3    | 90.0      | 110.0 |
|         | Chromium | 1.0000     | 0.9745     | 97.5    | 90.0      | 110.0 |
|         | Lead     | 5.0000     | 4.8596     | 97.2    | 90.0      | 110.0 |
|         | Selenium | 0.4000     | 0.3854     | 96.4    | 90.0      | 110.0 |
| CCV4--4 | Silver   | 0.1000     | 0.0915     | 91.5    | 90.0      | 110.0 |
|         | Arsenic  | 0.4000     | 0.3829     | 95.7    | 90.0      | 110.0 |
|         | Barium   | 1.0000     | 1.0105     | 101.0   | 90.0      | 110.0 |
|         | Cadmium  | 1.0000     | 0.9547     | 95.5    | 90.0      | 110.0 |
|         | Chromium | 1.0000     | 0.9722     | 97.2    | 90.0      | 110.0 |
|         | Lead     | 5.0000     | 4.8299     | 96.6    | 90.0      | 110.0 |
|         | Selenium | 0.4000     | 0.3983     | 99.6    | 90.0      | 110.0 |
| CCV5--5 | Silver   | 0.1000     | 0.0916     | 91.6    | 90.0      | 110.0 |
|         | Arsenic  | 0.4000     | 0.3832     | 95.8    | 90.0      | 110.0 |
|         | Barium   | 1.0000     | 1.0151     | 101.5   | 90.0      | 110.0 |
|         | Cadmium  | 1.0000     | 0.9577     | 95.8    | 90.0      | 110.0 |
|         | Chromium | 1.0000     | 0.9743     | 97.4    | 90.0      | 110.0 |
|         | Lead     | 5.0000     | 4.8468     | 96.9    | 90.0      | 110.0 |
|         | Selenium | 0.4000     | 0.3786     | 94.6    | 90.0      | 110.0 |

Analysis Batch Number: 13006-06/08/98-114 -1

Test Identification : 13006-Metals by hrICP, 6010A, s/sw

Sequence : DATP159

Number of Samples : 3

Batch Date/Time : 06/09/98 / 08:09:50

| CB#  | ANALYTE  | CONC FOUND # | CONC LIMIT |
|------|----------|--------------|------------|
| CB-  | Silver   | ND           | 0.0050     |
|      | Arsenic  | 0.0018       | 0.0150     |
|      | Barium   | 0.0003       | 0.0030     |
|      | Cadmium  | 0.0001       | 0.0020     |
|      | Chromium | 0.0001       | 0.0100     |
|      | Lead     | 0.0028       | 0.0200     |
|      | Selenium | ND           | 0.0300     |
| CB2- | Silver   | ND           | 0.0050     |
|      | Arsenic  | 0.0044       | 0.0150     |
|      | Barium   | ND           | 0.0030     |
|      | Cadmium  | 0.0001       | 0.0020     |
|      | Chromium | 0.0001       | 0.0100     |
|      | Lead     | 0.0035       | 0.0200     |
|      | Selenium | ND           | 0.0300     |
| CB3- | Silver   | ND           | 0.0050     |
|      | Arsenic  | 0.0025       | 0.0150     |
|      | Barium   | 0.0000       | 0.0030     |
|      | Cadmium  | 0.0001       | 0.0020     |
|      | Chromium | 0.0002       | 0.0100     |
|      | Lead     | 0.0017       | 0.0200     |
|      | Selenium | 0.0011       | 0.0300     |
| CB4- | Silver   | ND           | 0.0050     |
|      | Arsenic  | 0.0032       | 0.0150     |
|      | Barium   | 0.0001       | 0.0030     |
|      | Cadmium  | ND           | 0.0020     |
|      | Chromium | 0.0002       | 0.0100     |
|      | Lead     | ND           | 0.0200     |
|      | Selenium | ND           | 0.0300     |
| CB5- | Silver   | ND           | 0.0050     |
|      | Arsenic  | 0.0042       | 0.0150     |
|      | Barium   | 0.0001       | 0.0030     |
|      | Cadmium  | 0.0003       | 0.0020     |
|      | Chromium | ND           | 0.0100     |
|      | Lead     | 0.0023       | 0.0200     |
|      | Selenium | ND           | 0.0300     |

----- Result Footnotes -----

- (11) - The duplicate results cannot be evaluated because both results are <MDL.  
(5a) - Duplicates not evaluated: Results are <10x detection limit  
(8a) - See comments below.

----- Batch Notes -----

Arsenic LCSS is less than the limit of quantitation, use LCSW.

Groups & Samples

-----

Analysis Batch Number: 13006-06/08/98-114 -1

Test Identification : 13006-Metals by hrICP, 6010A, s/sw

Sequence : DATP159

Number of Samples : 3

Batch Data-Date/Time : 06/09/98 / 08:09:50

|             |             |             |             |             |             |             |             |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 22394-80185 | 22394-80186 | 22394-80187 | 22436-80324 | 22436-80325 | 22436-80326 | 22436-80327 | 22436-80328 |
| 22436-80329 | 22436-80330 | 22436-80331 | 22436-80332 | 22440-80344 | 22461-80400 | 22463-80404 | 22468-80417 |
| 22562-80770 | 22562-80771 |             |             |             |             |             |             |

Mountain States Analytical, Inc.  
Daily QC Batching Data  
Data Released for Reporting

06/09/98  
15:45:20  
Group: 22394

Analysis Batch Number: 1522 -06/08/98-107 -1

Test Identification : 1522 -Mercury by CVAA, sw, 7471A

Sequence : 1522 -1

Number of Samples : 19

Batch Data-Date/Time : 06/09/98 / 10:22:33

| BLANK#     | ANALYTE | CONC FOUND # | CONC LIMIT |
|------------|---------|--------------|------------|
| PBS1-023   | Mercury | 0.0070       | 0.0700     |
| PBS2-023-2 | Mercury | 0.0240       | 0.0700     |

|             |         |            |             |            |         | QC LIMITS |       |
|-------------|---------|------------|-------------|------------|---------|-----------|-------|
| SAMPLE#     | ANALYTE | CONC ADDED | CONC SAMPLE | CONC SPIKE | % REC # | LOWER     | UPPER |
| 22436-80328 | Mercury | 0.3320     | 0.0260      | 0.3700     | 103.6   | 80.0      | 120.0 |

|             |         |            |             |          |         | QC LIMITS |       |       |       |
|-------------|---------|------------|-------------|----------|---------|-----------|-------|-------|-------|
| SAMPLE#     | ANALYTE | CONC ADDED | CONC SAMPLE | RESULT 2 | %REC2 # | LOWER     | UPPER | RPD # | LIMIT |
| 22436-80328 | Mercury | 0.3320     | 0.0260      | 0.3740   | 104.8   | 80.0      | 120.0 | 1.1   | 20.0  |

| DUPLICATE   |         |          |          |       |       |          |
|-------------|---------|----------|----------|-------|-------|----------|
| SAMPLE#     | ANALYTE | RESULT 1 | RESULT 2 | RPD # | LIMIT | DILUTION |
| 22436-80328 | Mercury | 0.0260   | 0.0260   | 0.0   | 20.0  | 1.00     |

|          |         |            |            |         |       | QC LIMITS |  |
|----------|---------|------------|------------|---------|-------|-----------|--|
| SAMPLE#  | ANALYTE | CONC FOUND | CONC KNOWN | % REC # | LOWER | UPPER     |  |
| LCSS-023 | Mercury | 3.3580     | 3.2300     | 104.0   | 47.9  | 182.3     |  |

|        |         |            |            |         |       | QC LIMITS |  |
|--------|---------|------------|------------|---------|-------|-----------|--|
| SCV #  | ANALYTE | TRUE VALUE | BATCH READ | % REC # | LOWER | UPPER     |  |
| ICV-   | Mercury | 3.0000     | 3.1110     | 103.7   | 90.0  | 110.0     |  |
| SCV--2 | Mercury | 5.0000     | 5.1070     | 102.1   | 80.0  | 120.0     |  |
| SCV--3 | Mercury | 5.0000     | 5.1020     | 102.0   | 80.0  | 120.0     |  |
| SCV--4 | Mercury | 5.0000     | 5.0990     | 102.0   | 80.0  | 120.0     |  |
| SCV--5 | Mercury | 5.0000     | 5.0780     | 101.6   | 80.0  | 120.0     |  |
| SCV--6 | Mercury | 5.0000     | 5.1010     | 102.0   | 80.0  | 120.0     |  |
| ICV--7 | Mercury | 3.0000     | 3.0510     | 101.7   | 90.0  | 110.0     |  |
| SCV--8 | Mercury | 5.0000     | 4.9670     | 99.3    | 80.0  | 120.0     |  |
| SCV--9 | Mercury | 5.0000     | 5.2500     | 105.0   | 80.0  | 120.0     |  |

| SCB# | ANALYTE | CONC FOUND # | CONC LIMIT |
|------|---------|--------------|------------|
| ICB- | Mercury | ND           | 0.1000     |
| SCB- | Mercury | 0.0080       | 0.1000     |
| SCB- | Mercury | ND           | 0.1000     |
| SCB- | Mercury | ND           | 0.1000     |
| SCB- | Mercury | ND           | 0.1000     |
| SCB- | Mercury | ND           | 0.1000     |
| ICB- | Mercury | 0.0220       | 0.1000     |
| SCB- | Mercury | 0.0210       | 0.1000     |
| SCB- | Mercury | 0.0110       | 0.1000     |

Groups & Samples

|             |             |             |             |             |             |             |             |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 22339-79943 | 22355-79982 | 22394-80185 | 22394-80186 | 22394-80187 | 22436-80324 | 22436-80325 | 22436-80326 |
| 22436-80327 | 22436-80328 | 22436-80329 | 22436-80330 | 22436-80331 | 22436-80332 | 22461-80400 | 22473-80431 |



Mountain States Analytical, Inc.  
Daily QC Batching Data  
Data Released for Reporting

06/09/98  
15:45:20  
Group: 22394

Analysis Batch Number: 1522 -06/08/98-107 -1

Test Identification : 1522 -Mercury by CVAA, sw, 7471A

Sequence : 1522 -1

Number of Samples : 19

Batch Data-Date/Time : 06/09/98 / 10:22:33

Groups & Samples

-----  
22510-80543    22541-80678    22576-80798

1-24

# On Site Technologies, LTD.

612 E. Munay Drive  
Farmington, NM 87401  
(505) 325-2432

# CHAIN-OF-CUSTODY RECORD

## Subcontractor:

Mountain States Analytical, Inc.  
4645 West 2200 South

TEL: (800) 973-6724  
FAX: (801) 972-6278

Salt Lake City, UT 84119

Acct #:

18-May-98

| Sample ID   | Matrix | Collection Date     | Bottle Type | Requested Tests |         |        |
|-------------|--------|---------------------|-------------|-----------------|---------|--------|
|             |        |                     |             | SW3050A         | SW6010A | SW7471 |
| 9805051-01A | Soil   | 5/18/98 9:42:00 AM  | 4OZG        | 1               | 1       | 1      |
| 9805051-02A | Soil   | 5/18/98 10:36:00 AM | 4OZG        | 1               | 1       | 1      |
| 9805051-03A | Soil   | 5/18/98 11:22:00 AM | 4OZG        | 1               | 1       | 1      |

Comments: Please analyze three (3) soils for EPA 8260, 8270 and RCRA Metals.

Relinquished by:

*[Signature]*

Date/Time

5/18/98 1600

Relinquished by:

*[Signature]*

Date/Time

05/19/98 1220



# CHAIN OF CUSTODY RECORD

7268

612 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87499  
LAB: (505) 325-5667 • FAX: (505) 325-6256

|                                        |  |                                                  |  |
|----------------------------------------|--|--------------------------------------------------|--|
| Purchase Order No.:                    |  | Job No.                                          |  |
| Name: Denver Bearden                   |  | Name: Maureen Gannon                             |  |
| Company: PNM Gas Services              |  | Company: PNM Gas Services                        |  |
| Address: 603 W. Elm Street             |  | Mailing Address: Alverado Square, Mail Stop 0408 |  |
| City, State, Zip: Farmington, NM 87401 |  | City, State, Zip: Albuquerque, NM 87158          |  |
| Telephone No.:                         |  | Telephone No.:                                   |  |
| Telefax No.:                           |  | Telefax No.:                                     |  |
| Sampling Location: 1. DOE Drip MM. 94  |  | ANALYSIS REQUESTED                               |  |
| 2. DOE Drip MM. 101                    |  |                                                  |  |
| 3. DOE Drip CR 7890                    |  |                                                  |  |
| Sampler: R. Dedrick                    |  |                                                  |  |
| SAMPLE IDENTIFICATION                  |  | LAB ID                                           |  |
| DATE                                   |  | DATE                                             |  |
| TIME                                   |  | TIME                                             |  |
| MATRIX                                 |  | MATRIX                                           |  |
| PRES                                   |  | PRES                                             |  |
| 1. 9805180942 3 pt composite 52"       |  | 9805057-01A                                      |  |
| 2. 9805181036 3 pt composite 40"       |  | 9805057-02A                                      |  |
| 3. 9805181122 3 pt composite 40"       |  | 9805057-03A                                      |  |
| Relinquished by: R. Dedrick            |  | Received by: [Signature]                         |  |
| Date/Time: 5/15/98 0942                |  | Date/Time: 5/18/98 1253                          |  |
| Relinquished by:                       |  | Received by:                                     |  |
| Date/Time:                             |  | Date/Time:                                       |  |
| Relinquished by:                       |  | Received by:                                     |  |
| Date/Time:                             |  | Date/Time:                                       |  |
| Method of Shipment:                    |  | Special Instructions:                            |  |
| Authorized by: R. Dedrick              |  | Results to be sent to both parties.              |  |
| Date: 5/18/98                          |  |                                                  |  |

**612 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87499**  
**LAB: (505) 325-5667 • FAX: (505) 325-6256**

|                                         |  |                                                  |  |
|-----------------------------------------|--|--------------------------------------------------|--|
| Purchase Order No.:                     |  | Job No.                                          |  |
| Name: Denver Bearden                    |  | Company: PNM Gas Services                        |  |
| Address: 603 W. Elm Street              |  | City, State, Zip: Farmington, NM 87401           |  |
| Dept. 324-3763                          |  | Mailing Address: Alverado Square, Mail Stop 0408 |  |
| City, State, Zip: Albuquerque, NM 87158 |  | Telephone No. 505-848-2974                       |  |
| Telefax No.                             |  | Title                                            |  |

|                 |  |                      |  |                           |  |                                                  |  |                                         |  |                            |  |             |  |
|-----------------|--|----------------------|--|---------------------------|--|--------------------------------------------------|--|-----------------------------------------|--|----------------------------|--|-------------|--|
| SEND INVOICE TO |  | Name: Maureen Gannon |  | Company: PNM Gas Services |  | Mailing Address: Alverado Square, Mail Stop 0408 |  | City, State, Zip: Albuquerque, NM 87158 |  | Telephone No. 505-848-2974 |  | Telefax No. |  |
|                 |  | Title                |  |                           |  |                                                  |  |                                         |  |                            |  |             |  |

|                                           |  |                         |  |                       |  |
|-------------------------------------------|--|-------------------------|--|-----------------------|--|
| Sampling Location: 1. Deer Creek area, 74 |  | 2. Deer Creek area, 101 |  | 3. Deer Creek CR 1010 |  |
| Sampler: Chadwick                         |  |                         |  |                       |  |

| SAMPLE IDENTIFICATION    | SAMPLE DATE |       | TIME  | MATRIX | PRES. |
|--------------------------|-------------|-------|-------|--------|-------|
|                          | DATE        | TIME  |       |        |       |
| 7503130942 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130943 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130944 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130945 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130946 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130947 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130948 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130949 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130950 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130951 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130952 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130953 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130954 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130955 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130956 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130957 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130958 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130959 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130960 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130961 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130962 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130963 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130964 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130965 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130966 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130967 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130968 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130969 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130970 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130971 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130972 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130973 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130974 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130975 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130976 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130977 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130978 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130979 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130980 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130981 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130982 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130983 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130984 3pt composite | 7/10/96     | 10:00 | 10:00 | Soil   | Lo    |
| 7503130985               |             |       |       |        |       |

On Site Technologies Limited Partnership

ORIGINAL  
Invoice

ON SITE

TECHNOLOGIES, LTD.

P.O. Box 2606  
612 E. Murray Drive  
Farmington, NM 87499-2606

| DATE    | INVOICE NO. |
|---------|-------------|
| 6/17/98 | 281         |

BILL TO

PNM Gas Services  
Kathy Jukes  
603 W. Elm  
Farmington, NM 87401

SHIP TO

PNM Gas Services  
Kathy Jukes  
603 W. Elm  
Farmington, NM 87401

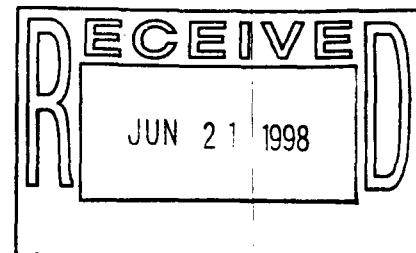
| P.O. NO. | TERMS  | DUE DATE | REP | PROJECT |
|----------|--------|----------|-----|---------|
|          | Net 15 | 7/2/98   | DWC | 2-1000  |

| DESCRIPTION | QTY | RATE | AMOUNT |
|-------------|-----|------|--------|
|-------------|-----|------|--------|

|                       |   |       |        |
|-----------------------|---|-------|--------|
| Diesel Range Organics | 6 | 55.00 | 330.00 |
| BTEX Method 8020      | 2 | 65.00 | 130.00 |

Jicarilla #151-3  
Jicarilla #151-7E  
Jicarilla #151-7E Drip #1  
Work Order #9806037  
SJC\Farmington

5.9375% 27.31



PLEASE PAY FROM  
THIS INVOICE

HOME CENTER: 7046  
5-186000-525-370-7046-XXRB-5998

79958102

Thank you for your business.

Total \$487.31

**ON SITE**  
TECHNOLOGIES, LTD.

On Site Technologies Limited Partnership

P.O. Box 2606  
612 E. Murray Drive  
Farmington, NM 87499-2606

**ORIGINAL  
Invoice**

| DATE    | INVOICE NO. |
|---------|-------------|
| 6/17/98 | 281         |

**BILL TO**

PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

**SHIP TO**

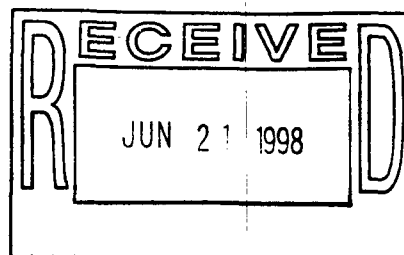
PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

| P.O. NO. | TERMS  | DUE DATE | REP | PROJECT |
|----------|--------|----------|-----|---------|
|          | Net 15 | 7/2/98   | DWC | 2-1000  |

| DESCRIPTION           | QTY | RATE  | AMOUNT |
|-----------------------|-----|-------|--------|
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| BTEX Method 8020      | 2   | 65.00 | 130.00 |

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Jicarilla #151-7E  
Jicarilla #151-7E Drip #1  
Work Order #9806037  
SJC\Farmington

5.9375% 27.31



**PLEASE PAY FROM  
THIS INVOICE**

HOME CENTER: 7046  
5-186000-525- -370-7046-XXRB-5998

79958402

Thank you for your business.

**Total** \$487.31

On Site Technologies Limited Partnership

# ORIGINAL Invoice

**ON SITE**

TECHNOLOGIES, LTD.

P.O. Box 2606  
612 E. Murray Drive  
Farmington, NM 87499-2606

| DATE    | INVOICE NO. |
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| 6/17/98 | 281         |

**BILL TO**

PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

**SHIP TO**

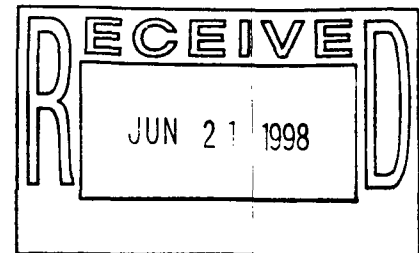
PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

| P.O. NO. | TERMS  | DUE DATE | REP | PROJECT |
|----------|--------|----------|-----|---------|
|          | Net 15 | 7/2/98   | DWC | 2-1000  |

| DESCRIPTION           | QTY | RATE  | AMOUNT |
|-----------------------|-----|-------|--------|
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| BTEX Method 8020      | 2   | 65.00 | 130.00 |

Jicarilla #151-3  
Jicarilla #151-7E  
Jicarilla #151-7E Drip #1  
Work Order #9806037  
SJC\Farmington

5.9375% 27.31



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**Total** \$487.31

# ORIGINAL Invoice

On Site Technologies Limited Partnership

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P.O. Box 2606  
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Farmington, NM 87499-2606

| DATE    | INVOICE NO. |
|---------|-------------|
| 6/17/98 | 281         |

### BILL TO

PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

### SHIP TO

PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

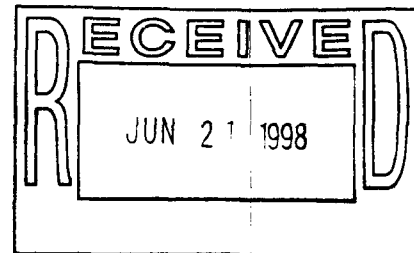
| P.O. NO. | TERMS  | DUE DATE | REP | PROJECT |
|----------|--------|----------|-----|---------|
|          | Net 15 | 7/2/98   | DWC | 2-1000  |

| DESCRIPTION | QTY | RATE | AMOUNT |
|-------------|-----|------|--------|
|-------------|-----|------|--------|

|                       |   |       |        |
|-----------------------|---|-------|--------|
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Jicarilla #151-3  
Jicarilla #151-7E  
Jicarilla #151-7E Drip #1  
Work Order #9806037  
SJC/Farmington

5.9375% 27.31



**PLEASE PAY FROM  
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HOME CENTER: 7046  
5-186000-525-370-7046-XXRB-5998

79958402

Thank you for your business.

**Total** \$487.31



**ON SITE**  
TECHNOLOGIES, LTD.

On Site Technologies Limited Partnership

P.O. Box 2606  
612 E. Murray Drive  
Farmington, NM 87499-2606

# ORIGINAL Invoice

| DATE    | INVOICE NO. |
|---------|-------------|
| 6/16/98 | 267         |

## BILL TO

PNM Gas Services  
Kathy Jukes  
603 W. Elm  
Farmington, NM 87401

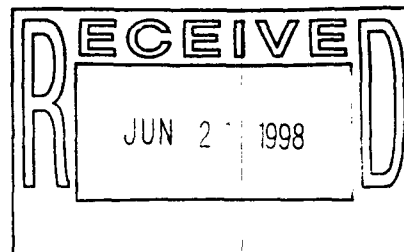
## SHIP TO

PNM Gas Services  
Kathy Jukes  
603 W. Elm  
Farmington, NM 87401

| P.O. NO. | TERMS  | DUE DATE | REP | PROJECT |
|----------|--------|----------|-----|---------|
|          | Net 15 | 7/1/98   | DWC | 2-1000  |

| DESCRIPTION                                                                          | QTY | RATE    | AMOUNT |
|--------------------------------------------------------------------------------------|-----|---------|--------|
| Diesel Range Organics                                                                | 2   | 55.00   | 110.00 |
| Jicarilla #G-8A L.F.<br>Jicarilla #G-6 L.F.<br>Work Order #9806025<br>SJC/Farmington |     | 5.9375% | 6.53   |

**PLEASE PAY FROM  
THIS INVOICE**



HOME CENTER: 7046  
5-186000-525-  -370-7046-XXRB-5998  
79958402

Thank you for your business.

|              |                 |
|--------------|-----------------|
| <b>Total</b> | <b>\$116.53</b> |
|--------------|-----------------|

On Site Technologies Limited Partnership

ORIGINAL  
Invoice

ON SITE

TECHNOLOGIES, LTD.

P.O. Box 2606  
612 E. Murray Drive  
Farmington, NM 87499-2606

DATE INVOICE NO.

6/17/98

280

BILL TO

PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

SHIP TO

PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

| P.O. NO. | TERMS  | DUE DATE | REP | PROJECT |
|----------|--------|----------|-----|---------|
|          | Net 15 | 7/2/98   | DWC | 2-1000  |

| DESCRIPTION | QTY | RATE | AMOUNT |
|-------------|-----|------|--------|
|-------------|-----|------|--------|

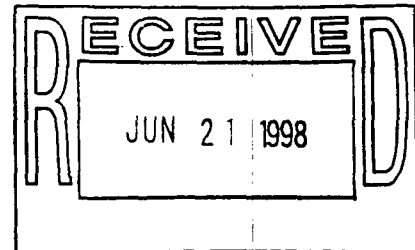
|                       |   |       |        |
|-----------------------|---|-------|--------|
| Diesel Range Organics | 3 | 55.00 | 165.00 |
| BTEX Method 8020      | 3 | 65.00 | 195.00 |

Federal #32-21  
Gallegos #7  
Work Order #9806036  
SJC\Farmington

5.9375%

21.38

PLEASE PAY FROM  
THIS INVOICE



HOME CENTER: 7046  
5-186000-525- -370-7046-XXRB-5998

79958700

Thank you for your business.

Total

\$381.38

On Site Technologies Limited Partnership

# ORIGINAL Invoice

## ON SITE

TECHNOLOGIES, LTD.

P.O. Box 2606  
612 E. Murray Drive  
Farmington, NM 87499-2606

DATE INVOICE NO.

6/16/98

267

### BILL TO

PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

### SHIP TO

PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

P.O. NO.

TERMS

DUE DATE

REP

PROJECT

Net 15

7/1/98

DWC

2-1000

DESCRIPTION

QTY

RATE

AMOUNT

Diesel Range Organics

2

55.00

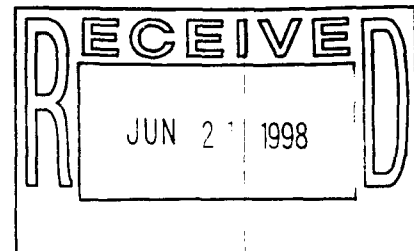
110.00

Jicarilla #G-8A L.F.  
Jicarilla #G-6 L.F.  
Work Order #9806025  
SJC\Farmington

5.9375%

6.53

**PLEASE PAY FROM  
THIS INVOICE**



HOME CENTER: 7046

5-186000-525-  -370-7046-XXRB-5998

79958402

Thank you for your business.

**Total**

\$116.53

On Site Technologies Limited Partnership

ORIGINAL  
Invoice

ON SITE

TECHNOLOGIES, LTD.

P.O. Box 2606  
612 E. Murray Drive  
Farmington, NM 87499-2606

DATE INVOICE NO.

6/17/98

280

BILL TO

PNM Gas Services  
Kathy Jukes  
603 W. Elm  
Farmington, NM 87401

SHIP TO

PNM Gas Services  
Kathy Jukes  
603 W. Elm  
Farmington, NM 87401

P.O. NO.

TERMS

DUE DATE

REP

PROJECT

Net 15

7/2/98

DWC

2-1000

DESCRIPTION

QTY

RATE

AMOUNT

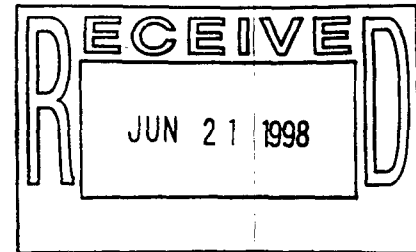
|                       |   |       |        |
|-----------------------|---|-------|--------|
| Diesel Range Organics | 3 | 55.00 | 165.00 |
| BTEX Method 8020      | 3 | 65.00 | 195.00 |

Federal #32-21  
Gallegos #7  
Work Order #9806036  
SJC\Farmington

5.9375%

21.38

PLEASE PAY FROM  
THIS INVOICE



HOME CENTER: 7046

5-186000-525- -370-7046-XXRB-5998

79958700

Thank you for your business.

Total

\$381.38

**ON SITE**  
TECHNOLOGIES, LTD.

On Site Technologies Limited Partnership

P.O. Box 2606  
612 E. Murray Drive  
Farmington, NM 87499-2606

# ORIGINAL Invoice

| DATE    | INVOICE NO. |
|---------|-------------|
| 6/16/98 | 267         |

## BILL TO

PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

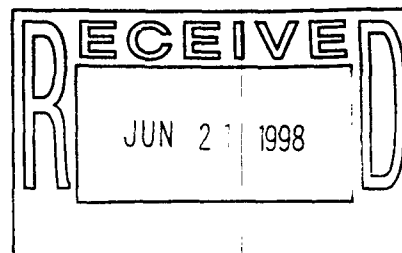
## SHIP TO

PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

| P.O. NO. | TERMS  | DUE DATE | REP | PROJECT |
|----------|--------|----------|-----|---------|
|          | Net 15 | 7/1/98   | DWC | 2-1000  |

| DESCRIPTION                                                                          | QTY | RATE    | AMOUNT |
|--------------------------------------------------------------------------------------|-----|---------|--------|
| Diesel Range Organics                                                                | 2   | 55.00   | 110.00 |
| Jicarilla #G-8A L.F.<br>Jicarilla #G-6 L.F.<br>Work Order #9806025<br>SJC\Farmington |     | 5.9375% | 6.53   |

**PLEASE PAY FROM  
THIS INVOICE**



HOME CENTER: 7046  
5-186000-525-  -370-7046-XXRB-5998

79958402

Thank you for your business.

|              |          |
|--------------|----------|
| <b>Total</b> | \$116.53 |
|--------------|----------|

On Site Technologies Limited Partnership

ORIGINAL  
Invoice

ON SITE

TECHNOLOGIES, LTD.

P.O. Box 2606  
612 E. Murray Drive  
Farmington, NM 87499-2606

| DATE    | INVOICE NO. |
|---------|-------------|
| 6/17/98 | 280         |

BILL TO

PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

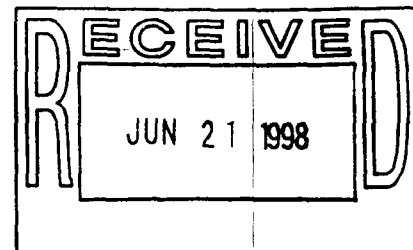
SHIP TO

PNM Gas Services  
Kathy Juckes  
603 W. Elm  
Farmington, NM 87401

| P.O. NO. | TERMS  | DUE DATE | REP | PROJECT |
|----------|--------|----------|-----|---------|
|          | Net 15 | 7/2/98   | DWC | 2-1000  |

| DESCRIPTION                                                            | QTY | RATE    | AMOUNT |
|------------------------------------------------------------------------|-----|---------|--------|
| Diesel Range Organics                                                  | 3   | 55.00   | 165.00 |
| BTEX Method 8020                                                       | 3   | 65.00   | 195.00 |
| Federal #32-21<br>Gallegos #7<br>Work Order #9806036<br>SJC\Farmington |     | 5.9375% | 21.38  |

PLEASE PAY FROM  
THIS INVOICE



HOME CENTER: 7046  
5-186000-525-      -370-7046-XXRB-5998

79958700

Thank you for your business.

|       |          |
|-------|----------|
| Total | \$381.38 |
|-------|----------|

# CHAIN OF CUSTODY RECORD

Date:

612 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87499  
LAB: (505) 325-5667 • FAX: (505) 325-6256

[illegible]

OFF: (505) 325-5667



LAB: (505) 325-1556

April 20, 1998

Maureen Gannon  
PNM - Public Service Company of NM  
Alvarado Square Mail Stop 0408  
Albuquerque, NM 87158  
TEL: (505) 241-2974  
FAX (505) 241-2340

RE: DOE Drip MM\_94

Order No.: 9803055

Dear Maureen Gannon,

On Site Technologies, LTD. received 1 sample on 3/24/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

- AQPREP TOTAL METALS: ICP (SW3010A)
- CORROSIVITY by pH (SW9045B)
- CYANIDE, Reactive (SW7.3.3.2)
- ICP METALS, TCLP Leached (SW1311/6010A)
- IGNITABILITY (SW1010)
- MERCURY, TCLP Leached (SW7470)
- SULFIDE, Reactive (SW7.3.4.2)
- TCLP Sample Prep (Metals) (SW1311)
- TCLP ZHE (Vol extraction) (SW1311)
- VOLATILES, TCLP Leached (SW1311/8240A)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "David Cox", is written over a horizontal line.

David Cox





OFF: (505) 325-5667

LAB: (505) 325-1556

**On Site Technologies, LTD.**

Date: 20-Apr-98

---

**CLIENT:** PNM - Public Service Company of NM  
**Project:** DOE Drip MM\_94  
**Lab Order:** 9803055

---

**CASE NARRATIVE**

Sample(s) sub-contracted to Mountain States Analytical, Inc. Salt Lake City, Utah.



OFF: (505) 325-5667



LAB: (505) 325-1556

April 20, 1998

Maureen Gannon  
PNM - Public Service Company of NM  
Alvarado Square Mail Stop 0408  
Albuquerque, NM 87158  
TEL: (505) 241-2974  
FAX (505) 241-2340

RE: DOE Drip MM\_101

Order No.: 9803056

Dear Maureen Gannon,

On Site Technologies, LTD. received 1 sample on 3/24/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

AQPREP TOTAL METALS: ICP (SW3010A)  
CORROSIVITY by pH (SW9045B)  
CYANIDE, Reactive (SW7.3.3.2)  
ICP METALS, TCLP Leached (SW1311/6010A)  
IGNITABILITY (SW1010)  
MERCURY, TCLP Leached (SW7470)  
SULFIDE, Reactive (SW7.3.4.2)  
TCLP Sample Prep (Metals) (SW1311)  
TCLP ZHE (Vol extraction) (SW1311)  
VOLATILES, TCLP Leached (SW1311/8240A)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 20-Apr-98

---

**CLIENT:** PNM - Public Service Company of NM

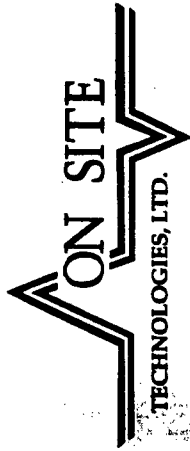
**Project:** DOE Drip MM\_101

**Lab Order:** 9803056

**CASE NARRATIVE**

---

Sample(s) were sub-contracted to Mountain States Analytical, Inc. Salt Lake City, Utah.



# CHAIN OF CUSTODY RECORD

7204

Page: 1 of 1

Date: 3/24/98

612 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87499  
LAB: (505) 325-5667 • FAX: (505) 325-6256

|                                            |  |                                                  |  |
|--------------------------------------------|--|--------------------------------------------------|--|
| Purchase Order No.:                        |  | Job No.                                          |  |
| Name: Denver Bearden                       |  | Title: Maureen Gannon                            |  |
| Company: PNM Gas Services                  |  | Company: PNM Gas Services                        |  |
| Address: 603 W. Elm Street                 |  | Mailing Address: Alverado Square, Mail Stop 0408 |  |
| City, State, Zip: Farmington, NM 87401     |  | City, State, Zip: Albuquerque, NM 87158          |  |
| Sampling Location:                         |  | Telephone No.: 505-848-2974                      |  |
| Telefax No.:                               |  | Telefax No.:                                     |  |
| SEND INVOICE TO                            |  | RESULTS TO                                       |  |
| Name: DOE Drip mile marker 101             |  | Name: ANALYSIS REQUESTED                         |  |
| Company: Rm Deducte                        |  | Company: ANALYSIS REQUESTED                      |  |
| Address: 7803541430                        |  | Address: ANALYSIS REQUESTED                      |  |
| City, State, Zip: Farmington, NM 87401     |  | City, State, Zip: Farmington, NM 87401           |  |
| Sampling Location:                         |  | Sampling Location:                               |  |
| Sample ID:                                 |  | Sample ID:                                       |  |
| Sample Identification:                     |  | Sample Identification:                           |  |
| Date:                                      |  | Date:                                            |  |
| Time:                                      |  | Time:                                            |  |
| Matrix:                                    |  | Matrix:                                          |  |
| Pres:                                      |  | Pres:                                            |  |
| Number of Containers:                      |  | Number of Containers:                            |  |
| 2                                          |  | 2                                                |  |
| Received by: R. A. Deducte                 |  | Received by: J. G.                               |  |
| Date/Time: 3/24/98 11:28                   |  | Date/Time: 3/24/98 11:28                         |  |
| Relinquished by:                           |  | Relinquished by:                                 |  |
| Date/Time:                                 |  | Date/Time:                                       |  |
| Relinquished by:                           |  | Relinquished by:                                 |  |
| Date/Time:                                 |  | Date/Time:                                       |  |
| Relinquished by:                           |  | Relinquished by:                                 |  |
| Date/Time:                                 |  | Date/Time:                                       |  |
| Method of Shipment:                        |  | Method of Shipment:                              |  |
| Authorized by: R. A. Deducte               |  | Authorized by: J. G.                             |  |
| Date: 3/24/98                              |  | Date: 3/24/98                                    |  |
| (Client Signature Must Accompany Request)  |  | (Client Signature Must Accompany Request)        |  |
| Disruptors: White • On Site • Yellow • LAB |  | Disruptors: White • On Site • Yellow • LAB       |  |
| Print • Sampler                            |  | Print • Sampler                                  |  |
| Goldmod • Client                           |  | Goldmod • Client                                 |  |
| 24-48 Hours                                |  | 24-48 Hours                                      |  |
| 10 Working Days                            |  | 10 Working Days                                  |  |
| Special Instructions:                      |  | Special Instructions:                            |  |
| Results to be sent to both parties.        |  | Results to be sent to both parties.              |  |

OFF: (505) 325-5667



LAB: (505) 325-1556

April 20, 1998

Maureen Gannon  
PNM - Public Service Company of NM  
Alvarado Square Mail Stop 0408  
Albuquerque, NM 87158  
TEL: (505) 241-2974  
FAX (505) 241-2340

RE: DOE Drip CR 7890

Order No.: 9803057

Dear Maureen Gannon,

On Site Technologies, LTD. received 1 sample on 3/24/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

AQPREP TOTAL METALS: ICP (SW3010A)  
CORROSIVITY by pH (SW9045B)  
CYANIDE, Reactive (SW7.3.3.2)  
ICP METALS, TCLP Leached (SW1311/6010A)  
IGNITABILITY (SW1010)  
MERCURY, TCLP Leached (SW7470)  
SULFIDE, Reactive (SW7.3.4.2)  
TCLP Sample Prep (Metals) (SW1311)  
TCLP ZHE (Vol extraction) (SW1311)  
VOLATILES, TCLP Leached (SW1311/8240A)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to be "David Cox", written in a cursive style.

David Cox



OFF: (505) 325-5667

LAB: (505) 325-1556

**On Site Technologies, LTD.**

**Date:** 20-Apr-98

---

**CLIENT:** PNM - Public Service Company of NM  
**Project:** DOE Drip CR 7890  
**Lab Order:** 9803057

---

**CASE NARRATIVE**

Sample(s) were sub-contracted to Mountain States Analytical, Inc. Salt Lake City, Utah

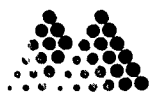
612 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87499  
LAB: (505) 325-5667 • FAX: (505) 325-6256

[illegible]

|                |       |           |   |              |   |                |   |                    |
|----------------|-------|-----------|---|--------------|---|----------------|---|--------------------|
| Distributions: | White | : On Site | : | Yellow - LAB | : | Pink - Sampler | : | Goldenrod - Client |
|----------------|-------|-----------|---|--------------|---|----------------|---|--------------------|



RECEIVED APR 17 1998



## Mountain States Analytical, Inc.

---

April 16, 1998

Mr. David Cox  
On Site Technologies, Ltd.  
612 E Murray Drive  
Farmington, NM 87401

Reference:

Project: Solid Waste Analysis  
MSAI Group: 21700

Dear Mr. Cox:

Enclosed are the analytical results for your project referenced above. The following samples are included in the report.

|                          |                           |
|--------------------------|---------------------------|
| DOE DM Marker 94 (Total) | DOE DM Marker 101 (Total) |
| DOE DCR 7890 (Total)     | DOE DM Marker 94 (TCLP)   |
| DOE DM Marker 101 (TCLP) | DOE DCR 7890 (TCLP)       |

All holding times were met for the tests performed on these samples.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting Mountain States Analytical, Inc. to serve as your analytical laboratory on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

With Regards,

Rolf E. Larsen  
Project Manager



## Mountain States Analytical, Inc.

The Quality Solution

On Site Technologies, Ltd.  
612 E Murray Drive  
Farmington, NM 87401

Attn: Mr. David Cox  
Project: Solid Waste Analysis

Sample ID: DOE DM Marker 94 (Total)  
Matrix: Solid Waste

MSAI Sample: 77378  
MSAI Group: 21700  
Date Reported: 04/16/98  
Discard Date: 05/16/98  
Date Submitted: 03/27/98  
Date Sampled: 03/24/98  
Collected by:  
Purchase Order: 7203  
Project No.:

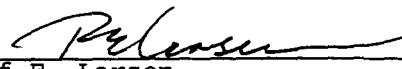
| Test | Analysis                                                                                                                                            | Results<br>as Received                    | Units                                            | Limit of<br>Quantitation |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------|--------------------------|
| 0395 | Corrosivity, sw, 9045C<br>Method: SW-846 9045C                                                                                                      | 7.74                                      | Std. Units                                       | 0.05                     |
| 0542 | Ignitability, sw<br>Method: MSAI IN HOUSE<br>Ignitable upon water contact<br>Ignitable by friction<br>Spontaneously combusts in air<br>Ignitability | Negative<br>Negative<br>Negative<br>> 146 | Degrees F<br>Degrees F<br>Degrees F<br>Degrees F | (1) 50                   |
| 1121 | Reactivity, (Cyanide & Sulfide)sw<br>Method: SW-846 CHAPTER 7.3<br>Cyanide (reactive)<br>Sulfide (reactive)                                         | 135<br>ND                                 | mg/kg<br>mg/kg                                   | 50<br>410                |

(1) Sample did not ignite up to 146 F. FLS

ND - Not detected at the limit of quantitation

This report consists of the following items: A cover letter, a signed analytical report for each sample specified on the cover letter, and if applicable, an inorganic quality control summary. Organic sample reports contain footnotes which describe any quality control anomalies which may have occurred.

Respectfully Submitted,  
Reviewed and Approved by:

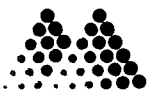
  
Rolf E. Larsen  
Project Manager

10  
Years of  
Quality  
Service

Corporate Office  
1645 West 2200 South, Salt Lake City, Utah 84119  
801-973-0050 • 1-800-973-6724(MSAI) • FAX 801-972-6278  
e-mail: service@msailabs.com

Southwest States Region  
6223 Bayonne, Spring, Texas 77389  
281-320-2842 • FAX 281-320-0989  
e-mail: gbrewer@msailabs.com





## Mountain States Analytical, Inc.

The Quality Solution

On Site Technologies, Ltd.  
612 E Murray Drive  
Farmington, NM 87401

Attn: Mr. David Cox  
Project: Solid Waste Analysis

Sample ID: DOE DM Marker 101 (Total)  
Matrix: Solid Waste

MSAI Sample: 77379  
MSAI Group: 21700  
Date Reported: 04/16/98  
Discard Date: 05/16/98  
Date Submitted: 03/27/98  
Date Sampled: 03/24/98  
Collected by:  
Purchase Order: 7203  
Project No.:

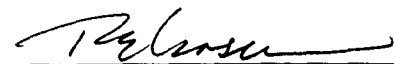
| Test | Analysis                                                                                                                                            | Results<br>as Received                    | Units                                            | Limit of<br>Quantitation |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------|--------------------------|
| 0395 | Corrosivity, sw, 9045C<br>Method: SW-846 9045C                                                                                                      | 6.55                                      | Std. Units                                       | 0.05                     |
| 0542 | Ignitability, sw<br>Method: MSAI IN HOUSE<br>Ignitable upon water contact<br>Ignitable by friction<br>Spontaneously combusts in air<br>Ignitability | Negative<br>Negative<br>Negative<br>> 146 | Degrees F<br>Degrees F<br>Degrees F<br>Degrees F | (1) 50                   |
| 1121 | Reactivity, (Cyanide & Sulfide)sw<br>Method: SW-846 CHAPTER 7.3<br>Cyanide (reactive)<br>Sulfide (reactive)                                         | 84<br>ND                                  | mg/kg<br>mg/kg                                   | 50<br>410                |

(1) Sample did not ignite up to 146 F. FLS

ND - Not detected at the limit of quantitation

This report consists of the following items: A cover letter, a signed analytical report for each sample specified on the cover letter, and if applicable, an inorganic quality control summary. Organic sample reports contain footnotes which describe any quality control anomalies which may have occurred.

Respectfully Submitted,  
Reviewed and Approved by:

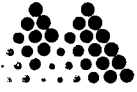
  
Rolf E. Larsen  
Project Manager

10  
Years of  
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Service

Corporate Office  
1645 West 2200 South, Salt Lake City, Utah 84119  
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e-mail: service@msailabs.com

Southwest States Region  
6223 Bayonne, Spring, Texas 77389  
281-320-2842 • FAX 281-320-0989  
e-mail: gbrewer@msailabs.com





## Mountain States Analytical, Inc.

*The Quality Solution*

On Site Technologies, Ltd.  
612 E Murray Drive  
Farmington, NM 87401

Attn: Mr. David Cox  
Project: Solid Waste Analysis

Sample ID: DOE DCR 7890 (Total)  
Matrix: Solid Waste

MSAI Sample: 77380  
MSAI Group: 21700  
Date Reported: 04/16/98  
Discard Date: 05/16/98  
Date Submitted: 03/27/98  
Date Sampled: 03/24/98  
Collected by:  
Purchase Order: 7203  
Project No.:

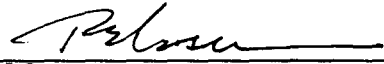
| Test | Analysis                                                                                                                                            | Results<br>as Received                    | Units                                            | Limit of<br>Quantitation |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------|--------------------------|
| 0395 | Corrosivity, sw, 9045C<br>Method: SW-846 9045C                                                                                                      | 7.67                                      | Std. Units                                       | 0.05                     |
| 0542 | Ignitability, sw<br>Method: MSAI IN HOUSE<br>Ignitable upon water contact<br>Ignitable by friction<br>Spontaneously combusts in air<br>Ignitability | Negative<br>Negative<br>Negative<br>> 146 | Degrees F<br>Degrees F<br>Degrees F<br>Degrees F | (1) 50                   |
| 1121 | Reactivity, (Cyanide & Sulfide)sw<br>Method: SW-846 CHAPTER 7.3<br>Cyanide (reactive)<br>Sulfide (reactive)                                         | ND<br>ND                                  | mg/kg<br>mg/kg                                   | 50<br>410                |

(1) Sample did not ignite up to 146 F. FLS

ND - Not detected at the limit of quantitation

This report consists of the following items: A cover letter, a signed analytical report for each sample specified on the cover letter, and if applicable, an inorganic quality control summary. Organic sample reports contain footnotes which describe any quality control anomalies which may have occurred.

Respectfully Submitted,  
Reviewed and Approved by:

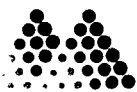
  
Rolf E. Larsen  
Project Manager

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Years of  
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Southwest States Region  
6223 Bayonne, Spring, Texas 77389  
281-320-2842 • FAX 281-320-0989  
e-mail: gbrewer@msailabs.com





## Mountain States Analytical, Inc.

*The Quality Solution*

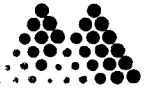
On Site Technologies, Ltd.  
612 E Murray Drive  
Farmington, NM 87401

Attn: Mr. David Cox  
Project: Solid Waste Analysis

Sample ID: DOE DM Marker 94 (TCLP)  
Matrix: Solid Waste

MSAI Sample: 77381  
MSAI Group: 21700  
Date Reported: 04/16/98  
Discard Date: 05/16/98  
Date Submitted: 03/27/98  
Date Sampled: 03/24/98  
Collected by:  
Purchase Order: 7203  
Project No.:

| Test Analysis                                                  | Results<br>as Received | Units    | Limit of<br>Quantitation |
|----------------------------------------------------------------|------------------------|----------|--------------------------|
| -----                                                          | -----                  | -----    | -----                    |
| 0259T Mercury by CVAA, TCLP, 7470<br>Method: SW-846 7470       | ND                     | mg/l     | 0.0005                   |
| 0392N Mercury Prep CVAA, TCLP, 7470<br>Method: SW-846 7470     | Batch. w057            |          |                          |
| 0392T Flame/ICP Prep, TCLP, 3010A<br>Method: SW-846 3010A      | Batch. w198            |          |                          |
| 13002 Metals by ICP, 6010A, TCLP<br>Method: SW-846 6010A       |                        |          |                          |
| Arsenic                                                        | ND                     | mg/l     | 0.18                     |
| Barium                                                         | 1.5                    | mg/l     | 1.0                      |
| Cadmium                                                        | ND                     | mg/l     | 0.020                    |
| Chromium                                                       | ND                     | mg/l     | 0.050                    |
| Lead                                                           | ND                     | mg/l     | 0.25                     |
| Selenium                                                       | ND                     | mg/l     | 0.30                     |
| Silver                                                         | ND                     | mg/l     | 0.020                    |
| 0946 TCLP Extraction, ZHE, sw, 1311<br>Method: SW-846 1311     | 100                    | % Solids | 0.001                    |
| 0947I TCLP Extraction, ICP Metals, 1311<br>Method: SW-846 1311 | 100                    | % Solids | 0.001                    |
| 0947M TCLP Extraction, Mercury, 1311<br>Method: SW-846 1311    | 100                    | % Solids | 0.001                    |
| 0948 Volatiles, TCLP 8260A, sw<br>Method: SW-846 8260A         |                        |          |                          |
| Benzene                                                        | ND                     | mg/l     | 0.050                    |
| Carbon tetrachloride                                           | ND                     | mg/l     | 0.050                    |
| Chlorobenzene                                                  | ND                     | mg/l     | 0.050                    |



## Mountain States Analytical, Inc.

On Site Technologies, Ltd.

*The Quality Solution*

Page 2

Sample ID: DOE DM Marker 94 (TCLP)

MSAI Sample: 77381

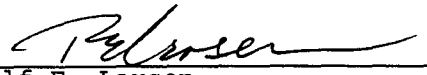
MSAI Group: 21700

| Test | Analysis                                          | Results<br>as Received | Units | Limit of<br>Quantitation |
|------|---------------------------------------------------|------------------------|-------|--------------------------|
| 0948 | Volatiles, TCLP 8260A, sw<br>Method: SW-846 8260A |                        |       |                          |
|      | Chloroform                                        | ND                     | mg/l  | 0.050                    |
|      | 1,2-Dichloroethane                                | ND                     | mg/l  | 0.050                    |
|      | 1,1-Dichloroethene                                | ND                     | mg/l  | 0.050                    |
|      | 2-Butanone (MEK)                                  | ND                     | mg/l  | 0.25                     |
|      | Tetrachloroethene                                 | ND                     | mg/l  | 0.050                    |
|      | Trichloroethene                                   | ND                     | mg/l  | 0.050                    |
|      | Vinyl chloride                                    | ND                     | mg/l  | 0.050                    |
|      | 1,4-Dichlorobenzene                               | ND                     | mg/l  | 0.050                    |

ND - Not detected at the limit of quantitation

This report consists of the following items: A cover letter, a signed analytical report for each sample specified on the cover letter, and if applicable, an inorganic quality control summary. Organic sample reports contain footnotes which describe any quality control anomalies which may have occurred.

Respectfully Submitted,  
Reviewed and Approved by:

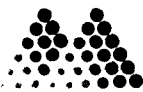
  
Rolf E. Larsen  
Project Manager

10  
Years of  
Quality  
Service

Corporate Office  
1645 West 2200 South, Salt Lake City, Utah 84119  
801-973-0050 • 1-800-973-6724(MSAI) • FAX 801-972-6278  
e-mail: service@msailabs.com

Southwest States Region  
6223 Bayonne, Spring, Texas 77389  
281-320-2842 • FAX 281-320-0989  
e-mail: gbrewer@msailabs.com





## Mountain States Analytical, Inc.

*The Quality Solution*

On Site Technologies, Ltd.  
612 E Murray Drive  
Farmington, NM 87401

Attn: Mr. David Cox  
Project: Solid Waste Analysis

Sample ID: DOE DM Marker 101 (TCLP)  
Matrix: Solid Waste

MSAI Sample: 77382  
MSAI Group: 21700  
Date Reported: 04/16/98  
Discard Date: 05/16/98  
Date Submitted: 03/27/98  
Date Sampled: 03/24/98  
Collected by:  
Purchase Order: 7203  
Project No.:

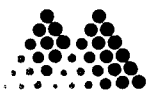
| Test Analysis                                                  | Results<br>as Received | Units    | Limit of<br>Quantitation |
|----------------------------------------------------------------|------------------------|----------|--------------------------|
| 0259T Mercury by CVAA, TCLP, 7470<br>Method: SW-846 7470       | ND                     | mg/l     | 0.0005                   |
| 0392N Mercury Prep CVAA, TCLP, 7470<br>Method: SW-846 7470     | Batch. w057            |          |                          |
| 0392T Flame/ICP Prep, TCLP, 3010A<br>Method: SW-846 3010A      | Batch. w198            |          |                          |
| 13002 Metals by ICP, 6010A, TCLP<br>Method: SW-846 6010A       |                        |          |                          |
| Arsenic                                                        | ND                     | mg/l     | 0.18                     |
| Barium                                                         | ND                     | mg/l     | 1.0                      |
| Cadmium                                                        | ND                     | mg/l     | 0.020                    |
| Chromium                                                       | ND                     | mg/l     | 0.050                    |
| Lead                                                           | ND                     | mg/l     | 0.25                     |
| Selenium                                                       | ND                     | mg/l     | 0.30                     |
| Silver                                                         | ND                     | mg/l     | 0.020                    |
| 0946 TCLP Extraction, ZHE, sw, 1311<br>Method: SW-846 1311     | 100                    | % Solids | 0.001                    |
| 0947I TCLP Extraction, ICP Metals, 1311<br>Method: SW-846 1311 | 100                    | % Solids | 0.001                    |
| 0947M TCLP Extraction, Mercury, 1311<br>Method: SW-846 1311    | 100                    | % Solids | 0.001                    |
| 0948 Volatiles, TCLP 8260A, sw<br>Method: SW-846 8260A         |                        |          |                          |
| Benzene                                                        | ND                     | mg/l     | 0.050                    |
| Carbon tetrachloride                                           | ND                     | mg/l     | 0.050                    |
| Chlorobenzene                                                  | ND                     | mg/l     | 0.050                    |

10  
Years of  
Quality  
Service

**Corporate Office**  
1645 West 2200 South, Salt Lake City, Utah 84119  
801-973-0050 • 1-800-973-6724(MSAI) • FAX 801-972-6278  
e-mail: [service@msailabs.com](mailto:service@msailabs.com)

**Southwest States Region**  
6223 Bayonne, Spring, Texas 77389  
281-320-2842 • FAX 281-320-0989  
e-mail: [gbrewer@msailabs.com](mailto:gbrewer@msailabs.com)





## Mountain States Analytical, Inc.

On Site Technologies, Ltd.

*The Quality Solution*

Page 2

Sample ID: DOE DM Marker 101 (TCLP)

MSAI Sample: 77382

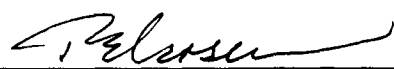
MSAI Group: 21700

| Test | Analysis                                          | Results<br>as Received | Units | Limit of<br>Quantitation |
|------|---------------------------------------------------|------------------------|-------|--------------------------|
| 0948 | Volatiles, TCLP 8260A, sw<br>Method: SW-846 8260A |                        |       |                          |
|      | Chloroform                                        | ND                     | mg/l  | 0.050                    |
|      | 1,2-Dichloroethane                                | ND                     | mg/l  | 0.050                    |
|      | 1,1-Dichloroethene                                | ND                     | mg/l  | 0.050                    |
|      | 2-Butanone (MEK)                                  | ND                     | mg/l  | 0.25                     |
|      | Tetrachloroethene                                 | ND                     | mg/l  | 0.050                    |
|      | Trichloroethene                                   | ND                     | mg/l  | 0.050                    |
|      | Vinyl chloride                                    | ND                     | mg/l  | 0.050                    |
|      | 1,4-Dichlorobenzene                               | ND                     | mg/l  | 0.050                    |

ND - Not detected at the limit of quantitation

This report consists of the following items: A cover letter, a signed analytical report for each sample specified on the cover letter, and if applicable, an inorganic quality control summary. Organic sample reports contain footnotes which describe any quality control anomalies which may have occurred.

Respectfully Submitted,  
Reviewed and Approved by:

  
Rolf E. Larsen  
Project Manager

10  
Years of  
Quality  
Service

### Corporate Office

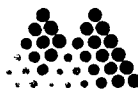
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## Mountain States Analytical, Inc.

*The Quality Solution*

On Site Technologies, Ltd.  
612 E Murray Drive  
Farmington, NM 87401

Attn: Mr. David Cox  
Project: Solid Waste Analysis

Sample ID: DOE DCR 7890 (TCLP)  
Matrix: Solid Waste

MSAI Sample: 77383  
MSAI Group: 21700  
Date Reported: 04/16/98  
Discard Date: 05/16/98  
Date Submitted: 03/27/98  
Date Sampled: 03/24/98  
Collected by:  
Purchase Order: 7203  
Project No.:

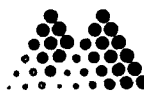
| Test Analysis                                                  | Results<br>as Received | Units    | Limit of<br>Quantitation |
|----------------------------------------------------------------|------------------------|----------|--------------------------|
| 0259T Mercury by CVAA, TCLP, 7470<br>Method: SW-846 7470       | ND                     | mg/l     | 0.0005                   |
| 0392N Mercury Prep CVAA, TCLP, 7470<br>Method: SW-846 7470     | Batch. w057            |          |                          |
| 0392T Flame/ICP Prep, TCLP, 3010A<br>Method: SW-846 3010A      | Batch. w198            |          |                          |
| 13002 Metals by ICP, 6010A, TCLP<br>Method: SW-846 6010A       |                        |          |                          |
| Arsenic                                                        | ND                     | mg/l     | 0.18                     |
| Barium                                                         | 1.2                    | mg/l     | 1.0                      |
| Cadmium                                                        | ND                     | mg/l     | 0.020                    |
| Chromium                                                       | ND                     | mg/l     | 0.050                    |
| Lead                                                           | ND                     | mg/l     | 0.25                     |
| Selenium                                                       | ND                     | mg/l     | 0.30                     |
| Silver                                                         | ND                     | mg/l     | 0.020                    |
| 0946 TCLP Extraction, ZHE, sw, 1311<br>Method: SW-846 1311     | 100                    | % Solids | 0.001                    |
| 0947I TCLP Extraction, ICP Metals, 1311<br>Method: SW-846 1311 | 100                    | % Solids | 0.001                    |
| 0947M TCLP Extraction, Mercury, 1311<br>Method: SW-846 1311    | 100                    | % Solids | 0.001                    |
| 0948 Volatiles, TCLP 8260A, sw<br>Method: SW-846 8260A         |                        |          |                          |
| Benzene                                                        | ND                     | mg/l     | 0.050                    |
| Carbon tetrachloride                                           | ND                     | mg/l     | 0.050                    |
| Chlorobenzene                                                  | ND                     | mg/l     | 0.050                    |

10  
Years of  
Quality  
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## Mountain States Analytical, Inc.

On Site Technologies, Ltd.

The Quality Solution

Page 2

Sample ID: DOE DCR 7890 (TCLP)

MSAI Sample: 77383  
MSAI Group: 21700

| Test | Analysis                                          | Results<br>as Received | Units | Limit of<br>Quantitation |
|------|---------------------------------------------------|------------------------|-------|--------------------------|
| 0948 | Volatiles, TCLP 8260A, sw<br>Method: SW-846 8260A |                        |       |                          |
|      | Chloroform                                        | ND                     | mg/l  | 0.050                    |
|      | 1,2-Dichloroethane                                | ND                     | mg/l  | 0.050                    |
|      | 1,1-Dichloroethene                                | ND                     | mg/l  | 0.050                    |
|      | 2-Butanone (MEK)                                  | ND                     | mg/l  | 0.25                     |
|      | Tetrachloroethene                                 | ND                     | mg/l  | 0.050                    |
|      | Trichloroethene                                   | ND                     | mg/l  | 0.050                    |
|      | Vinyl chloride                                    | ND                     | mg/l  | 0.050                    |
|      | 1,4-Dichlorobenzene                               | ND                     | mg/l  | 0.050                    |

ND - Not detected at the limit of quantitation

This report consists of the following items: A cover letter, a signed analytical report for each sample specified on the cover letter, and if applicable, an inorganic quality control summary. Organic sample reports contain footnotes which describe any quality control anomalies which may have occurred.

Respectfully Submitted,  
Reviewed and Approved by:

Rolf E. Larsen  
Project Manager

10  
Years of  
Quality  
Service

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Analysis Batch Number: 0259T-04/09/98-107 -1

Test Identification : 0259T-Mercury by CVAA, TCLP, 7470

Sequence : 0259T-1

Number of Samples : 13

Batch Data-Date/Time : 04/09/98 / 14:30:24

| BLANK#     | ANALYTE | CONC FOUND # | CONC LIMIT |
|------------|---------|--------------|------------|
| PBW1-057   | Mercury | 0.0300       | 0.1000     |
| PBW2-057-2 | Mercury | 0.0400       | 0.1000     |

|               |         |            |             |            |         | QC LIMITS |       |
|---------------|---------|------------|-------------|------------|---------|-----------|-------|
| SAMPLE#       | ANALYTE | CONC ADDED | CONC SAMPLE | CONC SPIKE | % REC # | LOWER     | UPPER |
| 21792-77671   | Mercury | 25.0000    | 0.0100      | 25.5500    | 102.2   | 80.0      | 115.0 |
| 21792-77671-2 | Mercury | 25.0000    | 0.0100      | 15.9000    | 63.6    | 50.0      | 115.0 |

|             |         |            |             |          |         | QC LIMITS |       |       |       |
|-------------|---------|------------|-------------|----------|---------|-----------|-------|-------|-------|
| SAMPLE#     | ANALYTE | CONC ADDED | CONC SAMPLE | RESULT 2 | %REC2 # | LOWER     | UPPER | RPD # | LIMIT |
| 21792-77671 | Mercury | 25.0000    | 0.0100      | 25.0500  | 100.2   | 80.0      | 115.0 | 2.0   | 20.0  |

| DUPLICATE   |         |          |          |       |       |          |
|-------------|---------|----------|----------|-------|-------|----------|
| SAMPLE#     | ANALYTE | RESULT 1 | RESULT 2 | RPD # | LIMIT | DILUTION |
| 21792-77671 | Mercury | 0.0100   | 0.0100   | 0.0   | 20.0  | 1.00     |

|          |         |            |            |         | QC LIMITS |       |
|----------|---------|------------|------------|---------|-----------|-------|
| SAMPLE#  | ANALYTE | CONC FOUND | CONC KNOWN | % REC # | LOWER     | UPPER |
| LCSW-057 | Mercury | 2.4200     | 2.5000     | 96.8    | 80.0      | 115.0 |

| QC LIMITS |         |            |            |         |       |       |
|-----------|---------|------------|------------|---------|-------|-------|
| CCV #     | ANALYTE | TRUE VALUE | BATCH READ | % REC # | LOWER | UPPER |
| ICV-      | Mercury | 3.0000     | 3.0200     | 100.7   | 90.0  | 110.0 |
| CCV--2    | Mercury | 5.0000     | 4.9900     | 99.8    | 80.0  | 120.0 |
| CCV--3    | Mercury | 5.0000     | 5.0200     | 100.4   | 80.0  | 120.0 |
| CCV--4    | Mercury | 5.0000     | 5.0600     | 101.2   | 80.0  | 120.0 |
| CCV--5    | Mercury | 5.0000     | 5.1100     | 102.2   | 80.0  | 120.0 |

| CCB# | ANALYTE | CONC FOUND # | CONC LIMIT |
|------|---------|--------------|------------|
| ICB- | Mercury | 0.0300       | 0.1000     |
| CCB- | Mercury | 0.0400       | 0.1000     |
| CCB- | Mercury | 0.0800       | 0.1000     |
| CCB- | Mercury | 0.0500       | 0.1000     |
| CCB- | Mercury | 0.0800       | 0.1000     |

## Groups &amp; Samples

|             |             |             |             |             |             |             |             |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 21700-77381 | 21700-77382 | 21700-77383 | 21734-77523 | 21736-77533 | 21737-77534 | 21738-77536 | 21777-77631 |
| 21780-77634 | 21783-77641 | 21783-77642 | 21792-77671 | 21801-77716 |             |             |             |

Analysis Batch Number: 0395 -04/10/98-117 -1

Test Identification : 0395 -Corrosivity, sw, 9045C

Sequence :

Number of Samples : 3

Batch Data-Date/Time : 04/14/98 / 17:23:11

## DUPLICATE

| SAMPLE#       | ANALYTE           | RESULT 1 | RESULT 2 | RPD # | LIMIT | DILUTION |
|---------------|-------------------|----------|----------|-------|-------|----------|
| 21831-77836   | pH of soil slurry | 9.6200   | 9.7500   | 1.3   | 1.4   | 1.00     |
| 21724-77491   | pH of soil slurry | 10.9600  | 11.0700  | 1.0   | 1.4   | 1.00     |
| 21865-77915   | pH of soil slurry | 8.1100   | 8.1000   | 0.1   | 1.0   | 1.00     |
| 21724-77491-2 | pH of soil slurry | 10.9100  | 11.0400  | 1.2   | 1.4   | 1.00     |

## CONTROL

| SAMPLE# | ANALYTE           | CONC FOUND | CONC KNOWN | % REC # | QC LIMITS |       |
|---------|-------------------|------------|------------|---------|-----------|-------|
|         |                   |            |            |         | LOWER     | UPPER |
| LCS-1   | pH of soil slurry | 3.9900     | 4.0000     | 99.8    | 97.1      | 104.1 |
| LCS-2   | pH of soil slurry | 4.1300     | 4.0000     | 103.3   | 97.1      | 104.1 |
| LCS-3   | pH of soil slurry | 4.1500     | 4.0000     | 103.8   | 97.1      | 104.1 |
| LCS-4   | pH of soil slurry | 4.0900     | 4.0000     | 102.3   | 97.1      | 104.1 |
| LCS-6   | pH of soil slurry | 4.0300     | 4.0000     | 100.8   | 97.1      | 104.1 |
| LCS-5   | pH of soil slurry | 11.9700    | 12.0000    | 99.8    | 97.1      | 104.1 |

## Groups &amp; Samples

-----  
21700-77378    21700-77379    21700-77380    21724-77491    21831-77836    21865-77915

Analysis Batch Number: 0542 -04/14/98-031 -1  
Test Identification : 0542 -Ignitability, sw  
Number of Samples : 3  
Batch Data-Date/Time : 04/14/98 / 16:23:06

Sequence :

## DUPLICATE

| <u>SAMPLE#</u> | <u>ANALYTE</u> | <u>RESULT 1</u> | <u>RESULT 2</u> | <u>RPD #</u> | <u>LIMIT</u> | <u>DILUTION</u> |
|----------------|----------------|-----------------|-----------------|--------------|--------------|-----------------|
| 21738-77537    | Ignitability   | 75.0000         | 78.0000         | 3.9          | 7.8          | 1.00            |

## CONTROL

| <u>SAMPLE#</u> | <u>ANALYTE</u> | <u>CONC FOUND</u> | <u>CONC KNOWN</u> | <u>% REC #</u> | <u>QC LIMITS</u> |              |
|----------------|----------------|-------------------|-------------------|----------------|------------------|--------------|
|                |                |                   |                   |                | <u>LOWER</u>     | <u>UPPER</u> |
| LCS-1          | Ignitability   | 84.0000           | 81.0000           | 103.7          | 96.7             | 106.1        |

## Groups &amp; Samples

-----  
21700-77378    21700-77379    21700-77380    21738-77537

Analysis Batch Number: 1121 -04/16/98-066 -1

Test Identification : 1121 -Reactivity, (Cyanide &amp; Sulfide)sw

Sequence :

Number of Samples : 20

Batch Data-Date/Time : 04/16/98 / 16:50:33

| BLANK#  | ANALYTE            | CONC FOUND # | CONC LIMIT |
|---------|--------------------|--------------|------------|
| BLK-1   | Cyanide (reactive) | 0.7300       | 10.0000    |
| BLK-1-2 | Cyanide (reactive) | ND           | 10.0000    |

## DUPLICATE

| SAMPLE# | ANALYTE            | RESULT 1 | RESULT 2 | RPD # | LIMIT | DILUTION |
|---------|--------------------|----------|----------|-------|-------|----------|
| STD-1   | Cyanide (reactive) | 53.4000  | 54.3000  | 1.7   | 20.0  | 1.00     |
| STD-1-2 | Cyanide (reactive) | 292.0000 | 281.0000 | 3.8   | 20.0  | 1.00     |

## CONTROL

| SAMPLE# | ANALYTE            | CONC FOUND | CONC KNOWN | % REC # | QC LIMITS |       |
|---------|--------------------|------------|------------|---------|-----------|-------|
|         |                    |            |            |         | LOWER     | UPPER |
| STD-1   | Cyanide (reactive) | 53.4000    | 300.0000   | 17.8    | 0.0       | 77.7  |
| STD-1-2 | Cyanide (reactive) | 292.0000   | 412.0000   | 70.9    | 0.0       | 77.7  |

## Groups &amp; Samples

|             |             |             |             |             |             |             |             |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 21700-77378 | 21700-77379 | 21700-77380 | 21724-77491 | 21724-77492 | 21724-77493 | 21724-77494 | 21724-77495 |
| 21724-77496 | 21831-77836 |             |             |             |             |             |             |

Mountain States Analytical, Inc.  
Daily QC Batching Data  
Data Released for Reporting04/16/98  
17:05:27  
Group: 21700

Analysis Batch Number: ICPWA-04/07/98-001 -1

Test Identification : ICPWA-\*Metals by ICP

Sequence : DATA097

Number of Samples : 21

Batch Data-Date/Time : 04/07/98 / 13:30:44

| BLANK#     | ANALYTE    | CONC FOUND # | CONC LIMIT |
|------------|------------|--------------|------------|
| PBW1-198   | Silver     | 0.0047       | 0.0050     |
|            | Aluminum   | 0.0103       | 0.0500     |
|            | Arsenic    | ND           | 0.0300     |
|            | Boron      | 0.0113       | 0.0400     |
|            | Barium     | 0.0001       | 0.0030     |
|            | Beryllium  | 0.0001       | 0.0002     |
|            | Calcium    | 0.1556       | 0.3000     |
|            | Cadmium    | ND           | 0.0040     |
|            | Cobalt     | 0.0002       | 0.0040     |
|            | Chromium   | 0.0025       | 0.0100     |
|            | Copper     | 0.0124       | 0.0200     |
|            | Iron       | ND           | 0.2000     |
|            | Potassium  | 0.0307       | 0.1000     |
|            | Lithium    | 0.0002       | 0.0050     |
|            | Magnesium  | ND           | 0.0500     |
|            | Manganese  | 0.0038(8a)   | 0.0030     |
|            | Molybdenum | ND           | 0.0300     |
|            | Nickel     | 0.0114       | 0.0200     |
|            | Phosphorus | ND           | 0.2000     |
|            | Lead       | ND           | 0.0000     |
|            | Antimony   | ND           | 0.1000     |
|            | Selenium   | ND           | 0.0700     |
|            | Titanium   | 0.0004       | 0.0020     |
|            | Thallium   | 0.0394       | 0.1000     |
|            | Vanadium   | 0.0008       | 0.0030     |
|            | Zinc       | 0.0372       | 0.0500     |
| PBW2-198-2 | Silver     | 0.0033       | 0.0050     |
|            | Aluminum   | 0.0191       | 0.0500     |
|            | Arsenic    | 0.0117       | 0.0300     |
|            | Boron      | 0.0118       | 0.0400     |
|            | Barium     | ND           | 0.0030     |
|            | Beryllium  | 0.0001       | 0.0002     |
|            | Calcium    | 0.0580       | 0.3000     |
|            | Cadmium    | ND           | 0.0040     |
|            | Cobalt     | ND           | 0.0040     |
|            | Chromium   | 0.0012       | 0.0100     |
|            | Copper     | 0.0048       | 0.0100     |
|            | Iron       | 0.0134       | 0.2000     |
|            | Potassium  | 0.0150       | 0.1000     |
|            | Lithium    | ND           | 0.0050     |
|            | Magnesium  | 0.0085       | 0.0500     |
|            | Manganese  | 0.0020       | 0.0030     |
|            | Molybdenum | ND           | 0.0300     |
|            | Nickel     | ND           | 0.0200     |
|            | Phosphorus | 0.0408       | 0.2000     |
|            | Lead       | ND           | 0.0500     |
|            | Antimony   | 0.0421       | 0.1000     |
|            | Selenium   | ND           | 0.0700     |
|            | Titanium   | 0.0008       | 0.0020     |
|            | Thallium   | 0.0096       | 0.1000     |

Analysis Batch Number: ICPWA-04/07/98-001 -1

Test Identification : ICPWA-\*Metals by ICP

Sequence : DATA097

Number of Samples : 21

Batch Data-Date/Time : 04/07/98 / 13:30:44

| BLANK#     | ANALYTE  | CONC FOUND # | CONC LIMIT |
|------------|----------|--------------|------------|
| PBW2-198-2 | Vanadium | 0.0008       | 0.0030     |
|            | Zinc     | 0.0431       | 0.0500     |

## SPIKE

| SAMPLE#       | ANALYTE   | CONC ADDED | CONC SAMPLE | CONC SPIKE | % REC # | QC LIMITS |       |
|---------------|-----------|------------|-------------|------------|---------|-----------|-------|
|               |           |            |             |            |         | LOWER     | UPPER |
| 21792-77671   | Silver    | 0.5000     | 0.0104      | 0.5429     | 106.5   | 80.0      | 120.0 |
|               | Arsenic   | 5.0000     | 0.0061      | 5.3489     | 106.9   | 80.0      | 120.0 |
|               | Barium    | 10.0000    | 0.0657      | 9.5204     | 94.5    | 80.0      | 120.0 |
|               | Beryllium | 0.0250     | 0.0001      | 0.0238     | 94.6    | 80.0      | 120.0 |
|               | Cadmium   | 0.2500     | -0.0027     | 0.2541     | 102.7   | 80.0      | 120.0 |
|               | Chromium  | 1.0000     | 0.0050      | 1.0918     | 108.7   | 80.0      | 120.0 |
|               | Copper    | 0.5000     | 0.0075      | 0.4898     | 96.5    | 80.0      | 120.0 |
|               | Nickel    | 5.0000     | 0.0193      | 5.1075     | 101.8   | 80.0      | 120.0 |
|               | Lead      | 0.5000     | -0.0484     | 0.4634     | 102.4   | 80.0      | 120.0 |
|               | Antimony  | 2.5000     | -0.0186     | 2.6968     | 108.6   | 80.0      | 120.0 |
|               | Selenium  | 0.2500     | -0.0089     | 0.2510     | 104.0   | 80.0      | 120.0 |
|               | Thallium  | 1.0000     | 0.0610      | 0.1586     | 9.8(2c) | 80.0      | 120.0 |
|               | Vanadium  | 2.0000     | 0.0015      | 0.1030     | 5.1(2c) | 80.0      | 120.0 |
|               | Zinc      | 5.0000     | 0.2610      | 5.6823     | 108.4   | 80.0      | 120.0 |
| 21792-77671-2 | Silver    | 0.5000     | 0.0104      | 0.5553     | 109.0   | 50.0      | 150.0 |
|               | Arsenic   | 5.0000     | 0.0061      | 5.3336     | 106.6   | 50.0      | 150.0 |
|               | Barium    | 10.0000    | 0.0657      | 9.3260     | 92.6    | 50.0      | 150.0 |
|               | Beryllium | 0.0250     | 0.0001      | 0.0244     | 96.9    | 50.0      | 150.0 |
|               | Cadmium   | 0.2500     | -0.0027     | 0.2641     | 106.7   | 50.0      | 150.0 |
|               | Chromium  | 1.0000     | 0.0050      | 1.0739     | 106.9   | 50.0      | 150.0 |
|               | Copper    | 0.5000     | 0.0075      | 0.5008     | 98.7    | 50.0      | 150.0 |
|               | Nickel    | 5.0000     | 0.0193      | 5.0893     | 101.4   | 50.0      | 150.0 |
|               | Lead      | 0.5000     | -0.0484     | 0.5235     | 114.4   | 50.0      | 150.0 |
|               | Antimony  | 2.5000     | -0.0186     | 2.7298     | 109.9   | 50.0      | 150.0 |
|               | Selenium  | 0.2500     | -0.0089     | 0.2413     | 100.1   | 50.0      | 150.0 |
|               | Thallium  | 1.0000     | 0.0610      | 0.1059     | 4.5(8a) | 50.0      | 150.0 |
|               | Vanadium  | 2.0000     | 0.0015      | 0.1052     | 5.2(8a) | 50.0      | 150.0 |
|               | Zinc      | 5.0000     | 0.2610      | 5.6716     | 108.2   | 50.0      | 150.0 |

## MSD

| SAMPLE#     | ANALYTE   | CONC ADDED | CONC SAMPLE | RESULT 2 | %REC2 #   | QC LIMITS |       | RPD #    | LIMIT |
|-------------|-----------|------------|-------------|----------|-----------|-----------|-------|----------|-------|
|             |           |            |             |          |           | LOWER     | UPPER |          |       |
| 21792-77671 | Silver    | 0.5000     | 0.0104      | 0.5369   | 105.3     | 80.0      | 120.0 | 1.1      | 20.0  |
|             | Arsenic   | 5.0000     | 0.0061      | 5.4037   | 108.0     | 80.0      | 120.0 | 1.0      | 20.0  |
|             | Barium    | 10.0000    | 0.0657      | 9.5249   | 94.6      | 80.0      | 120.0 | 0.0      | 20.0  |
|             | Beryllium | 0.0250     | 0.0001      | 0.0241   | 95.7      | 80.0      | 120.0 | 1.2      | 20.0  |
|             | Cadmium   | 0.2500     | -0.0027     | 0.2564   | 103.6     | 80.0      | 120.0 | 0.9      | 20.0  |
|             | Chromium  | 1.0000     | 0.0050      | 1.1063   | 110.1     | 80.0      | 120.0 | 1.3      | 20.0  |
|             | Copper    | 0.5000     | 0.0075      | 0.4976   | 98.0      | 80.0      | 120.0 | 1.6      | 20.0  |
|             | Nickel    | 5.0000     | 0.0193      | 5.1332   | 102.3     | 80.0      | 120.0 | 0.5      | 20.0  |
|             | Lead      | 0.5000     | -0.0484     | 0.4907   | 107.8     | 80.0      | 120.0 | 5.7      | 20.0  |
|             | Antimony  | 2.5000     | -0.0186     | 2.8255   | 113.8     | 80.0      | 120.0 | 4.7      | 20.0  |
|             | Selenium  | 0.2500     | -0.0089     | 0.3329   | 136.7(2c) | 80.0      | 120.0 | 28.1(2c) | 20.0  |
|             | Thallium  | 1.0000     | 0.0610      | 0.0532   | -0.8(2c)  | 80.0      | 120.0 | 99.6(2c) | 20.0  |
|             | Vanadium  | 2.0000     | 0.0015      | 0.1027   | 5.1(2c)   | 80.0      | 120.0 | 0.3      | 20.0  |
|             | Zinc      | 5.0000     | 0.2610      | 5.7297   | 109.4     | 80.0      | 120.0 | 0.8      | 20.0  |



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## DUPLICATE

| SAMPLE#     | ANALYTE    | RESULT 1 | RESULT 2 | RPD #     | LIMIT | DILUTION |
|-------------|------------|----------|----------|-----------|-------|----------|
| 21792-77671 | Silver     | 0.0104   | 0.0100   | 3.3       | 20.0  | 1.00     |
|             | Aluminum   | 0.1405   | 0.1274   | 9.8       | 20.0  | 1.00     |
|             | Arsenic    | 0.0061   | 0.0018   | 110.5(11) | 20.0  | 1.00     |
|             | Boron      | 0.0189   | 0.0258   | 30.8(11)  | 20.0  | 1.00     |
|             | Barium     | 0.0657   | 0.0662   | 0.6       | 20.0  | 1.00     |
|             | Beryllium  | 0.0001   | 0.0002   | 26.7(11)  | 20.0  | 1.00     |
|             | Calcium    | 2.2029   | 2.2190   | 0.7       | 20.0  | 1.00     |
|             | Cadmium    | -0.0027  | 0.0000   | 200.0(11) | 20.0  | 1.00     |
|             | Cobalt     | -0.0005  | 0.0014   | 443.7(11) | 20.0  | 1.00     |
|             | Chromium   | 0.0050   | 0.0063   | 22.2(11)  | 20.0  | 1.00     |
|             | Copper     | 0.0075   | 0.0121   | 46.6(5a)  | 20.0  | 1.00     |
|             | Iron       | 0.0661   | 0.0816   | 20.9(11)  | 20.0  | 1.00     |
|             | Potassium  | 0.3252   | 0.2515   | 25.6(5a)  | 20.0  | 1.00     |
|             | Lithium    | 0.0006   | 0.0006   | 0.0       | 20.0  | 1.00     |
|             | Magnesium  | 0.1905   | 0.2022   | 5.9       | 20.0  | 1.00     |
|             | Manganese  | 0.0142   | 0.0145   | 2.4       | 20.0  | 1.00     |
|             | Molybdenum | 0.0051   | 0.0000   | 200.0(11) | 20.0  | 1.00     |
|             | Nickel     | 0.0193   | 0.0198   | 2.4       | 20.0  | 1.00     |
|             | Phosphorus | 0.1199   | 0.0000   | 200.0(11) | 20.0  | 1.00     |
|             | Lead       | -0.0484  | 0.0000   | 200.0(11) | 20.0  | 1.00     |
|             | Antimony   | -0.0186  | 0.0553   | 403.0(11) | 20.0  | 1.00     |
|             | Selenium   | -0.0089  | 0.0000   | 200.0(11) | 20.0  | 1.00     |
|             | Titanium   | 0.0017   | 0.0015   | 14.9      | 20.0  | 1.00     |
|             | Thallium   | 0.0610   | 0.0461   | 27.9(11)  | 20.0  | 1.00     |
|             | Vanadium   | 0.0015   | 0.0015   | 1.4       | 20.0  | 1.00     |
|             | Zinc       | 0.2610   | 0.2866   | 9.4       | 20.0  | 1.00     |

## CONTROL

| SAMPLE#  | ANALYTE    | CONC FOUND | CONC KNOWN | % REC # | QC LIMITS |       |
|----------|------------|------------|------------|---------|-----------|-------|
|          |            |            |            |         | LOWER     | UPPER |
| LCSW-198 | Silver     | 0.0590     | 0.0500     | 118.0   | 80.0      | 120.0 |
|          | Aluminum   | 2.1146     | 2.0000     | 105.7   | 80.0      | 120.0 |
|          | Arsenic    | 2.0187     | 2.0000     | 100.9   | 80.0      | 120.0 |
|          | Boron      | 0.5135     | 0.5000     | 102.7   | 80.0      | 120.0 |
|          | Barium     | 1.9408     | 2.0000     | 97.0    | 80.0      | 120.0 |
|          | Beryllium  | 0.0499     | 0.0500     | 99.8    | 80.0      | 120.0 |
|          | Calcium    | 2.2009     | 2.0000     | 110.0   | 80.0      | 120.0 |
|          | Cadmium    | 0.0482     | 0.0500     | 96.3    | 80.0      | 120.0 |
|          | Cobalt     | 0.5079     | 0.5000     | 101.6   | 80.0      | 120.0 |
|          | Chromium   | 0.2087     | 0.2000     | 104.3   | 80.0      | 120.0 |
|          | Copper     | 0.2469     | 0.2500     | 98.7    | 80.0      | 120.0 |
|          | Iron       | 1.0461     | 1.0000     | 104.6   | 80.0      | 120.0 |
|          | Potassium  | 10.2049    | 10.0000    | 102.0   | 80.0      | 120.0 |
|          | Lithium    | 0.0921     | 0.1000     | 92.1    | 80.0      | 120.0 |
|          | Magnesium  | 2.0661     | 2.0000     | 103.3   | 80.0      | 120.0 |
|          | Manganese  | 0.4986     | 0.5000     | 99.7    | 80.0      | 120.0 |
|          | Molybdenum | 0.5142     | 0.5000     | 102.8   | 80.0      | 120.0 |
|          | Nickel     | 0.5216     | 0.5000     | 104.3   | 80.0      | 120.0 |
|          | Phosphorus | 0.9530     | 1.0000     | 95.3    | 80.0      | 120.0 |
|          | Lead       | 0.4856     | 0.5000     | 97.1    | 80.0      | 120.0 |

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| CONTROL  |          | QC LIMITS  |            |         |       |       |
|----------|----------|------------|------------|---------|-------|-------|
| SAMPLE#  | ANALYTE  | CONC FOUND | CONC KNOWN | % REC # | LOWER | UPPER |
| LCSW-198 | Antimony | 0.9605     | 1.0000     | 96.1    | 80.0  | 120.0 |
|          | Selenium | 1.9554     | 2.0000     | 97.8    | 80.0  | 120.0 |
|          | Titanium | 0.0971     | 0.1000     | 97.1    | 80.0  | 120.0 |
|          | Thallium | 2.0108     | 2.0000     | 100.5   | 80.0  | 120.0 |
|          | Vanadium | 0.5034     | 0.5000     | 100.7   | 80.0  | 120.0 |
|          | Zinc     | 0.5162     | 0.5000     | 103.2   | 80.0  | 120.0 |

|         |            | QC LIMITS  |            |         |       |       |
|---------|------------|------------|------------|---------|-------|-------|
| CCV #   | ANALYTE    | TRUE VALUE | BATCH READ | % REC # | LOWER | UPPER |
| ICV-    | Silver     | 0.4000     | 0.4165     | 104.1   | 90.0  | 110.0 |
|         | Aluminum   | 20.0000    | 21.2221    | 106.1   | 90.0  | 110.0 |
|         | Arsenic    | 1.6000     | 1.5761     | 98.5    | 90.0  | 110.0 |
|         | Boron      | 0.8000     | 0.8157     | 102.0   | 90.0  | 110.0 |
|         | Barium     | 4.0000     | 3.8022     | 95.1    | 90.0  | 110.0 |
|         | Beryllium  | 0.4000     | 0.3928     | 98.2    | 90.0  | 110.0 |
|         | Calcium    | 40.0000    | 42.7537    | 106.9   | 90.0  | 110.0 |
|         | Cadmium    | 4.0000     | 3.9107     | 97.8    | 90.0  | 110.0 |
|         | Cobalt     | 0.8000     | 0.7871     | 98.4    | 90.0  | 110.0 |
|         | Chromium   | 4.0000     | 3.9601     | 99.0    | 90.0  | 110.0 |
|         | Copper     | 4.0000     | 3.8309     | 95.8    | 90.0  | 110.0 |
|         | Iron       | 4.0000     | 3.9399     | 98.5    | 90.0  | 110.0 |
|         | Potassium  | 40.0000    | 41.7429    | 104.4   | 90.0  | 110.0 |
|         | Lithium    | 20.0000    | 19.1085    | 95.5    | 90.0  | 110.0 |
|         | Magnesium  | 20.0000    | 20.4378    | 102.2   | 90.0  | 110.0 |
|         | Manganese  | 4.0000     | 3.8608     | 96.5    | 90.0  | 110.0 |
|         | Molybdenum | 20.0000    | 19.4861    | 97.4    | 90.0  | 110.0 |
|         | Nickel     | 8.0000     | 7.8153     | 97.7    | 90.0  | 110.0 |
|         | Phosphorus | 20.0000    | 19.7610    | 98.8    | 90.0  | 110.0 |
|         | Lead       | 20.0000    | 19.5392    | 97.7    | 90.0  | 110.0 |
|         | Antimony   | 4.0000     | 4.0089     | 100.2   | 90.0  | 110.0 |
|         | Selenium   | 1.6000     | 1.5771     | 98.6    | 90.0  | 110.0 |
|         | Titanium   | 1.6000     | 1.5533     | 97.1    | 90.0  | 110.0 |
|         | Thallium   | 4.0000     | 3.9442     | 98.6    | 90.0  | 110.0 |
|         | Vanadium   | 1.6000     | 1.5668     | 97.9    | 90.0  | 110.0 |
|         | Zinc       | 4.0000     | 3.8701     | 96.8    | 90.0  | 110.0 |
| CCV1--2 | Silver     | 0.4000     | 0.4151     | 103.8   | 90.0  | 110.0 |
|         | Aluminum   | 20.0000    | 21.1864    | 105.9   | 90.0  | 110.0 |
|         | Arsenic    | 1.6000     | 1.5660     | 97.9    | 90.0  | 110.0 |
|         | Boron      | 0.8000     | 0.8155     | 101.9   | 90.0  | 110.0 |
|         | Barium     | 4.0000     | 3.7908     | 94.8    | 90.0  | 110.0 |
|         | Beryllium  | 0.4000     | 0.3923     | 98.1    | 90.0  | 110.0 |
|         | Calcium    | 40.0000    | 42.3151    | 105.8   | 90.0  | 110.0 |
|         | Cadmium    | 4.0000     | 3.9138     | 97.8    | 90.0  | 110.0 |
|         | Cobalt     | 0.8000     | 0.7900     | 98.8    | 90.0  | 110.0 |
|         | Chromium   | 4.0000     | 3.9423     | 98.6    | 90.0  | 110.0 |
|         | Copper     | 4.0000     | 3.8254     | 95.6    | 90.0  | 110.0 |
|         | Iron       | 4.0000     | 3.9488     | 98.7    | 90.0  | 110.0 |
|         | Potassium  | 40.0000    | 41.5293    | 103.8   | 90.0  | 110.0 |
|         | Lithium    | 20.0000    | 19.1686    | 95.8    | 90.0  | 110.0 |

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Sequence : DATA097

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| CCV #   | ANALYTE    | TRUE VALUE | BATCH READ | % REC # | QC LIMITS |       |
|---------|------------|------------|------------|---------|-----------|-------|
|         |            |            |            |         | LOWER     | UPPER |
| CCV1--2 | Magnesium  | 20.0000    | 20.3520    | 101.8   | 90.0      | 110.0 |
|         | Manganese  | 4.0000     | 3.8459     | 96.1    | 90.0      | 110.0 |
|         | Molybdenum | 20.0000    | 19.4464    | 97.2    | 90.0      | 110.0 |
|         | Nickel     | 8.0000     | 7.7734     | 97.2    | 90.0      | 110.0 |
|         | Phosphorus | 20.0000    | 19.7214    | 98.6    | 90.0      | 110.0 |
|         | Lead       | 20.0000    | 19.3701    | 96.9    | 90.0      | 110.0 |
|         | Antimony   | 4.0000     | 4.0579     | 101.4   | 90.0      | 110.0 |
|         | Selenium   | 1.6000     | 1.6179     | 101.1   | 90.0      | 110.0 |
|         | Titanium   | 1.6000     | 1.5464     | 96.6    | 90.0      | 110.0 |
|         | Thallium   | 4.0000     | 3.8735     | 96.8    | 90.0      | 110.0 |
|         | Vanadium   | 1.6000     | 1.5632     | 97.7    | 90.0      | 110.0 |
|         | Zinc       | 4.0000     | 3.8584     | 96.5    | 90.0      | 110.0 |
| CCV2--3 | Silver     | 0.4000     | 0.4183     | 104.6   | 90.0      | 110.0 |
|         | Aluminum   | 20.0000    | 20.9400    | 104.7   | 90.0      | 110.0 |
|         | Arsenic    | 1.6000     | 1.5880     | 99.2    | 90.0      | 110.0 |
|         | Boron      | 0.8000     | 0.8106     | 101.3   | 90.0      | 110.0 |
|         | Barium     | 4.0000     | 3.7460     | 93.7    | 90.0      | 110.0 |
|         | Beryllium  | 0.4000     | 0.3941     | 98.5    | 90.0      | 110.0 |
|         | Calcium    | 40.0000    | 43.4372    | 108.6   | 90.0      | 110.0 |
|         | Cadmium    | 4.0000     | 3.9881     | 99.7    | 90.0      | 110.0 |
|         | Cobalt     | 0.8000     | 0.7992     | 99.9    | 90.0      | 110.0 |
|         | Chromium   | 4.0000     | 4.0063     | 100.2   | 90.0      | 110.0 |
|         | Copper     | 4.0000     | 3.7679     | 94.2    | 90.0      | 110.0 |
|         | Iron       | 4.0000     | 4.0030     | 100.1   | 90.0      | 110.0 |
|         | Potassium  | 40.0000    | 40.9773    | 102.4   | 90.0      | 110.0 |
|         | Lithium    | 20.0000    | 18.1399    | 90.7    | 90.0      | 110.0 |
|         | Magnesium  | 20.0000    | 20.1889    | 100.9   | 90.0      | 110.0 |
|         | Manganese  | 4.0000     | 3.9023     | 97.6    | 90.0      | 110.0 |
|         | Molybdenum | 20.0000    | 19.6719    | 98.4    | 90.0      | 110.0 |
|         | Nickel     | 8.0000     | 7.9422     | 99.3    | 90.0      | 110.0 |
|         | Phosphorus | 20.0000    | 19.8564    | 99.3    | 90.0      | 110.0 |
|         | Lead       | 20.0000    | 19.7460    | 98.7    | 90.0      | 110.0 |
|         | Antimony   | 4.0000     | 4.0529     | 101.3   | 90.0      | 110.0 |
|         | Selenium   | 1.6000     | 1.5820     | 98.9    | 90.0      | 110.0 |
|         | Titanium   | 1.6000     | 1.5523     | 97.0    | 90.0      | 110.0 |
|         | Thallium   | 4.0000     | 3.8506     | 96.3    | 90.0      | 110.0 |
|         | Vanadium   | 1.6000     | 1.5775     | 98.6    | 90.0      | 110.0 |
|         | Zinc       | 4.0000     | 3.9229     | 98.1    | 90.0      | 110.0 |
| CCV3--4 | Silver     | 0.4000     | 0.4204     | 105.1   | 90.0      | 110.0 |
|         | Aluminum   | 20.0000    | 21.1855    | 105.9   | 90.0      | 110.0 |
|         | Arsenic    | 1.6000     | 1.5993     | 100.0   | 90.0      | 110.0 |
|         | Boron      | 0.8000     | 0.8138     | 101.7   | 90.0      | 110.0 |
|         | Barium     | 4.0000     | 3.7715     | 94.3    | 90.0      | 110.0 |
|         | Beryllium  | 0.4000     | 0.3922     | 98.1    | 90.0      | 110.0 |
|         | Calcium    | 40.0000    | 43.2641    | 108.2   | 90.0      | 110.0 |
|         | Cadmium    | 4.0000     | 3.9738     | 99.3    | 90.0      | 110.0 |
|         | Cobalt     | 0.8000     | 0.7970     | 99.6    | 90.0      | 110.0 |
|         | Chromium   | 4.0000     | 4.0107     | 100.3   | 90.0      | 110.0 |
|         | Copper     | 4.0000     | 3.8138     | 95.3    | 90.0      | 110.0 |

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Test Identification : ICPWA-\*Metals by ICP

Sequence : DATA097

Number of Samples : 21

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| CCV #   | ANALYTE    | TRUE VALUE | BATCH READ | QC LIMITS |             |
|---------|------------|------------|------------|-----------|-------------|
|         |            |            |            | % REC #   | LOWER UPPER |
| CCV3--4 | Iron       | 4.0000     | 3.9554     | 98.9      | 90.0 110.0  |
|         | Potassium  | 40.0000    | 41.1064    | 102.8     | 90.0 110.0  |
|         | Lithium    | 20.0000    | 19.3580    | 96.8      | 90.0 110.0  |
|         | Magnesium  | 20.0000    | 20.3638    | 101.8     | 90.0 110.0  |
|         | Manganese  | 4.0000     | 3.8901     | 97.3      | 90.0 110.0  |
|         | Molybdenum | 20.0000    | 19.7834    | 98.9      | 90.0 110.0  |
|         | Nickel     | 8.0000     | 7.9707     | 99.6      | 90.0 110.0  |
|         | Phosphorus | 20.0000    | 20.0988    | 100.5     | 90.0 110.0  |
|         | Lead       | 20.0000    | 19.7714    | 98.9      | 90.0 110.0  |
|         | Antimony   | 4.0000     | 3.9948     | 99.9      | 90.0 110.0  |
|         | Selenium   | 1.6000     | 1.4728     | 92.0      | 90.0 110.0  |
|         | Titanium   | 1.6000     | 1.5565     | 97.3      | 90.0 110.0  |
|         | Thallium   | 4.0000     | 3.8508     | 96.3      | 90.0 110.0  |
|         | Vanadium   | 1.6000     | 1.5743     | 98.4      | 90.0 110.0  |
|         | Zinc       | 4.0000     | 3.9241     | 98.1      | 90.0 110.0  |
| CCV4--5 | Silver     | 0.4000     | 0.4196     | 104.9     | 90.0 110.0  |
|         | Aluminum   | 20.0000    | 21.0254    | 105.1     | 90.0 110.0  |
|         | Arsenic    | 1.6000     | 1.5936     | 99.6      | 90.0 110.0  |
|         | Boron      | 0.8000     | 0.8104     | 101.3     | 90.0 110.0  |
|         | Barium     | 4.0000     | 3.7572     | 93.9      | 90.0 110.0  |
|         | Beryllium  | 0.4000     | 0.3955     | 98.9      | 90.0 110.0  |
|         | Calcium    | 40.0000    | 43.4825    | 108.7     | 90.0 110.0  |
|         | Cadmium    | 4.0000     | 3.9899     | 99.7      | 90.0 110.0  |
|         | Cobalt     | 0.8000     | 0.8034     | 100.4     | 90.0 110.0  |
|         | Chromium   | 4.0000     | 4.0431     | 101.1     | 90.0 110.0  |
|         | Copper     | 4.0000     | 3.7886     | 94.7      | 90.0 110.0  |
|         | Iron       | 4.0000     | 4.0540     | 101.4     | 90.0 110.0  |
|         | Potassium  | 40.0000    | 40.7785    | 101.9     | 90.0 110.0  |
|         | Lithium    | 20.0000    | 19.1631    | 95.8      | 90.0 110.0  |
|         | Magnesium  | 20.0000    | 20.3226    | 101.6     | 90.0 110.0  |
|         | Manganese  | 4.0000     | 3.9000     | 97.5      | 90.0 110.0  |
|         | Molybdenum | 20.0000    | 19.8027    | 99.0      | 90.0 110.0  |
|         | Nickel     | 8.0000     | 7.9522     | 99.4      | 90.0 110.0  |
|         | Phosphorus | 20.0000    | 20.3886    | 101.9     | 90.0 110.0  |
|         | Lead       | 20.0000    | 19.9683    | 99.8      | 90.0 110.0  |
|         | Antimony   | 4.0000     | 3.9340     | 98.3      | 90.0 110.0  |
|         | Selenium   | 1.6000     | 1.5537     | 97.1      | 90.0 110.0  |
|         | Titanium   | 1.6000     | 1.5569     | 97.3      | 90.0 110.0  |
|         | Thallium   | 4.0000     | 4.0097     | 100.2     | 90.0 110.0  |
|         | Vanadium   | 1.6000     | 1.5785     | 98.7      | 90.0 110.0  |
|         | Zinc       | 4.0000     | 3.9351     | 98.4      | 90.0 110.0  |
| CCV5--6 | Silver     | 0.4000     | 0.4205     | 105.1     | 90.0 110.0  |
|         | Aluminum   | 20.0000    | 21.0949    | 105.5     | 90.0 110.0  |
|         | Arsenic    | 1.6000     | 1.5554     | 97.2      | 90.0 110.0  |
|         | Boron      | 0.8000     | 0.8090     | 101.1     | 90.0 110.0  |
|         | Barium     | 4.0000     | 3.7530     | 93.8      | 90.0 110.0  |
|         | Beryllium  | 0.4000     | 0.3896     | 97.4      | 90.0 110.0  |
|         | Calcium    | 40.0000    | 43.1192    | 107.8     | 90.0 110.0  |
|         | Cadmium    | 4.0000     | 3.9770     | 99.4      | 90.0 110.0  |

Analysis Batch Number: ICPWA-04/07/98-001 -1

Test Identification : ICPWA-\*Metals by ICP

Sequence : DATA097

Number of Samples : 21

Batch Data-Date/Time : 04/07/98 / 13:30:44

| CCV #   | ANALYTE    | TRUE VALUE | BATCH READ | QC LIMITS |       |       |
|---------|------------|------------|------------|-----------|-------|-------|
|         |            |            |            | % REC #   | LOWER | UPPER |
| CCV5--6 | Cobalt     | 0.8000     | 0.7989     | 99.9      | 90.0  | 110.0 |
|         | Chromium   | 4.0000     | 4.0036     | 100.1     | 90.0  | 110.0 |
|         | Copper     | 4.0000     | 3.8033     | 95.1      | 90.0  | 110.0 |
|         | Iron       | 4.0000     | 3.9699     | 99.2      | 90.0  | 110.0 |
|         | Potassium  | 40.0000    | 41.1590    | 102.9     | 90.0  | 110.0 |
|         | Lithium    | 20.0000    | 18.8817    | 94.4      | 90.0  | 110.0 |
|         | Magnesium  | 20.0000    | 20.4214    | 102.1     | 90.0  | 110.0 |
|         | Manganese  | 4.0000     | 3.8887     | 97.2      | 90.0  | 110.0 |
|         | Molybdenum | 20.0000    | 19.8154    | 99.1      | 90.0  | 110.0 |
|         | Nickel     | 8.0000     | 7.9741     | 99.7      | 90.0  | 110.0 |
|         | Phosphorus | 20.0000    | 19.8955    | 99.5      | 90.0  | 110.0 |
|         | Lead       | 20.0000    | 19.8617    | 99.3      | 90.0  | 110.0 |
|         | Antimony   | 4.0000     | 4.1533     | 103.8     | 90.0  | 110.0 |
|         | Selenium   | 1.6000     | 1.6274     | 101.7     | 90.0  | 110.0 |
|         | Titanium   | 1.6000     | 1.5531     | 97.1      | 90.0  | 110.0 |
|         | Thallium   | 4.0000     | 3.7488     | 93.7      | 90.0  | 110.0 |
|         | Vanadium   | 1.6000     | 1.5719     | 98.2      | 90.0  | 110.0 |
|         | Zinc       | 4.0000     | 3.9476     | 98.7      | 90.0  | 110.0 |
| CCV6--7 | Silver     | 0.4000     | 0.4168     | 104.2     | 90.0  | 110.0 |
|         | Aluminum   | 20.0000    | 21.3462    | 106.7     | 90.0  | 110.0 |
|         | Arsenic    | 1.6000     | 1.5421     | 96.4      | 90.0  | 110.0 |
|         | Boron      | 0.8000     | 0.8059     | 100.7     | 90.0  | 110.0 |
|         | Barium     | 4.0000     | 3.7897     | 94.7      | 90.0  | 110.0 |
|         | Beryllium  | 0.4000     | 0.3893     | 97.3      | 90.0  | 110.0 |
|         | Calcium    | 40.0000    | 42.6919    | 106.7     | 90.0  | 110.0 |
|         | Cadmium    | 4.0000     | 3.8999     | 97.5      | 90.0  | 110.0 |
|         | Cobalt     | 0.8000     | 0.7857     | 98.2      | 90.0  | 110.0 |
|         | Chromium   | 4.0000     | 3.9416     | 98.5      | 90.0  | 110.0 |
|         | Copper     | 4.0000     | 3.8069     | 95.2      | 90.0  | 110.0 |
|         | Iron       | 4.0000     | 3.9716     | 99.3      | 90.0  | 110.0 |
|         | Potassium  | 40.0000    | 41.6515    | 104.1     | 90.0  | 110.0 |
|         | Lithium    | 20.0000    | 19.2665    | 96.3      | 90.0  | 110.0 |
|         | Magnesium  | 20.0000    | 20.4440    | 102.2     | 90.0  | 110.0 |
|         | Manganese  | 4.0000     | 3.8632     | 96.6      | 90.0  | 110.0 |
|         | Molybdenum | 20.0000    | 19.6742    | 98.4      | 90.0  | 110.0 |
|         | Nickel     | 8.0000     | 7.7709     | 97.1      | 90.0  | 110.0 |
|         | Phosphorus | 20.0000    | 19.4224    | 97.1      | 90.0  | 110.0 |
|         | Lead       | 20.0000    | 19.3227    | 96.6      | 90.0  | 110.0 |
| CCV7--8 | Antimony   | 4.0000     | 4.0206     | 100.5     | 90.0  | 110.0 |
|         | Selenium   | 1.6000     | 1.5377     | 96.1      | 90.0  | 110.0 |
|         | Titanium   | 1.6000     | 1.5467     | 96.7      | 90.0  | 110.0 |
|         | Thallium   | 4.0000     | 3.8127     | 95.3      | 90.0  | 110.0 |
|         | Vanadium   | 1.6000     | 1.5614     | 97.6      | 90.0  | 110.0 |
|         | Zinc       | 4.0000     | 3.8732     | 96.8      | 90.0  | 110.0 |
|         | Silver     | 0.4000     | 0.4200     | 105.0     | 90.0  | 110.0 |
|         | Aluminum   | 20.0000    | 21.2506    | 106.3     | 90.0  | 110.0 |
|         | Arsenic    | 1.6000     | 1.5680     | 98.0      | 90.0  | 110.0 |
|         | Boron      | 0.8000     | 0.8029     | 100.4     | 90.0  | 110.0 |
|         | Barium     | 4.0000     | 3.7828     | 94.6      | 90.0  | 110.0 |

Analysis Batch Number: ICPWA-04/07/98-001 -1

Test Identification : ICPWA-\*Metals by ICP

Sequence : DATA097

Number of Samples : 21

Batch Data-Date/Time : 04/07/98 / 13:30:44

## QC LIMITS

| CCV #   | ANALYTE    | TRUE VALUE | BATCH READ | % REC # | LOWER | UPPER |
|---------|------------|------------|------------|---------|-------|-------|
| CCV7--8 | Beryllium  | 0.4000     | 0.3909     | 97.7    | 90.0  | 110.0 |
|         | Calcium    | 40.0000    | 42.5208    | 106.3   | 90.0  | 110.0 |
|         | Cadmium    | 4.0000     | 3.9035     | 97.6    | 90.0  | 110.0 |
|         | Cobalt     | 0.8000     | 0.7844     | 98.0    | 90.0  | 110.0 |
|         | Chromium   | 4.0000     | 3.9342     | 98.4    | 90.0  | 110.0 |
|         | Copper     | 4.0000     | 3.8040     | 95.1    | 90.0  | 110.0 |
|         | Iron       | 4.0000     | 3.9147     | 97.9    | 90.0  | 110.0 |
|         | Potassium  | 40.0000    | 41.6183    | 104.0   | 90.0  | 110.0 |
|         | Lithium    | 20.0000    | 19.0052    | 95.0    | 90.0  | 110.0 |
|         | Magnesium  | 20.0000    | 20.3623    | 101.8   | 90.0  | 110.0 |
|         | Manganese  | 4.0000     | 3.8610     | 96.5    | 90.0  | 110.0 |
|         | Molybdenum | 20.0000    | 19.5840    | 97.9    | 90.0  | 110.0 |
|         | Nickel     | 8.0000     | 7.7660     | 97.1    | 90.0  | 110.0 |
|         | Phosphorus | 20.0000    | 19.6272    | 98.1    | 90.0  | 110.0 |
|         | Lead       | 20.0000    | 19.4714    | 97.4    | 90.0  | 110.0 |
|         | Antimony   | 4.0000     | 3.9434     | 98.6    | 90.0  | 110.0 |
|         | Selenium   | 1.6000     | 1.5767     | 98.5    | 90.0  | 110.0 |
|         | Titanium   | 1.6000     | 1.5457     | 96.6    | 90.0  | 110.0 |
|         | Thallium   | 4.0000     | 3.7955     | 94.9    | 90.0  | 110.0 |
|         | Vanadium   | 1.6000     | 1.5627     | 97.7    | 90.0  | 110.0 |
|         | Zinc       | 4.0000     | 3.8724     | 96.8    | 90.0  | 110.0 |

| CCB# | ANALYTE    | CONC FOUND # | CONC LIMIT |
|------|------------|--------------|------------|
| ICB- | Silver     | 0.0009       | 0.0050     |
|      | Aluminum   | 0.0110       | 0.0500     |
|      | Arsenic    | 0.0172       | 0.0300     |
|      | Boron      | 0.0060       | 0.0400     |
|      | Barium     | ND           | 0.0030     |
|      | Beryllium  | ND           | 0.0002     |
|      | Calcium    | 0.0013       | 0.3000     |
|      | Cadmium    | ND           | 0.0040     |
|      | Cobalt     | 0.0009       | 0.0040     |
|      | Chromium   | 0.0036       | 0.0100     |
|      | Copper     | 0.0008       | 0.0100     |
|      | Iron       | 0.0015       | 0.2000     |
|      | Potassium  | ND           | 0.1000     |
|      | Lithium    | 0.0007       | 0.0050     |
|      | Magnesium  | ND           | 0.0500     |
|      | Manganese  | 0.0002       | 0.0020     |
|      | Molybdenum | ND           | 0.0300     |
|      | Nickel     | 0.0031       | 0.0200     |
|      | Phosphorus | ND           | 0.2000     |
|      | Lead       | ND           | 0.0500     |
|      | Antimony   | ND           | 0.1000     |
|      | Selenium   | 0.0057       | 0.0700     |
|      | Titanium   | 0.0001       | 0.0020     |
|      | Thallium   | 0.0295       | 0.1000     |
|      | Vanadium   | 0.0004       | 0.0030     |
|      | Zinc       | 0.0007       | 0.0250     |

Analysis Batch Number: ICPWA-04/07/98-001 -1

Test Identification : ICPWA-\*Metals by ICP

Sequence : DATA097

Number of Samples : 21

Batch Data-Date/Time : 04/07/98 / 13:30:44

| CCB#  | ANALYTE    | CONC FOUND # | CONC LIMIT |
|-------|------------|--------------|------------|
| CCB1- | Silver     | 0.0003       | 0.0050     |
|       | Aluminum   | 0.0094       | 0.0500     |
|       | Arsenic    | ND           | 0.0300     |
|       | Boron      | 0.0051       | 0.0400     |
|       | Barium     | ND           | 0.0030     |
|       | Beryllium  | 0.0000       | 0.0002     |
|       | Calcium    | 0.0019       | 0.3000     |
|       | Cadmium    | ND           | 0.0040     |
|       | Cobalt     | ND           | 0.0040     |
|       | Chromium   | 0.0020       | 0.0100     |
|       | Copper     | 0.0005       | 0.0100     |
|       | Iron       | ND           | 0.2000     |
|       | Potassium  | ND           | 0.1000     |
|       | Lithium    | 0.0006       | 0.0050     |
|       | Magnesium  | ND           | 0.0500     |
|       | Manganese  | 0.0002       | 0.0020     |
|       | Molybdenum | ND           | 0.0300     |
|       | Nickel     | 0.0053       | 0.0200     |
|       | Phosphorus | 0.0070       | 0.2000     |
|       | Lead       | ND           | 0.0500     |
|       | Antimony   | 0.0032       | 0.1000     |
|       | Selenium   | ND           | 0.0700     |
|       | Titanium   | 0.0001       | 0.0020     |
|       | Thallium   | 0.0437       | 0.1000     |
|       | Vanadium   | ND           | 0.0030     |
|       | Zinc       | 0.0001       | 0.0250     |
| CCB2- | Silver     | 0.0010       | 0.0050     |
|       | Aluminum   | 0.0139       | 0.0500     |
|       | Arsenic    | 0.0019       | 0.0300     |
|       | Boron      | 0.0092       | 0.0400     |
|       | Barium     | ND           | 0.0030     |
|       | Beryllium  | 0.0000       | 0.0002     |
|       | Calcium    | 0.0022       | 0.3000     |
|       | Cadmium    | ND           | 0.0040     |
|       | Cobalt     | ND           | 0.0040     |
|       | Chromium   | 0.0007       | 0.0100     |
|       | Copper     | ND           | 0.0100     |
|       | Iron       | ND           | 0.2000     |
|       | Potassium  | ND           | 0.1000     |
|       | Lithium    | 0.0011       | 0.0050     |
|       | Magnesium  | ND           | 0.0500     |
|       | Manganese  | 0.0004       | 0.0020     |
|       | Molybdenum | ND           | 0.0300     |
|       | Nickel     | 0.0037       | 0.0200     |
|       | Phosphorus | ND           | 0.2000     |
|       | Lead       | ND           | 0.0500     |
|       | Antimony   | 0.0372       | 0.1000     |
|       | Selenium   | ND           | 0.0700     |
|       | Titanium   | 0.0005       | 0.0020     |
|       | Thallium   | 0.0158       | 0.1000     |

Analysis Batch Number: ICPWA-04/07/98-001 -1

Test Identification : ICPWA-\*Metals by ICP

Sequence : DATA097

Number of Samples : 21

Batch Data-Date/Time : 04/07/98 / 13:30:44

| CCB#  | ANALYTE    | CONC FOUND # | CONC LIMIT |
|-------|------------|--------------|------------|
| CCB2- | Vanadium   | 0.0007       | 0.0030     |
|       | Zinc       | 0.0016       | 0.0250     |
| CCB3- | Silver     | 0.0024       | 0.0050     |
|       | Aluminum   | 0.0143       | 0.0500     |
|       | Arsenic    | 0.0025       | 0.0300     |
|       | Boron      | 0.0066       | 0.0400     |
|       | Barium     | 0.0002       | 0.0030     |
|       | Beryllium  | 0.0001       | 0.0002     |
|       | Calcium    | 0.0022       | 0.3000     |
|       | Cadmium    | ND           | 0.0040     |
|       | Cobalt     | ND           | 0.0040     |
|       | Chromium   | 0.0023       | 0.0100     |
|       | Copper     | 0.0012       | 0.0100     |
|       | Iron       | ND           | 0.2000     |
|       | Potassium  | 0.0401       | 0.1000     |
|       | Lithium    | 0.0015       | 0.0050     |
|       | Magnesium  | 0.0031       | 0.0500     |
|       | Manganese  | 0.0004       | 0.0020     |
|       | Molybdenum | ND           | 0.0300     |
|       | Nickel     | ND           | 0.0200     |
|       | Phosphorus | ND           | 0.2000     |
|       | Lead       | ND           | 0.0500     |
|       | Antimony   | ND           | 0.1000     |
|       | Selenium   | 0.0134       | 0.0700     |
|       | Titanium   | ND           | 0.0020     |
|       | Thallium   | ND           | 0.1000     |
|       | Vanadium   | 0.0018       | 0.0030     |
|       | Zinc       | 0.0020       | 0.0250     |
| CCB4- | Silver     | 0.0026       | 0.0050     |
|       | Aluminum   | 0.0230       | 0.0500     |
|       | Arsenic    | 0.0002       | 0.0300     |
|       | Boron      | 0.0056       | 0.0400     |
|       | Barium     | 0.0002       | 0.0030     |
|       | Beryllium  | 0.0001       | 0.0002     |
|       | Calcium    | 0.0029       | 0.3000     |
|       | Cadmium    | ND           | 0.0040     |
|       | Cobalt     | ND           | 0.0040     |
|       | Chromium   | 0.0045       | 0.0100     |
|       | Copper     | 0.0023       | 0.0100     |
|       | Iron       | ND           | 0.2000     |
|       | Potassium  | 0.0673       | 0.1000     |
|       | Lithium    | 0.0014       | 0.0050     |
|       | Magnesium  | 0.0035       | 0.0500     |
|       | Manganese  | 0.0009       | 0.0020     |
|       | Molybdenum | ND           | 0.0300     |
|       | Nickel     | ND           | 0.0200     |
|       | Phosphorus | 0.0241       | 0.2000     |
|       | Lead       | ND           | 0.0500     |
|       | Antimony   | 0.0121       | 0.1000     |
|       | Selenium   | ND           | 0.0700     |



Analysis Batch Number: ICPWA-04/07/98-001 -1

Test Identification : ICPWA-\*Metals by ICP

Sequence : DATA097

Number of Samples : 21

Batch Data-Date/Time : 04/07/98 / 13:30:44

| CCB#  | ANALYTE    | CONC FOUND # | CONC LIMIT |
|-------|------------|--------------|------------|
| CCB4- | Titanium   | 0.0002       | 0.0020     |
|       | Thallium   | 0.0025       | 0.1000     |
|       | Vanadium   | 0.0003       | 0.0030     |
|       | Zinc       | 0.0005       | 0.0250     |
| CCB5- | Silver     | 0.0012       | 0.0050     |
|       | Aluminum   | 0.0143       | 0.0500     |
|       | Arsenic    | 0.0043       | 0.0300     |
|       | Boron      | 0.0049       | 0.0400     |
|       | Barium     | 0.0005       | 0.0030     |
|       | Beryllium  | 0.0000       | 0.0002     |
|       | Calcium    | 0.0067       | 0.3000     |
|       | Cadmium    | ND           | 0.0040     |
|       | Cobalt     | ND           | 0.0040     |
|       | Chromium   | 0.0016       | 0.0100     |
|       | Copper     | 0.0012       | 0.0100     |
|       | Iron       | ND           | 0.2000     |
|       | Potassium  | 0.0253       | 0.1000     |
|       | Lithium    | 0.0021       | 0.0050     |
|       | Magnesium  | 0.0004       | 0.0500     |
|       | Manganese  | 0.0003       | 0.0020     |
|       | Molybdenum | ND           | 0.0300     |
|       | Nickel     | 0.0017       | 0.0200     |
|       | Phosphorus | 0.1175       | 0.2000     |
|       | Lead       | ND           | 0.0500     |
|       | Antimony   | ND           | 0.1000     |
|       | Selenium   | ND           | 0.0700     |
|       | Titanium   | 0.0004       | 0.0020     |
|       | Thallium   | 0.0182       | 0.1000     |
|       | Vanadium   | 0.0008       | 0.0030     |
|       | Zinc       | 0.0008       | 0.0250     |
| CCB6- | Silver     | 0.0001       | 0.0050     |
|       | Aluminum   | ND           | 0.0500     |
|       | Arsenic    | ND           | 0.0300     |
|       | Boron      | 0.0035       | 0.0400     |
|       | Barium     | ND           | 0.0030     |
|       | Beryllium  | ND           | 0.0002     |
|       | Calcium    | ND           | 0.3000     |
|       | Cadmium    | ND           | 0.0040     |
|       | Cobalt     | ND           | 0.0040     |
|       | Chromium   | 0.0002       | 0.0100     |
|       | Copper     | 0.0003       | 0.0100     |
|       | Iron       | ND           | 0.2000     |
|       | Potassium  | 0.0618       | 0.1000     |
|       | Lithium    | ND           | 0.0050     |
|       | Magnesium  | ND           | 0.0500     |
|       | Manganese  | 0.0000       | 0.0020     |
|       | Molybdenum | ND           | 0.0300     |
|       | Nickel     | ND           | 0.0200     |
|       | Phosphorus | ND           | 0.2000     |
|       | Lead       | ND           | 0.0500     |

Mountain States Analytical, Inc.  
Daily QC Batching Data  
Data Released for Reporting04/16/98  
17:05:32  
Group: 21700Analysis Batch Number: ICPWA-04/07/98-001 -1  
Test Identification : ICPWA-\*Metals by ICP  
Number of Samples : 21  
Batch Data-Date/Time : 04/07/98 / 13:30:44

Sequence : DATA097

| CCB#  | ANALYTE    | CONC FOUND # | CONC LIMIT |
|-------|------------|--------------|------------|
| CCB6- | Antimony   | 0.0715       | 0.1000     |
|       | Selenium   | 0.0237       | 0.0700     |
|       | Titanium   | 0.0000       | 0.0020     |
|       | Thallium   | ND           | 0.1000     |
|       | Vanadium   | 0.0006       | 0.0030     |
|       | Zinc       | ND           | 0.0250     |
| CCB7- | Silver     | 0.0023       | 0.0050     |
|       | Aluminum   | ND           | 0.0500     |
|       | Arsenic    | 0.0030       | 0.0300     |
|       | Boron      | 0.0008       | 0.0400     |
|       | Barium     | 0.0004       | 0.0030     |
|       | Beryllium  | ND           | 0.0002     |
|       | Calcium    | ND           | 0.3000     |
|       | Cadmium    | 0.0010       | 0.0040     |
|       | Cobalt     | 0.0017       | 0.0040     |
|       | Chromium   | 0.0022       | 0.0100     |
|       | Copper     | 0.0012       | 0.0100     |
|       | Iron       | ND           | 0.2000     |
|       | Potassium  | 0.0618       | 0.1000     |
|       | Lithium    | ND           | 0.0050     |
|       | Magnesium  | ND           | 0.0500     |
|       | Manganese  | 0.0005       | 0.0020     |
|       | Molybdenum | 0.0055       | 0.0300     |
|       | Nickel     | 0.0066       | 0.0200     |
|       | Phosphorus | ND           | 0.2000     |
|       | Lead       | ND           | 0.0500     |
|       | Antimony   | ND           | 0.1000     |
|       | Selenium   | 0.0310       | 0.0700     |
|       | Titanium   | ND           | 0.0020     |
|       | Thallium   | ND           | 0.1000     |
|       | Vanadium   | 0.0009       | 0.0030     |
|       | Zinc       | 0.0005       | 0.0250     |

## ----- Result Footnotes -----

- (8a) - See comments below.  
(2c) - Spike result outside limits. PDS is within acceptance limits.  
(11) - The duplicate results cannot be evaluated because both results are <MDL.  
(5a) - Duplicates not evaluated: Results are <10x detection limit

## ----- Batch Notes -----

The TCLP spike doesn't contain the following elements: Aluminum, Boron, Calcium, Cobalt, Iron, Potassium, Lithium, Magnesium, Manganese, Molybdenum, Phosphorus, and Titanium. However, an LCSW (Laboratory Control Sample) was digested and analyzed with the batch, and all of the above elements were within quality control limits for the LCSW.

The preparation blank, PBW1 showed a trace of Manganese, less than one microgram/liter above the detection limit. Normally preparation blanks in TCLP batches are evaluated with respect to 5% of the regulatory limit. However, no regulatory limit for Manganese in TCLP exists. We believe that the data should be acceptable for use because the level of Manganese present in the sample is low, and is unlikely to be a cause for concern.

The recoveries for Thallium and Vanadium are low in the matrix spike, matrix spike duplicate, and TCLP spike. This appears to represent a genuine matrix effect, and the results for the parent sample should be interpreted with caution. Method 1311, the TCL Procedure, requires that the method of standard additions be used if the TCLP spike recovery is less than 50%, and sample results are within 80 to 100% of the regulatory limit. No regulatory in 40 CFR 261.24 exists for these elements.

jdb

Mountain States Analytical, Inc.  
Daily QC Batching Data  
Data Released for Reporting

04/16/98  
17:05:33  
Group: 21700

Analysis Batch Number: ICPWA-04/07/98-001 -1  
Test Identification : ICPWA-\*Metals by ICP  
Number of Samples : 21  
Batch Data-Date/Time : 04/07/98 / 13:30:44

Sequence : DATA097

Groups & Samples

|             |             |             |             |             |             |             |             |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 21680-77288 | 21689-77328 | 21690-77329 | 21691-77334 | 21700-77381 | 21700-77382 | 21700-77383 | 21722-77486 |
| 21722-77487 | 21722-77488 | 21722-77489 | 21734-77523 | 21737-77534 | 21738-77536 | 21780-77634 | 21789-77667 |
| 21792-77670 | 21792-77671 | 21801-77716 |             |             |             |             |             |

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK1

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 980407WL

Matrix: (soil/water) WATER

Lab Sample ID: 980407WB

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: V4030

Level: (low/med) LOW

Date Received:

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 04/07/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

| CAS NO.          | COMPOUND                  | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) ug/L | Q |
|------------------|---------------------------|----------------------------------------------|---|
| 74-97-5-----     | Bromochloromethane        | 5                                            | U |
| 74-87-3-----     | Chloromethane             | 10                                           | U |
| 75-01-4-----     | Vinyl Chloride            | 10                                           | U |
| 74-83-9-----     | Bromomethane              | 10                                           | U |
| 75-00-3-----     | Chloroethane              | 10                                           | U |
| 67-64-1-----     | Acetone                   | 20                                           | U |
| 75-35-4-----     | 1,1-Dichloroethene        | 5                                            | U |
| 75-09-2-----     | Methylene Chloride        | 5                                            | U |
| 75-15-0-----     | Carbon Disulfide          | 5                                            | U |
| 156-60-5-----    | trans-1,2-Dichloroethene  | 5                                            | U |
| 108-05-4-----    | Vinyl Acetate             | 10                                           | U |
| 75-34-3-----     | 1,1-Dichloroethane        | 5                                            | U |
| 78-93-3-----     | 2-Butanone                | 20                                           | U |
| 156-59-2-----    | cis-1,2-Dichloroethene    | 5                                            | U |
| 67-66-3-----     | Chloroform                | 5                                            | U |
| 71-55-6-----     | 1,1,1-Trichloroethane     | 5                                            | U |
| 56-23-5-----     | Carbon Tetrachloride      | 5                                            | U |
| 107-06-2-----    | 1,2-Dichloroethane        | 5                                            | U |
| 71-43-2-----     | Benzene                   | 5                                            | U |
| 79-01-6-----     | Trichloroethene           | 5                                            | U |
| 78-87-5-----     | 1,2-Dichloropropane       | 5                                            | U |
| 75-27-4-----     | Bromodichloromethane      | 5                                            | U |
| 100-75-8-----    | 2-Chloroethyl Vinyl Ether | 20                                           | U |
| 10061-01-5-----  | cis-1,3-Dichloropropene   | 5                                            | U |
| 108-88-3-----    | Toluene                   | 5                                            | U |
| 10061-02-6-----  | trans-1,3-Dichloropropene | 5                                            | U |
| 79-00-5-----     | 1,1,2-Trichloroethane     | 5                                            | U |
| 108-10-1-----    | 4-Methyl-2-Pentanone      | 10                                           | U |
| 591-78-6-----    | 2-Hexanone                | 10                                           | U |
| 127-18-4-----    | Tetrachloroethene         | 5                                            | U |
| 124-48-1-----    | Dibromochloromethane      | 5                                            | U |
| 108-90-7-----    | Chlorobenzene             | 5                                            | U |
| 100-41-4-----    | Ethylbenzene              | 5                                            | U |
| 108-38-3/106-42- | m+p-Xylene                | 5                                            | U |

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK1

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 980407WL

Matrix: (soil/water) WATER

Lab Sample ID: 980407WB

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: V4030

Level: (low/med) LOW

Date Received:

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 04/07/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

| CAS NO.  | COMPOUND                    | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) ug/L | Q |
|----------|-----------------------------|----------------------------------------------|---|
| 95-47-6  | o-Xylene                    | 5                                            | U |
| 100-42-5 | Styrene                     | 5                                            | U |
| 75-25-2  | Bromoform                   | 5                                            | U |
| 140-88-5 | Ethyl Acrylate              | 5                                            | U |
| 79-34-5  | 1,1,2,2-Tetrachloroethane   | 5                                            | U |
| 78-83-1  | Isobutyl Alcohol            | 300                                          | U |
| 71-36-3  | n-Butyl Alcohol             | 500                                          | U |
| 110-57-6 | trans-1,4-Dichloro-2-butene | 10                                           | U |
| 80-62-6  | Methyl Methacrylate         | 5                                            | U |
| 123-91-1 | 1,4-Dioxane                 | 500                                          | U |
| 74-95-3  | Dibromomethane              | 5                                            | U |
| 79-46-9  | 2-Nitropropane              | 50                                           | U |
| 97-63-2  | Ethyl Methacrylate          | 5                                            | U |
| 106-93-4 | 1,2-Dibromoethane           | 5                                            | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane   | 5                                            | U |
| 108-94-1 | Cyclohexanone               | 250                                          | U |
| 96-18-4  | 1,2,3-Trichloropropane      | 5                                            | U |
| 10645-7  | Pentachloroethane           | 10                                           | U |
| 98-82-8  | Isopropylbenzene            | 10                                           | U |
| 100-44-7 | Benzyl Chloride             | 10                                           | U |
| 541-73-1 | 1,3-Dichlorobenzene         | 5                                            | U |
| 106-46-7 | 1,4-Dichlorobenzene         | 5                                            | U |
| 104-51-8 | n-Butylbenzene              | 10                                           | U |
| 91-20-3  | Naphthalene                 | 5                                            | U |
| 75-71-8  | Dichlorodifluoromethane     | 5                                            | U |
| 75-69-4  | Trichlorofluoromethane      | 5                                            | U |
| 60-29-7  | Ethyl Ether                 | 5                                            | U |
| 110-009  | Furan                       | 5                                            | U |
| 107-08-8 | Acrolein                    | 100                                          | U |
| 76-13-1  | Freon 113                   | 5                                            | U |
| 504-60-9 | trans-Piperylene            | 5                                            | U |
| 504-60-9 | cis-Piperylene              | 5                                            | U |
| 75-05-8  | Acetonitrile                | 150                                          | U |
| 74-88-4  | Methyl Iodide               | 5                                            | U |

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBK1

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 980407WL

Matrix: (soil/water) WATER

Lab Sample ID: 980407WB

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: V4030

Level: (low/med) LOW

Date Received:

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 04/07/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

|         |          |                                              |   |
|---------|----------|----------------------------------------------|---|
| CAS NO. | COMPOUND | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) ug/L | Q |
|---------|----------|----------------------------------------------|---|

|                |                               |     |   |
|----------------|-------------------------------|-----|---|
| 107-05-1-----  | Allyl Chloride                | 5   | U |
| 107-13-1-----  | Acrylonitrile                 | 50  | U |
| 1634-04-4----- | Methyl t-Butyl Ether          | 5   | U |
| 126-99-8-----  | 2-Chloro-1,3-Butadiene        | 5   | U |
| 107-12-0-----  | Propionitrile (ethyl Cyanide) | 100 | U |
| 141-78-6-----  | Ethyl Acetate                 | 10  | U |
| 126-98-7-----  | Methacrylonitrile             | 10  | U |
| 109-99-9-----  | Tetrahydrofuran               | 5   | U |
| 110-82-7-----  | Cyclohexane                   | 10  | U |
| 1476-11-5----- | cis-1,4-Dichloro-2-butene     | 10  | U |
| 594-20-7-----  | 2,2-Dichloropropane           | 5   | U |
| 563-58-6-----  | 1,1-Dichloropropene           | 5   | U |
| 142-28-9-----  | 1,3-Dichloropropane           | 5   | U |
| 103-65-1-----  | n-Propylbenzene               | 5   | U |
| 108-86-1-----  | Bromobenzene                  | 5   | U |
| 95-49-8-----   | o-Chlorotoluene               | 5   | U |
| 108-61-8-----  | 1,3,5-Trimethylbenzene        | 5   | U |
| 106-43-4-----  | p-Chlorotoluene               | 5   | U |
| 98-06-6-----   | tert-Butylbenzene             | 5   | U |
| 95-63-6-----   | 1,2,4-Trimethylbenzene        | 5   | U |
| 135-98-8-----  | sec-Butylbenzene              | 5   | U |
| 99-87-6-----   | p-Isopropyltoluene            | 5   | U |
| 120-82-1-----  | 1,2,4-Trichlorobenzene        | 5   | U |
| 96-12-8-----   | 1,2-Dibromo-3-Chloropropane   | 5   | U |
| 67-68-3-----   | Hexachlorobutadiene           | 5   | U |
| 87-61-6-----   | 1,2,3-Trichlorobenzene        | 5   | U |
| 95-50-1-----   | 1,2-Dichlorobenzene           | 5   | U |

2A  
WATER VOLATILE SURROGATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 980407WL

|    | EPA<br>SAMPLE NO. | S1<br>(TOL) # | S2<br>(BFB) # | S3<br>(DCE) # | OTHER | TOT<br>OUT |
|----|-------------------|---------------|---------------|---------------|-------|------------|
|    | =====             | =====         | =====         | =====         | ===== | =====      |
| 01 | VBLK1             | 99            | 97            | 100           |       | 0          |
| 02 | VBLK1LCS          | 97            | 96            | 96            |       | 0          |
| 03 | VBLK1LCSD         | 100           | 100           | 105           |       | 0          |
| 04 | M01959DL          | 100           | 101           | 104           |       | 0          |
| 05 | 0406BLK           | 98            | 99            | 101           |       | 0          |
| 06 | 8082              | 100           | 100           | 106           |       | 0          |
| 07 | DM94              | 99            | 99            | 104           |       | 0          |
| 08 | DM101             | 100           | 100           | 106           |       | 0          |
| 09 | DCR               | 98            | 99            | 102           |       | 0          |
| 10 | DCRMS             | 100           | 101           | 103           |       | 0          |
| 11 | DCRMSD            | 97            | 100           | 101           |       | 0          |
| 12 | M01959            | 94            | 94            | 101           |       | 0          |
| 13 |                   |               |               |               |       |            |
| 14 |                   |               |               |               |       |            |
| 15 |                   |               |               |               |       |            |
| 16 |                   |               |               |               |       |            |
| 17 |                   |               |               |               |       |            |
| 18 |                   |               |               |               |       |            |
| 19 |                   |               |               |               |       |            |
| 20 |                   |               |               |               |       |            |
| 21 |                   |               |               |               |       |            |
| 22 |                   |               |               |               |       |            |
| 23 |                   |               |               |               |       |            |
| 24 |                   |               |               |               |       |            |
| 25 |                   |               |               |               |       |            |
| 26 |                   |               |               |               |       |            |
| 27 |                   |               |               |               |       |            |
| 28 |                   |               |               |               |       |            |
| 29 |                   |               |               |               |       |            |
| 30 |                   |               |               |               |       |            |

QC LIMITS

S1 (TOL) = Toluene-d8 (68-131)  
 S2 (BFB) = Bromofluorobenzene (67-132)  
 S3 (DCE) = 1,2-Dichloroethane-d4 (77-138)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogates diluted out



3A  
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 980407WL

Matrix Spike - EPA Sample No.: DCR

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>AMOUNT<br>(ug/L) | MS<br>AMOUNT<br>(ug/L) | MS<br>%<br>REC # | QC.<br>LIMITS<br>REC. |
|--------------------|--------------------------|----------------------------|------------------------|------------------|-----------------------|
| 1,1-Dichloroethene | 20.0                     | 0.00                       | 19.4                   | 97               | 68-132                |
| Benzene            | 20.0                     | 0.86                       | 19.8                   | 95               | 82-130                |
| Trichloroethene    | 20.0                     | 0.00                       | 20.6                   | 103              | 72-124                |
| Toluene            | 20.0                     |                            | 25.0                   | 125              | 77-129                |
| Chlorobenzene      | 20.0                     | 0.00                       | 19.6                   | 98               | 74-122                |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | MSD<br>AMOUNT<br>(ug/L) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD | REC.   |
|--------------------|--------------------------|-------------------------|-------------------|------------|------------------|--------|
| 1,1-Dichloroethene | 20.0                     | 19.7                    | 98                | 1          | 16               | 68-132 |
| Benzene            | 20.0                     | 19.8                    | 95                | 0          | 11               | 82-130 |
| Trichloroethene    | 20.0                     | 20.2                    | 101               | 2          | 14               | 72-124 |
| Toluene            | 20.0                     | 24.3                    | 122               | 2          | 12               | 77-129 |
| Chlorobenzene      | 20.0                     | 19.5                    | 98                | 0          | 12               | 74-122 |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

FORM 3  
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 980407WL

Matrix Spike - Sample No.: vblk1

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>AMOUNT<br>(ug/L) | LCS<br>AMOUNT<br>(ug/L) | LCS<br>%<br>REC # | QC.<br>LIMITS<br>REC. |
|--------------------|--------------------------|----------------------------|-------------------------|-------------------|-----------------------|
| =====              | =====                    | =====                      | =====                   | =====             | =====                 |
| 1,1-Dichloroethene | 20.0                     | 0.00                       | 20.0                    | 100               | 74-126                |
| Benzene            | 20.0                     | 0.00                       | 19.3                    | 96                | 81-125                |
| Trichloroethene    | 20.0                     | 0.00                       | 19.6                    | 98                | 78-122                |
| Toluene            | 20.0                     | 0.00                       | 19.6                    | 98                | 88-119                |
| Chlorobenzene      | 20.0                     | 0.00                       | 19.4                    | 97                | 75-123                |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | LCSD<br>AMOUNT<br>(ug/L) | LCSD<br>%<br>REC # | %<br>RPD # | QC LIMITS |        |
|--------------------|--------------------------|--------------------------|--------------------|------------|-----------|--------|
| =====              | =====                    | =====                    | =====              | =====      | =====     | =====  |
| 1,1-Dichloroethene | 20.0                     | 19.5                     | 98                 | 2          | 13        | 74-126 |
| Benzene            | 20.0                     | 19.5                     | 98                 | 2          | 11        | 81-125 |
| Trichloroethene    | 20.0                     | 19.7                     | 98                 | 0          | 12        | 78-122 |
| Toluene            | 20.0                     | 19.6                     | 98                 | 0          | 9         | 88-119 |
| Chlorobenzene      | 20.0                     | 19.6                     | 98                 | 1          | 12        | 75-123 |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:



| Distribution: | White – On Site | Yellow – LAB | Pink – Sampler | Goldenrod – Client |
|---------------|-----------------|--------------|----------------|--------------------|
|---------------|-----------------|--------------|----------------|--------------------|

District I - (505) 393-6161  
P. O. Box 1980  
Hobbs, NM 88241-1980  
District II - (505) 748-1283  
811 S. First  
Artesia, NM 88210  
District III - (505) 334-6178  
Rio Brazos Road  
Artesia, NM 87410  
District IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Form C-138  
Originated 8/8/95

Submit Original  
Plus 1 Copy  
to appropriate  
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 4. Generator <i>Williams Field Service</i><br><i>PRODUCTION OPERATORS INC.</i> |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5. Originating Site                                                            |
| 2. Management Facility Destination <i>T-N-T Facility</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 6. Transporter <i>SCHMITZ CONST.</i>                                           |
| 3. Address of Facility Operator <i>HCR 74 BOX 113</i><br><i>LINDRITH N.M. 87029</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 8. State <i>N.M.</i>                                                           |
| 7. Location of Material (Street Address or ULSTR) <i>VARIOUS</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                |
| 9. Circle One:<br>A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.<br><input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved.<br><br>All transporters must certify the wastes delivered are only those consigned for transport. |                                                                                |

BRIEF DESCRIPTION OF MATERIAL: *RAIN WATER & WASH WATER.*

RECEIVED

AUG - 4 1997

Environmental Bureau  
Oil Conservation Division

*All fluid stored  
in tanks at the  
# 296 #4*

RECEIVED  
AUG - 1 1997

OIL CON. DIV.  
DIST. 3

Estimated Volume \_\_\_\_\_ cy Known Volume (to be entered by the operator at the end of the haul) \_\_\_\_\_ cy

SIGNATURE: *Tony Lee Schmitz*  
Waste Management Facility Authorized Agent

TITLE: *PRESIDENT*

DATE: *7/28/96*

TYPE OR PRINT NAME: *TONY LEE SCHMITZ*

TELEPHONE NO. *505-774-6504*

(This space for State Use)

APPROVED BY: *Denny G. Fount*

TITLE: *Geologist*

DATE: *8/1/97*

APPROVED BY: *R. L. [Signature]*

TITLE: *Bureau Chief*

DATE: *8/5/97*

Printed in Artesia, New Mexico

## CERTIFICATE OF WASTE STATUS

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                        |        |          |              |            |          |           |       |        |        |      |        |       |       |            |      |           |        |      |      |        |           |        |        |      |      |      |       |        |              |       |      |        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------|----------|--------------|------------|----------|-----------|-------|--------|--------|------|--------|-------|-------|------------|------|-----------|--------|------|------|--------|-----------|--------|--------|------|------|------|-------|--------|--------------|-------|------|--------|
| <b>1. Generator Name and Address:</b><br><u>Williams Field Service</u><br>Production Operators, Inc.<br>4000 Lomas<br>Farmington, NM 87401                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>2. Destination Name:</b><br>T-N-T Construction Inc. |        |          |              |            |          |           |       |        |        |      |        |       |       |            |      |           |        |      |      |        |           |        |        |      |      |      |       |        |              |       |      |        |
| <b>3. Originating Site (name):</b> Trunk A, B, C, F, L. <b>Location of the Waste (Street address &amp;/or ULSTR):</b> Trunk M<br><table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">29-6#2</td> <td style="width: 15%;">30-5</td> <td style="width: 15%;">32-8#2</td> <td style="width: 15%;">Carracas</td> <td style="width: 15%;">Hart Mt.</td> <td style="width: 15%;">LaCosa</td> <td style="width: 15%;">Moore</td> <td style="width: 15%;">Pipkin</td> </tr> <tr> <td>29-6#3</td> <td>30-8</td> <td>32-8#3</td> <td>Cedar</td> <td>Horse</td> <td>Manzanares</td> <td>N-30</td> <td>Pritchard</td> </tr> <tr> <td>29-6#4</td> <td>31-6</td> <td>32-9</td> <td>Coyote</td> <td>Kernaghan</td> <td>Middle</td> <td>Navajo</td> <td>Pump</td> </tr> <tr> <td>29-7</td> <td>32-7</td> <td>Aztec</td> <td>Decker</td> <td>Kernaghan B8</td> <td>PLA-9</td> <td>Sims</td> <td>32-8#1</td> </tr> </table> <small>Attach list of originating sites as appropriate</small> |                                                        | 29-6#2 | 30-5     | 32-8#2       | Carracas   | Hart Mt. | LaCosa    | Moore | Pipkin | 29-6#3 | 30-8 | 32-8#3 | Cedar | Horse | Manzanares | N-30 | Pritchard | 29-6#4 | 31-6 | 32-9 | Coyote | Kernaghan | Middle | Navajo | Pump | 29-7 | 32-7 | Aztec | Decker | Kernaghan B8 | PLA-9 | Sims | 32-8#1 |
| 29-6#2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 30-5                                                   | 32-8#2 | Carracas | Hart Mt.     | LaCosa     | Moore    | Pipkin    |       |        |        |      |        |       |       |            |      |           |        |      |      |        |           |        |        |      |      |      |       |        |              |       |      |        |
| 29-6#3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 30-8                                                   | 32-8#3 | Cedar    | Horse        | Manzanares | N-30     | Pritchard |       |        |        |      |        |       |       |            |      |           |        |      |      |        |           |        |        |      |      |      |       |        |              |       |      |        |
| 29-6#4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 31-6                                                   | 32-9   | Coyote   | Kernaghan    | Middle     | Navajo   | Pump      |       |        |        |      |        |       |       |            |      |           |        |      |      |        |           |        |        |      |      |      |       |        |              |       |      |        |
| 29-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 32-7                                                   | Aztec  | Decker   | Kernaghan B8 | PLA-9      | Sims     | 32-8#1    |       |        |        |      |        |       |       |            |      |           |        |      |      |        |           |        |        |      |      |      |       |        |              |       |      |        |
| <b>4. Source and Description of Waste</b><br><br>RAIN WATER & WASH WATER<br><br>For the month of <u>JULY 1997</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                        |        |          |              |            |          |           |       |        |        |      |        |       |       |            |      |           |        |      |      |        |           |        |        |      |      |      |       |        |              |       |      |        |

I, BUSTER GASTON representative for:  
 (Print Name)  
PRODUCTION OPERATORS, INC. do hereby certify that,  
 according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,  
 1988, regulatory determination, the above described waste is: (Check appropriate classification)

☐ EXEMPT oilfield waste      ☒ NON-EXEMPT oilfield waste which is non-hazardous by characteristic  
 analysis or by product identification

and that nothing has been added to the exempt or non-exempt non-hazardous waste defined above.

For NON-EXEMPT waste only the following documentation is attached (check appropriate items):

☐ MSDS Information      ☐ Other (description):  
☒ RCRA Hazardous Waste Analysis  
☐ Chain of Custody

Name (Original Signature): Buster Gaston  
 Title: OPERATIONS COORDINATOR  
 Date: 7-23-97

**TOXICITY CHARACTERISTIC LEACHING PROCEDURE  
TRACE METAL CONCENTRATION**

Client: **Production Operators**  
Project: **None Given**  
Sample ID: **29-6 #4**  
Laboratory ID: **0397G01172**  
Sample Matrix: **Water**

Date Reported: **07/15/97**  
Date Sampled: **06/20/97**  
Date Received: **06/20/97**  
Date Analyzed: **6/30-7/7/97**

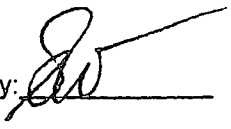
| Parameter     | Result | Comparison Limit | Regulatory Level | Units |
|---------------|--------|------------------|------------------|-------|
| Arsenic.....  | <0.005 | 0.005            | 5                | mg/L  |
| Barium.....   | 0.97   | 0.01             | 100              | mg/L  |
| Cadmium.....  | <0.004 | 0.004            | 1                | mg/L  |
| Chromium..... | <0.01  | 0.01             | 5                | mg/L  |
| Lead.....     | <0.05  | 0.05             | 5                | mg/L  |
| Mercury.....  | <0.001 | 0.001            | 0.2              | mg/L  |
| Selenium..... | <0.005 | 0.005            | 1                | mg/L  |
| Silver.....   | <0.01  | 0.01             | 5                | mg/L  |

ND- Analyte not detected at stated detection level.

References: Method 1311: Toxicity Characteristic Leaching Procedure,  
SW-846, Rev. 0, July 1992.

Method 3010A: Acid Digestion of Aqueous Samples and Extracts for Total  
Metals, SW-846, Rev. 1, July 1992.

Comments:

Reported By: 

Reviewed: 

# Quality Control / Quality Assurance

## Spike Analysis / Blank Analysis

### TOXICITY CHARACTERISTIC LEACHING PROCEDURE

Client: Production Operators  
Project: None Given  
Sample Matrix: Water

Date Reported: 07/15/97  
Date Analyzed: 8/30-7/797  
Date Received: 06/20/97

#### Spike Analysis

| Parameter | Spike Result (mg/L) | Sample Result (mg/L) | Spike Added (mg/L) | Percent Recovery |
|-----------|---------------------|----------------------|--------------------|------------------|
| Arsenic   | 0.02                | <0.005               | 0.03               | 84%              |
| Barium    | 0.44                | <0.10                | 0.50               | 88%              |
| Cadmium   | 0.430               | <0.004               | 0.500              | 86%              |
| Chromium  | 0.45                | <0.01                | 0.50               | 90%              |
| Lead      | 0.42                | <0.05                | 0.50               | 84%              |
| Mercury   | 0.026               | <0.001               | 0.025              | 104%             |
| Selenium  | 0.024               | <0.005               | 0.025              | 96%              |
| Silver    | *                   | *                    | *                  | *                |

#### Method Blank Analysis

| Parameter | Result | Detection Limit | Units |
|-----------|--------|-----------------|-------|
| Arsenic   | ND     | 0.005           | mg/L  |
| Barium    | ND     | 0.01            | mg/L  |
| Cadmium   | ND     | 0.004           | mg/L  |
| Chromium  | ND     | 0.01            | mg/L  |
| Lead      | ND     | 0.005           | mg/L  |
| Mercury   | ND     | 0.001           | mg/L  |
| Selenium  | ND     | 0.005           | mg/L  |
| Silver    | ND     | 0.01            | mg/L  |

#### References:

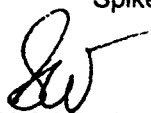
Method 1311: Toxicity Characteristic Leaching Procedure, SW-846, Rev. 0, July 1992.

Method 3010A: Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, Rev. 1, July 1992.

#### Comments:

\*Spike data unavailable.

Reported by



Reviewed by





**Quality Control / Quality Assurance****Known Analysis****TOXICITY CHARACTERISTIC LEACHING PROCEDURE**

Client: **Production Operators**  
Project: **None Given**  
Sample Matrix: **Water**

Date Reported: **07/15/97**  
Date Analyzed: **6/30-7/7/97**  
Date Received: **06/20/97**

**Known Analysis**

| Parameter | Found Result | Known Result | Percent Recovery | Units |
|-----------|--------------|--------------|------------------|-------|
| Arsenic   | 0.010        | 0.010        | 100%             | mg/L  |
| Barium    | 0.94         | 1.00         | 94%              | mg/L  |
| Cadmium   | 1.000        | 1.000        | 100%             | mg/L  |
| Chromium  | 1.01         | 1.00         | 101%             | mg/L  |
| Lead      | 1.02         | 1.00         | 102%             | mg/L  |
| Mercury   | 0.008        | 0.008        | 95%              | mg/L  |
| Selenium  | 0.011        | 0.010        | 110%             | mg/L  |
| Silver    | 1.02         | 1.00         | 102%             | mg/L  |

**References:**

Method 1311: Toxicity Characteristic Leaching Procedure,  
SW-846, Rev. 0, July 1992.

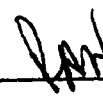
Method 3010A: Acid Digestion of Aqueous Samples and Extracts for Total  
Metals, SW-846, Rev. 1, July 1992.

**Comments:**

Reported by



Reviewed by



TOXICITY CHARACTERISTIC LEACHING PROCEDURE  
HSL VOLATILE COMPOUNDS1160 Research Drive  
Bozeman, Montana 59718

Client: PRODUCTION OPERATORS

Sample ID: 29-6 #4

Project ID: None Given

Lab ID: B973260

0397G01172

Matrix: Water

Date Reported: 07/02/97

Date Sampled: 06/20/97

Date Received: 06/24/97

Date Extracted: 06/26/97

Date Analyzed: 06/26/97

| Parameter               | Result | PQL  | Regulatory Level | Units |
|-------------------------|--------|------|------------------|-------|
| 1,1-Dichloroethene      | ND     | 0.02 | 0.7              | mg/L  |
| 1,2-Dichloroethane      | ND     | 0.02 | 0.5              | mg/L  |
| 2-Butanone (MEK)        | 0.3    | 0.1  | 200              | mg/L  |
| Benzene                 | 0.94   | 0.02 | 0.5              | mg/L  |
| Carbon Tetrachloride    | ND     | 0.02 | 0.5              | mg/L  |
| Chlorobenzene           | ND     | 0.02 | 100              | mg/L  |
| Chloroform              | ND     | 0.02 | 6.0              | mg/L  |
| Tetrachloroethene (PCE) | ND     | 0.02 | 0.7              | mg/L  |
| Trichloroethene (TCE)   | ND     | 0.02 | 0.5              | mg/L  |
| Vinyl Chloride          | ND     | 0.02 | 0.2              | mg/L  |

## QUALITY CONTROL - Surrogate Recovery

%

QC Limits

|                       |    |          |
|-----------------------|----|----------|
| 1,2-Dichloroethane-d4 | 96 | 80 - 120 |
| Bromofluorobenzene    | 97 | 86 - 115 |
| Toluene-d8            | 97 | 88 - 110 |

ND - Not Detected at Practical Quantitation Level (PQL)

Reference: Method 8260A Gas Chromatography/Mass Spectrometry for Volatile Organics, Test Methods for Evaluating Solid Wastes, SW-846, Final Update II, United States Environmental Protection Agency, September 1994.

Method 1311, Toxicity Characteristic Leaching Procedure, Test Methods for Evaluating Solid Wastes, SW-846, United States EPA, September 1994.

Analyst E.D.Reviewed PRD

TOXICITY CHARACTERISTIC LEACHING PROCEDURE  
HSL SEMI-VOLATILE COMPOUNDS1180 Research Drive  
Bozeman, Montana 59718

Client: PRODUCTION OPERATORS

Sample ID: 29-8 #4

Project ID: None Given

Lab ID: B973280

0397G01172

Matrix: Water

Date Reported: 07/21/97

Date Sampled: 06/20/97

Date Received: 06/24/97

Date Extracted: 06/27/97

Date Analyzed: 07/01/97

| Parameter                | Result | PQL  | Regulatory Level | Units |
|--------------------------|--------|------|------------------|-------|
| 1,4-Dichlorobenzene      | ND     | 0.01 | 7.5              | mg/L  |
| 2,4,5-Trichlorophenol    | ND     | 0.02 | 400              | mg/L  |
| 2,4,6-Trichlorophenol    | ND     | 0.02 | 2.0              | mg/L  |
| 2,4-Dinitrotoluene       | ND     | 0.01 | 0.13             | mg/L  |
| Hexachloro-1,3-butadiene | ND     | 0.02 | 0.5              | mg/L  |
| Hexachlorobenzene        | ND     | 0.02 | 0.13             | mg/L  |
| Hexachloroethane         | ND     | 0.02 | 3.0              | mg/L  |
| m,p-Cresol               | ND     | 0.01 | 200              | mg/L  |
| Nitrobenzene             | ND     | 0.01 | 2.0              | mg/L  |
| o-Cresol                 | ND     | 0.01 | 200              | mg/L  |
| Pentachlorophenol        | ND     | 0.05 | 100              | mg/L  |
| Pyridine                 | ND     | 0.02 | 5.0              | mg/L  |

## QUALITY CONTROL - Surrogate Recovery

%

QC Limits

|                      |        |          |
|----------------------|--------|----------|
| 2,4,6-Tribromophenol | 97     | 10 - 123 |
| 2-Fluorobiphenyl     | 118 ## | 43 - 116 |
| 2-Fluorophenol       | 17 ##  | 21 - 100 |
| Nitrobenzene-d5      | 94     | 35 - 114 |
| Phenol-d6            | 28     | 10 - 94  |
| Terphenyl-d14        | 83     | 33 - 121 |

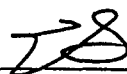
ND - Not Detected at Practical Quantitation Level (PQL)

## - Surrogate Recovery not within control limits due to matrix/dilution effect.

Reference: Method 8270B, Gas Chromatography/Mass Spectrometry for Semivolatile Organics, Test Methods for Evaluating Solid Wastes, SW-846, United States EPA, September 1994.

Method 1311, Toxicity Characteristic Leaching Procedure, Test Methods for Evaluating Solid Wastes, SW-846, United States EPA, September 1994.

Analyst



Reviewed

E.D.

## **QUALITY ASSURANCE / QUALITY CONTROL**

**LAB QA/QC  
TOXICITY CHARACTERISTIC LEACHING PROCEDURE  
METHOD BLANK**

Date Analyzed: 06/27/97  
Lab ID: MBW97178A  
Matrix: Water  
Date Extracted 06/27/97

| Parameter               | Result | PQL  | Units |
|-------------------------|--------|------|-------|
| 1,1-Dichloroethene      | ND     | 0.02 | mg/L  |
| 1,2-Dichloroethane      | ND     | 0.02 | mg/L  |
| 2-Butanone (MEK)        | ND     | 0.1  | mg/L  |
| Benzene                 | ND     | 0.02 | mg/L  |
| Carbon Tetrachloride    | ND     | 0.02 | mg/L  |
| Chlorobenzene           | ND     | 0.02 | mg/L  |
| Chloroform              | ND     | 0.02 | mg/L  |
| Tetrachloroethene (PCE) | ND     | 0.02 | mg/L  |
| Trichloroethene (TCE)   | ND     | 0.02 | mg/L  |
| Vinyl Chloride          | ND     | 0.02 | mg/L  |

**QUALITY CONTROL - Surrogate Recovery** %

|                       |    |
|-----------------------|----|
| 1,2-Dichloroethane-d4 | 98 |
| Bromofluorobenzene    | 96 |
| Toluene-d8            | 95 |

ND - Not Detected at Practical Quantitation Level (PQL)

Analyst F. D.

Reviewed RRD

**LAB QA/QC  
TOXICITY CHARACTERISTIC LEACHING PROCEDURE  
METHOD BLANK**

Date Analyzed: 06/26/97  
Lab ID: MBW97177A  
Matrix: Water  
Date Extracted 06/26/97

| Parameter               | Result | PQL  | Units |
|-------------------------|--------|------|-------|
| 1,1-Dichloroethene      | ND     | 0.02 | mg/L  |
| 1,2-Dichloroethane      | ND     | 0.02 | mg/L  |
| 2-Butanone (MEK)        | ND     | 0.1  | mg/L  |
| Benzene                 | ND     | 0.02 | mg/L  |
| Carbon Tetrachloride    | ND     | 0.02 | mg/L  |
| Chlorobenzene           | ND     | 0.02 | mg/L  |
| Chloroform              | ND     | 0.02 | mg/L  |
| Tetrachloroethene (PCE) | ND     | 0.02 | mg/L  |
| Trichloroethene (TCE)   | ND     | 0.02 | mg/L  |
| Vinyl Chloride          | ND     | 0.02 | mg/L  |

**QUALITY CONTROL - Surrogate Recovery** %

|                       |     |
|-----------------------|-----|
| 1,2-Dichloroethane-d4 | 95  |
| Bromofluorobenzene    | 101 |
| Toluene-d8            | 100 |

ND - Not Detected at Practical Quantitation Level (PQL)

Analyst E.D.

Reviewed RPD

**LAB QA/QC  
TOXICITY CHARACTERISTIC LEACHING PROCEDURE  
MATRIX SPIKE SUMMARY**

Date Analyzed: 06/26/97  
Laboratory ID: B97-3289  
Sample Matrix: GRIT DUST  
Date Extracted: 6/25/97

| Parameter            | Spike Added<br>mg/L | Sample Concentration<br>mg/L | Matrix Spike Concentration<br>mg/L | Matrix Spike Recovery (%) |
|----------------------|---------------------|------------------------------|------------------------------------|---------------------------|
| Vinyl Chloride       | 0.05                | 0                            | 0.047                              | 94                        |
| 1,1-Dichloroethene   | 0.05                | 0                            | 0.048                              | 96                        |
| 1,2-Dichloroethane   | 0.05                | 0                            | 0.050                              | 100                       |
| Chloroform           | 0.05                | 0                            | 0.049                              | 98                        |
| Carbon Tetrachloride | 0.05                | 0                            | 0.045                              | 90                        |
| Trichloroethene      | 0.05                | 0                            | 0.049                              | 98                        |
| Benzene              | 0.05                | 0                            | 0.048                              | 96                        |
| Tetrachloroethene    | 0.05                | 0                            | 0.051                              | 102                       |
| Chlorobenzene        | 0.05                | 0                            | 0.047                              | 94                        |
| Methyl Ethyl Ketone  | 0.1                 | 0                            | 0.100                              | 100                       |

**QUALITY CONTROL:**

| Surrogate Recovery    | %  |
|-----------------------|----|
| 1,2-Dichloroethane-d4 | 99 |
| Toluene-d8            | 99 |
| Bromofluorobenzene    | 99 |

**References:**

Method 8260, Gas Chromatography/Mass Spectrometry for Volatile Organics, Test Methods for Evaluating Solid Wastes, SW-846, Final Update II, United States Environmental Protection Agency, September 1994.

Method 1311, Toxicity Characteristic Leaching Procedure, Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, September 1994.

E.P.  
Analyst

RRD  
Reviewed

**LAB QA/QC  
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS  
MATRIX SPIKE SUMMARY**

Date Analyzed: 07/01/97  
Laboratory ID: TBS97-178  
Sample Matrix: Water  
Date Extracted: 08/27/97

| Parameter             | Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Recovery (%) |
|-----------------------|--------------------|-----------------------------|-----------------------------------|---------------------------|
| 1,4-Dichlorobenzene   | 0.1                | 0                           | 0.080                             | 80                        |
| 2,4,5-Trichlorophenol | 0.1                | 0                           | 0.093                             | 93                        |
| 2,4,6-Trichlorophenol | 0.1                | 0                           | 0.094                             | 94                        |
| 2,4-Dinitrotoluene    | 0.1                | 0                           | 0.092                             | 92                        |
| Hexachlorobenzene     | 0.1                | 0                           | 0.094                             | 94                        |
| Hexachlorobutadiene   | 0.1                | 0                           | 0.083                             | 83                        |
| Hexachloroethane      | 0.1                | 0                           | 0.080                             | 80                        |
| m,p-Cresol            | 0.2                | 0                           | 0.164                             | 82                        |
| Nitrobenzene          | 0.1                | 0                           | 0.089                             | 89                        |
| o-Cresol              | 0.1                | 0                           | 0.081                             | 81                        |
| Pentachlorophenol     | 0.1                | 0                           | 0.088                             | 88                        |
| Pyridine              | 0.1                | 0                           | 0.100                             | 100                       |

**QUALITY CONTROL:**

| Surrogate Recoveries | %  |
|----------------------|----|
| 2,4,6-Tribromophenol | 98 |
| 2-Fluorobiphenyl     | 83 |
| 2-Fluorophenol       | 84 |
| Nitrobenzene-d5      | 89 |
| Phenol-d6            | 70 |
| Terphenyl-d14        | 77 |

**References:**

Method 8270B, Semivolatile Organics - GC/MS, Test Methods for Evaluating Solid Waste, USEPA, SW-846, Vol. IB, September 1994.

Analyst

Reviewed



LAB QA/QC  
EPA METHOD 8270  
METHOD BLANKDate Analyzed: 07/01/97  
Lab ID: MBW97178  
Matrix: Water  
Date Extracted: 08/27/97

| Parameter                     | Result | PQL  | Units |
|-------------------------------|--------|------|-------|
| 1,2,4-Trichlorobenzene        | ND     | 0.01 | mg/L  |
| 1,2-Dichlorobenzene           | ND     | 0.01 | mg/L  |
| 1,3-Dichlorobenzene           | ND     | 0.01 | mg/L  |
| 1,4-Dichlorobenzene           | ND     | 0.01 | mg/L  |
| 2,4,5-Trichlorophenol         | ND     | 0.02 | mg/L  |
| 2,4,6-Trichlorophenol         | ND     | 0.01 | mg/L  |
| 2,4-Dichlorophenol            | ND     | 0.01 | mg/L  |
| 2,4-Dimethylphenol            | ND     | 0.01 | mg/L  |
| 2,4-Dinitrophenol             | ND     | 0.05 | mg/L  |
| 2,4-Dinitrotoluene            | ND     | 0.01 | mg/L  |
| 2,6-Dinitrotoluene            | ND     | 0.01 | mg/L  |
| 2-Chloronaphthalene           | ND     | 0.01 | mg/L  |
| 2-Chlorophenol                | ND     | 0.01 | mg/L  |
| 2-Methylnaphthalene           | ND     | 0.01 | mg/L  |
| 2-Methylphenol                | ND     | 0.01 | mg/L  |
| 2-Nitroaniline                | ND     | 0.05 | mg/L  |
| 2-Nitrophenol                 | ND     | 0.01 | mg/L  |
| 3,3'-Dichlorobenzidine        | ND     | 0.01 | mg/L  |
| 3-Methylphenol/4-Methylphenol | ND     | 0.01 | mg/L  |
| 3-Nitroaniline                | ND     | 0.05 | mg/L  |
| 4,6-Dinitro-2-methylphenol    | ND     | 0.05 | mg/L  |
| 4-Bromophenyl-phenylether     | ND     | 0.01 | mg/L  |
| 4-Chloro-3-methylphenol       | ND     | 0.02 | mg/L  |
| 4-Chloroaniline               | ND     | 0.02 | mg/L  |
| 4-Chlorophenyl-phenylether    | ND     | 0.01 | mg/L  |
| 4-Nitroaniline                | ND     | 0.02 | mg/L  |
| 4-Nitrophenol                 | ND     | 0.05 | mg/L  |
| Acenaphthene                  | ND     | 0.01 | mg/L  |
| Acenaphthylene                | ND     | 0.01 | mg/L  |
| Anthracene                    | ND     | 0.01 | mg/L  |
| Benzo(a)anthracene            | ND     | 0.01 | mg/L  |
| Benzo(a)pyrene                | ND     | 0.01 | mg/L  |
| Benzo(b)fluoranthene          | ND     | 0.01 | mg/L  |

Continued

**LAB QA/QC**  
**EPA METHOD 8270**  
**METHOD BLANK**

Date Analyzed: 07/01/97  
Lab ID: MBW97178  
Matrix: Water  
Date Extracted: 06/27/97

| Parameter                   | Result | PQL  | Units |
|-----------------------------|--------|------|-------|
| Continued                   |        |      |       |
| Benzo(g,h,i)perylene        | ND     | 0.01 | mg/L  |
| Benzo(k)fluoranthene        | ND     | 0.01 | mg/L  |
| Benzoic Acid                | ND     | 0.05 | mg/L  |
| Benzyl Alcohol              | ND     | 0.01 | mg/L  |
| bis(2-Chloroethoxy)methane  | ND     | 0.01 | mg/L  |
| bis(2-Chloroethyl)ether     | ND     | 0.01 | mg/L  |
| bis(2-Chloroisopropyl)ether | ND     | 0.01 | mg/L  |
| bis(2-Ethylhexyl)phthalate  | ND     | 0.01 | mg/L  |
| Butylbenzylphthalate        | ND     | 0.01 | mg/L  |
| Chrysene                    | ND     | 0.01 | mg/L  |
| Di-n-Butylphthalate         | ND     | 0.01 | mg/L  |
| Di-n-Octylphthalate         | ND     | 0.01 | mg/L  |
| Dibenz(a,h)anthracene       | ND     | 0.01 | mg/L  |
| Dibenzofuran                | ND     | 0.01 | mg/L  |
| Diethylphthalate            | ND     | 0.01 | mg/L  |
| Dimethylphthalate           | ND     | 0.01 | mg/L  |
| Fluoranthene                | ND     | 0.01 | mg/L  |
| Fluorene                    | ND     | 0.01 | mg/L  |
| Hexachlorobenzene           | ND     | 0.01 | mg/L  |
| Hexachlorobutadiene         | ND     | 0.02 | mg/L  |
| Hexachlorocyclopentadiene   | ND     | 0.01 | mg/L  |
| Hexachloroethane            | ND     | 0.02 | mg/L  |
| Indeno(1,2,3-cd)pyrene      | ND     | 0.01 | mg/L  |
| Isophorone                  | ND     | 0.01 | mg/L  |
| N-Nitrosodi-n-propylamine   | ND     | 0.01 | mg/L  |
| N-Nitrosodiphenylamine      | ND     | 0.01 | mg/L  |
| Naphthalene                 | ND     | 0.01 | mg/L  |
| Nitrobenzene                | ND     | 0.01 | mg/L  |
| Pentachlorophenol           | ND     | 0.05 | mg/L  |
| Phenanthrene                | ND     | 0.01 | mg/L  |
| Phenol                      | ND     | 0.01 | mg/L  |
| Pyrene                      | ND     | 0.01 | mg/L  |

Continued

LAB QA/QC  
EPA METHOD 8270  
METHOD BLANK

Date Analyzed: 07/01/97  
Lab ID: MBW97178  
Matrix: Water  
Date Extracted: 06/27/97

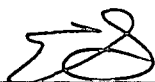
| Parameter | Result | PQL | Units |
|-----------|--------|-----|-------|
|-----------|--------|-----|-------|

Continued

| QUALITY CONTROL - Surrogate Recovery | %  | QC Limits |
|--------------------------------------|----|-----------|
| 2,4,6-Tribromophenol                 | 90 | 10 - 123  |
| 2-Fluorobiphenyl                     | 75 | 43 - 116  |
| 2-Fluorophenol                       | 78 | 21 - 110  |
| Nitrobenzene-d5                      | 83 | 35 - 114  |
| Phenol-d6                            | 63 | 10 - 110  |
| Terphenyl-d14                        | 76 | 33 - 141  |

ND - Not Detected at Practical Quantitation Level (PQL)

Analyst



Reviewed

F. D.

## LAB QA/QC

## TCLP SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE SUMMARY

Date Analyzed: 07/01/97  
Laboratory ID: B97-3260  
Sample Matrix: Water  
Date Extracted: 06/27/97

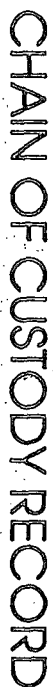
## ORIGINAL SAMPLE PARAMETERS

| Parameter             | Spike Added (mg/L) | Sample Conc. (mg/L) | MS Conc. (mg/L) | MS Recovery (%) |
|-----------------------|--------------------|---------------------|-----------------|-----------------|
| 1,4-Dichlorobenzene   | 0.100              | 0.000               | 0.079           | 79              |
| 2,4,5-Trichlorophenol | 0.100              | 0.000               | 0.029           | 29              |
| 2,4,6-Trichlorophenol | 0.100              | 0.000               | 0.033           | 33              |
| 2,4-Dinitrotoluene    | 0.100              | 0.000               | 0.048           | 48              |
| Hexachlorobenzene     | 0.100              | 0.000               | 0.090           | 90              |
| Hexachlorobutadiene   | 0.100              | 0.000               | 0.085           | 85              |
| Hexachloroethane      | 0.100              | 0.000               | 0.079           | 79              |
| m,p-Cresol            | 0.200              | 0.000               | 0.210           | 105             |
| o-Cresol              | 0.200              | 0.000               | 0.106           | 53              |
| Nitrobenzene          | 0.100              | 0.000               | 0.102           | 102             |
| Pentachlorophenol     | 0.100              | 0.000               | 0.000           | 0               |
| Pyridine              | 0.100              | 0.000               | 0.086           | 86              |

## DUPLICATE SAMPLE PARAMETERS

| Parameter             | Spike Added (mg/L) | MSD Conc. (mg/L) | MSD Recovery (%) | RPD (%) |
|-----------------------|--------------------|------------------|------------------|---------|
| 1,4-Dichlorobenzene   | 0.100              | 0.082            | 82               | 4       |
| 2,4,5-Trichlorophenol | 0.100              | 0.054            | 54               | 60      |
| 2,4,6-Trichlorophenol | 0.100              | 0.049            | 49               | 39      |
| 2,4-Dinitrotoluene    | 0.100              | 0.068            | 68               | 34      |
| Hexachlorobenzene     | 0.100              | 0.093            | 93               | 3       |
| Hexachlorobutadiene   | 0.100              | 0.086            | 86               | 1       |
| Hexachloroethane      | 0.100              | 0.079            | 79               | 0       |
| m,p-Cresol            | 0.200              | 0.213            | 107              | 1       |
| o-Cresol              | 0.200              | 0.106            | 53               | 0       |
| Nitrobenzene          | 0.100              | 0.106            | 106              | 4       |
| Pentachlorophenol     | 0.100              | 0.008            | 8                | 200     |
| Pyridine              | 0.100              | 0.092            | 92               | 7       |

  
Analyst  
Reviewed



## CHAIN OF CUSTODY RECORD



AUG 04 '95 08:38 OCD AZT NM  
Box 1980  
NM 88241-1980  
(505) 748-1283  
First  
NM 88210  
(505) 334-6178  
Rio Brazos Road  
NM 87410  
(505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Form C-138  
Originated 8/8/93

Submit Original  
Plus 1 Copy  
to appropriate  
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

|                                                                                               |                                                                |
|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>         | 4. Generator <u>MID-AMERICA PIPELINE</u>                       |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | 5. Originating Site <u>RIO ARRIBA COUNTY SEC 14, T33N R 7W</u> |
| Management Facility Destination <u>WATER DISPOSAL ENT CONSTRUCTION INC.</u>                   | 6. Transporter <u>SCHMITZ CONST. INC.</u>                      |
| Address of Facility Operator <u>HCR 74 BOX 113 LINDRITH N.M. 87029</u>                        | 8. State <u>N.M.</u>                                           |
| Location of Material (Street Address or ULSTRA) <u>LYBROOK PUMP STATION</u>                   |                                                                |

Circle One:

- A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.
- B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved.

All transporters must certify the wastes delivered are only those consigned for transport.

BRIEF DESCRIPTION OF MATERIAL:

ENVIRONMENTAL STORM DRAIN WATER

RECEIVED  
OCT - 4 1996  
OIL CON. DIV.  
DIST. 3

Estimated Volume 30 BBLS or Known Volume (to be entered by the operator at the end of the haul) \_\_\_\_\_ cy

SIGNATURE: [Signature] TITLE: PRESIDENT DATE: 8/10/1/96  
Waste Management Facility Authorized Agent

NAME OR PRINT NAME: TONY LEE SCHMITZ TELEPHONE NO. 505-774-6504

This space for State Use)

APPROVED BY: [Signature] TITLE: Geologist DATE: 10/22/96

APPROVED BY: [Signature] TITLE: Bureau Chief DATE: 10/24/96

Printed in Ogden 10/24/96 2:23

T-n-T Construction, Inc.  
Soil Remediation  
HCR 74-Box 115  
Lindrih, New Mexico 87029  
505-774-6669

### Certification of Waste Status

Originating location: Huerfano Station  
Well name: Range-10W Township 26N Section 21 San Juan County  
Operator: Mid-America Pipeline Company  
Date: October 21, 1996

Disposal location: T-n-T Construction, Inc. Soil remediation  
site, State Highway 537, mile marker 22.

"As a condition of acceptance for disposal, I hereby certify that  
this waste is oil field waste that has been certified non-hazard-  
ous by testing."

Name: J. Dennis Holland  
Signature: J. Dennis Holland  
Title: Safety Environmental & Training Coordinator  
Address: 54514 Hwy. 64 Farmington, NM 87401  
Phone Number: (505) 325-0789 FAX (505) 325-7714

T-n-T Construction, Inc.  
Soil Remediation  
HCR 74-Box 115  
Lindrith, New Mexico 87029  
505-774-6669

### Certification of Waste Status

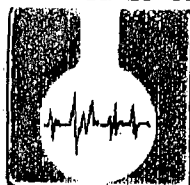
Originating location: Jybrook Station  
Well name: Township-23N Range-7W Section- 14 Rio Arriba County  
Operator: Mid-America Pipeline Company  
Date: October 21, 1996

Disposal location: T-n-T Construction, Inc. Soil remediation  
site, State Highway 537, mile marker 22.

"As a condition of acceptance for disposal, I hereby certify that  
this waste is oil field waste that has been certified non-hazard-  
ous by testing."

Name: J. Dennis Holland  
Signature: J. Dennis Holland  
Title: Safety Environmental & Training Coordinator  
Address: 5414 Hwy. 64 Farmington, NM 87401  
Phone Number: (505)325-0789 FAX(505)325-7714





**ASSAIGA  
ANALYTICAL  
LABORATORIES**

7300 Jefferson, N.E. • Albuquerque, New Mexico 87109 • (505) 345-8964 • FAX (505) 345-7259

3332 Wedgewood, E-5 • El Paso, Texas 79925 • (915) 593-6000 • FAX (915) 593-7820

Report Generated:  
July 27, 1995 10:01

## CERTIFICATE OF ANALYSIS RESULTS BY SAMPLE

SENT MID-AMERICA PIPELINE  
TO: 559 NEW MEXICO HWY 544  
AZTEC, NM 87410

WORKORDER # : 9507019  
WORK ID : HUERFANO STATION ENV. DRAIN  
CLIENT CODE : MID04  
DATE RECEIVED : 07/06/95

ATTN: DENNIS HOLLAND

Page: 1

Lab ID: 9507019-01A  
Sample ID: TCLP-METALS

Collected: 07/05/95 13:30:00  
Matrix: WATER

| TEST / METHOD              | RESULT   | UNITS       | LIMIT  | D_F | DATE ANAL | BATCH_ID           |
|----------------------------|----------|-------------|--------|-----|-----------|--------------------|
| % SOLIDS(TCLP XT)EPA 160.3 | 2.70     | % (Percent) |        |     |           |                    |
| TCLP (FAA) DIG/1311/3005   | 07/11/95 | N/A         |        |     |           |                    |
| TCLP (GFAA)DIG/1311/3005   | 07/13/95 | N/A         |        |     |           |                    |
| TCLP EXTRACTION/TCLP 1311  | 07/07/95 | N/A         |        |     |           |                    |
| TCLP METALS/1311/SW846 AA  |          |             |        |     |           |                    |
| Arsenic, As                | ND       | mg/L        | 0.0050 | 5.0 | 07/21/95  | WCV116,WGF368WP447 |
| Barium, Ba                 | ND       | mg/L        | 0.50   | 5.0 | 07/13/95  | WCV116,WGF368WP447 |
| Cadmium, Cd                | ND       | mg/L        | 0.0030 | 5.0 | 07/12/95  | WCV116,WGF368WP447 |
| Chromium, Cr               | ND       | mg/L        | 0.020  | 5.0 | 07/12/95  | WCV116,WGF368WP447 |
| Lead, Pb                   | ND       | mg/L        | 0.10   | 5.0 | 07/12/95  | WCV116,WGF368WP447 |
| Mercury, Hg                | ND       | mg/L        | 0.0020 | 2.0 | 07/14/95  | WCV116,WGF368WP447 |
| Selenium, Se               | ND       | mg/L        | 0.0050 | 5.0 | 07/20/95  | WCV116,WGF368WP447 |
| Silver, Ag                 | ND       | mg/L        | 0.010  | 5.0 | 07/11/95  | WCV116,WGF368WP447 |
| TCLP(CVAA)Hg XT/SW846 7471 | 07/13/95 | N/A         |        |     |           |                    |

Lab ID: 9507019-01B  
Sample ID: TCLP-SUM

Collected: 07/05/95 13:30:00  
Matrix: WATER

| TEST / METHOD                 | RESULT   | UNITS | LIMIT    | D_F  | DATE ANAL | BATCH_ID |
|-------------------------------|----------|-------|----------|------|-----------|----------|
| TCLP EXTRACTION/TCLP 1311     | 07/07/95 | N/A   |          |      |           |          |
| TCLP HERB XT/SM 509B          | 07/17/95 | N/A   |          |      |           |          |
| TCLP HERBICIDES/SM509B        |          |       |          |      |           |          |
| 2,4'-D                        | ND       | mg/L  | 0.00010  | 50   | 07/18/95  | THERB39  |
| 2,4,5'-TP                     | ND       | mg/L  | 0.00010  | 50   | 07/18/95  | THERB39  |
| 2,4,5'-T                      | ND       | mg/L  | 0.00010  | 50   | 07/18/95  | THERB39  |
| TCLP PEST XT/1311/3520        | 07/12/95 | N/A   |          |      |           |          |
| TCLP PESTICIDES/1311/8080A    |          |       |          |      |           |          |
| gamma-BHC (lindane)           | ND       | mg/L  | 0.000010 | 50   | 07/20/95  | TPEST25  |
| Chlordane                     | ND       | mg/L  | 0.000020 | 50   | 07/20/95  | TPEST25  |
| Endrin                        | ND       | mg/L  | 0.000010 | 50   | 07/20/95  | TPEST25  |
| Heptachlor                    | ND       | mg/L  | 0.000010 | 50   | 07/20/95  | TPEST25  |
| Heptachlor Epoxide            | ND       | mg/L  | 0.000010 | 50   | 07/20/95  | TPEST25  |
| Methoxychlor                  | ND       | mg/L  | 0.000020 | 50   | 07/20/95  | TPEST25  |
| Toxaphene                     | ND       | mg/L  | 0.0010   | 50   | 07/20/95  | TPEST25  |
| TCLP SV/METHOD 1311/8270B     |          |       |          |      |           |          |
| 1,4-Dichlorobenzene           | ND       | mg/L  | 0.0010   | 8900 | 07/20/95  | TSVOA122 |
| 2-Methylphenol / O-Cresol     | ND       | mg/L  | 0.0010   | 8900 | 07/20/95  | TSVOA122 |
| 3/4-Methylphenol / M/P-Cresol | ND       | mg/L  | 0.0010   | 8900 | 07/20/95  | TSVOA122 |
| Hexachloroethane              | ND       | mg/L  | 0.0010   | 8900 | 07/20/95  | TSVOA122 |



Page: 2

Lab ID: 9507019-01B

Sample ID: TCLP-SUM

Collected: 07/05/95 13:30:00

Matrix: WATER

| TEST / METHOD             | RESULT   | UNITS | LIMIT  | D_F  | DATE<br>ANAL | BATCH_ID |
|---------------------------|----------|-------|--------|------|--------------|----------|
| TCLP SV/METHOD 1311/8270B |          |       |        |      |              |          |
| Nitrobenzene              | ND       | mg/L  | 0.0010 | 8900 | 07/20/95     | TSVOA122 |
| Hexachlorobutadiene       | ND       | mg/L  | 0.0010 | 8900 | 07/20/95     | TSVOA122 |
| 2,4,6-Trichlorophenol     | ND       | mg/L  | 0.0010 | 8900 | 07/20/95     | TSVOA122 |
| 2,4,5-Trichlorophenol     | ND       | mg/L  | 0.0010 | 8900 | 07/20/95     | TSVOA122 |
| 2,4-Dinitrotoluene        | ND       | mg/L  | 0.0010 | 8900 | 07/20/95     | TSVOA122 |
| Hexachlorobenzene         | ND       | mg/L  | 0.0010 | 8900 | 07/20/95     | TSVOA122 |
| Pentachlorophenol         | ND       | mg/L  | 0.0010 | 8900 | 07/20/95     | TSVOA122 |
| Pyridine                  | ND       | mg/L  | 0.0010 | 8900 | 07/20/95     | TSVOA122 |
| TCLP SVOA XT/1311/3520    | 07/13/95 | N/A   |        |      |              |          |

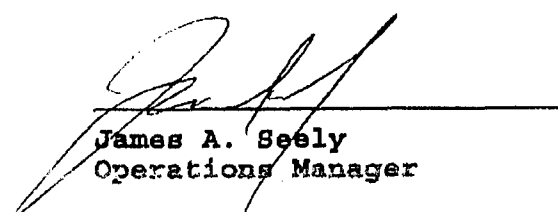
Lab ID: 9507019-01C

Sample ID: TCLP-VOA

Collected: 07/05/95 13:30:00

Matrix: WATER

| TEST / METHOD             | RESULT   | UNITS | LIMIT  | D_F | DATE<br>ANAL | BATCH_ID |
|---------------------------|----------|-------|--------|-----|--------------|----------|
| TCLP ZHE / TCLP 1311      | 07/17/95 | N/A   |        |     |              |          |
| ZHE/VOA/METHOD 1311/8240B |          |       |        |     |              |          |
| Vinyl Chloride            | ND       | mg/L  | 0.0050 | 40  | 07/20/95     | TVOA188  |
| 1,1-Dichloroethene        | ND       | mg/L  | 0.0010 | 40  | 07/20/95     | TVOA188  |
| Chloroform                | ND       | mg/L  | 0.0010 | 40  | 07/20/95     | TVOA188  |
| 1,2-Dichloroethane        | ND       | mg/L  | 0.0010 | 40  | 07/20/95     | TVOA188  |
| 2-Butanone (MEK)          | 0.34     | mg/L  | 0.0050 | 40  | 07/20/95     | TVOA188  |
| Carbon Tetrachloride      | ND       | mg/L  | 0.0010 | 40  | 07/20/95     | TVOA188  |
| Trichloroethene           | ND       | mg/L  | 0.0010 | 40  | 07/20/95     | TVOA188  |
| Benzene                   | 0.097    | mg/L  | 0.0010 | 40  | 07/20/95     | TVOA188  |
| Tetrachloroethene         | ND       | mg/L  | 0.0010 | 40  | 07/20/95     | TVOA188  |
| Chlorobenzene             | ND       | mg/L  | 0.0010 | 40  | 07/20/95     | TVOA188  |



James A. Seely  
Operations Manager

**WORKORDER COMMENTS**

DATE : 07/27/95  
WORKORDER:

**DEFINITIONS/DATA QUALIFIERS**

The following are definitions, abbreviations, and data qualifiers which may have been utilized in your report:

- ND = Analyte "not detected" in analysis at the sample specific detection limit.
- D\_F = Sample "dilution factor"
- NT = Analyte "not tested" per client request.
- B = Analyte was also detected in laboratory method QC blank.
- E = Analyte concentration (result) is an estimated value or exceeds analysis calibration range.
- LIMIT = The minimum amount of the analyte that AAL can detect utilizing the specified analysis.

Please Note: Multiply the "Limit" value (AAL's Detection Limit) by Dilution Factor (D\_F) to obtain the sample specific Detection Limit.

---

**REPORT COMMENTS**

---

AUG 24 '96 08:38 OGD AZT NM  
tel I - (505) 393-6161  
Box 1980  
s. NM 88241-1980  
tel II - (505) 748-1283  
1. First  
ia. NM 88210  
tel III - (505) 334-6178  
Rio Brazos Road  
NM 87410  
tel IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Roger Anderson  
Pat Sanchez

Form C-138  
Originated 8/8/95

Submit Original  
Plus 1 Copy  
to appropriate  
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

|                                                                                               |                                              |
|-----------------------------------------------------------------------------------------------|----------------------------------------------|
| RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>         | 4. Generator <u>CONOCO INC.</u>              |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | 5. Originating Site <u>SANTUAN GAS PLANT</u> |
| Management Facility Destination <u>TNT CONSTRUCTION INC</u>                                   | 6. Transporter <u>DAWN</u>                   |
| Address of Facility Operator <u>HCR 74 BOX 113 LINDRITH N.M. 87029</u>                        | 8. State <u>N.M.</u>                         |
| Location of Material (Street Address or ULSTR)                                                |                                              |

Circle One:

A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.

B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved.

All transporters must certify the wastes delivered are only those consigned for transport.

BRIEF DESCRIPTION OF MATERIAL:

WASH. DOWN WATER

RECEIVED  
OCT 9 1996

Environmental Bureau  
Oil Conservation Division

RECEIVED  
OCT - 7 1996  
OIL CON. DIV.  
DIST. 3

Estimated Volume 8000 GAL. or Known Volume (to be entered by the operator at the end of the haul) \_\_\_\_\_ cy

SIGNATURE: [Signature] TITLE: PRESIDENT DATE: 9/30/96  
Waste Management Facility/Authorized Agent  
NAME OR PRINT NAME: TONY LEE SCHMITZ TELEPHONE NO. 505-774-6504

This space for State Use

APPROVED BY: [Signature] TITLE: Geologist DATE: 10/7/96  
APPROVED BY: [Signature] TITLE: Bureau Chief DATE: 10/9/96

072.7 hrs  
10/9/96  
Printed in City

**T-n-T Construction, Inc.**  
**Soil Remediation**  
**HCR 74-Box 115**  
**Lindrith, New Mexico 87029**  
**505-774-6663**

### Certification of Waste Status

N.W. QUARTER OF THE N.W. QUARTER

Originating location: San Juan Gas Plant (SEC 14, T-29N, R-11W)  
Well name: Plant  
Operator: Conoco Inc.  
Date: 9/27/96

Disposal location: T-n-T Construction, Inc. Soil remediation site, State Highway 537, mile marker 22.

"As a condition of acceptance for disposal, I hereby certify that this waste is oil field waste that has been certified non-hazardous by testing."

Name: David Bottoms  
Signature: David Bottoms  
Title: Maintenance Foreman  
Address: P.O. Box 217, Bloomfield, N.M. 87413  
Phone Number: (505) 632-4900

**Certificate of  
Analysis**

Quanterra Incorporated  
3307 Industrial Oaks Boulevard, Suite 180  
Austin, Texas 78735

512 892-6684 Direct  
512 892-6652 Fax



**ANALYTICAL REPORT**

San Juan Gas Plant  
Lot#: I6G120107

Chris Hansen Room #HU 3006

Conoco Inc.

QUANTERRA INCORPORATED

A handwritten signature in black ink, appearing to read 'Chris J. Schepcoff', written over the printed name and title.

Chris J. Schepcoff  
Project Manager

July 24, 1996

**EXECUTIVE SUMMARY - Detection Highlights**

I6G120107

| <u>PARAMETER</u>                           | <u>RESULT</u> | <u>REPORTING<br/>LIMIT</u> | <u>UNIT</u> | <u>METHOD</u> |
|--------------------------------------------|---------------|----------------------------|-------------|---------------|
| SAN JUAN AMINE WASHER WATER 07/08/96 00:00 |               |                            |             |               |
| Chromium                                   | 2.2           | 0.10                       | mg/L        | SW846 6010A   |
| Flashpoint                                 | >150          | >150                       | deg F       | SW846 1010    |
| pH (liquid)                                | 4.1           | 0.10                       | No Units    | MCAWW 150.1   |
| Total Solids (Residue)                     | 75000         | 10                         | mg/L        | MCAWW 160.3   |



## ANALYTICAL METHODS SUMMARY

I6G120107

| <u>PARAMETER</u>                                      | <u>METHOD</u> |
|-------------------------------------------------------|---------------|
| pH (Electrometric)                                    | MCAWW 150.1   |
| Inductively Coupled<br>Plasma (ICP) Metals            | SW846 6010A   |
| Mercury in Liquid Waste<br>(Manual Cold-Vapor)        | SW846 7470    |
| Pensky-Martens Method for<br>Determining Ignitability | SW846 1010    |
| Reactive Cyanide                                      | SW846 7.3.3   |
| Reactive Sulfide                                      | SW846 7.3.4   |
| Total Residue (TS)                                    | MCAWW 160.3   |
| Volatile Organics<br>by GC/MS                         | SW846 8240A   |

### References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes",  
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical  
Methods", Third Edition, November 1986 and its updates.



**METHOD / ANALYST SUMMARY**

I6G120107

**ANALYTICAL**

| <u>METHOD</u> | <u>ANALYST</u> | <u>ID #</u> |
|---------------|----------------|-------------|
| MCAWW 150.1   | Jay Harris     | 060505      |
| MCAWW 160.3   | Jay Harris     | 060505      |
| SW846 1010    | Jay Harris     | 060505      |
| SW846 6010A   | Scott Butler   | 010399      |
| SW846 7.3.3   | Jay Harris     | 060505      |
| SW846 7.3.4   | Jay Harris     | 060505      |
| SW846 7470    | Todd Marion    | 026009      |
| SW846 8240A   | Sam Bivone     | 011612      |

**References:**

MCAWW "Methods for Chemical Analysis of Water and Wastes",  
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical  
Methods", Third Edition, November 1986 and its updates.



## QC DATA ASSOCIATION SUMMARY

Sample Preparation and Analysis Control Numbers

| <u>Lot#-Sample#</u> | <u>Matrix</u> | <u>Method</u> | <u>Pgm<br/>Code</u> | <u>Leach<br/>Batch#</u> | <u>QC Batch<br/>Number</u> | <u>MS Run<br/>Number</u> |
|---------------------|---------------|---------------|---------------------|-------------------------|----------------------------|--------------------------|
| I6G110105-001       | WATER         | MCAWW 245.1   | 03                  |                         | 6197166                    | 6197035                  |
|                     | WATER         | SW846 1010    | 01                  |                         | 6200111                    | 6200005                  |
|                     | WATER         | MCAWW 150.1   | 01                  |                         | 6197132                    | 6197016                  |
|                     | WATER         | MCAWW 160.3   | 01                  |                         | 6198195                    | 6198056                  |
|                     | WATER         | SW846 6010A   | 01                  |                         | 6197182                    | 6197048                  |
|                     | WATER         | SW846 7470    | 01                  |                         | 6197166                    | 6197035                  |
|                     | WATER         | SW846 8240A   | 01                  |                         | 6200138                    | 6205027                  |
|                     | WATER         | SW846 7.3.3   | 01                  |                         | 6198108                    | 6198002                  |
|                     | WATER         | SW846 7.3.4   | 01                  |                         | 6198110                    | 6198004                  |
| I6G120161-003       | WATER         | MCAWW 200.7   | 01                  |                         | 6197182                    | 6197048                  |
|                     | WATER         | MCAWW 239.2   | 01                  |                         | 6197182                    | 6197048                  |
|                     | WATER         | SW846 6010A   | 01                  |                         | 6197182                    | 6197048                  |
| I6G160116-001       | WATER         | SW846 8240B   | 01                  |                         | 6200138                    | 6205027                  |



## SAMPLE SUMMARY

The analytical results of the samples listed below are presented on the following pages.

| <u>VO #</u> | <u>LOT-SAMPLE #</u> | <u>SAMPLE IDENTIFICATION</u> | <u>DATE/TIME SAMPLED</u> |
|-------------|---------------------|------------------------------|--------------------------|
| 24R4P       | I6G120107-001       | SAN JUAN AMINE WASHER WATER  | 07/08/96 00:00           |

This report must not be reproduced except in full, without the written approval of the laboratory.



CONOCO INC.

Client Sample ID: SAN JUAN AMINE WASHER WATER

## GC/MS Volatiles

Lot-Sample #: I5G120107 - 001 Work Order #: C4R4P107 Matrix: WATER  
Date Sampled.: 07/08/96 00:00 Date Received: 07/10/96 09:18  
Prep Date: 07/17/96 Analysis Date: 07/22/96  
Prep Batch #: 6200138 MS Run #: 6205027  
Dilution Fact: 1  
Percent Moist:

| PARAMETER            | RESULT | REPORTING |       |             |
|----------------------|--------|-----------|-------|-------------|
|                      |        | LIMIT     | UNITS | METHOD      |
| Benzene              | ND     | 0.050     | mg/L  | SW846 8240A |
| Carbon tetrachloride | ND     | 0.050     | mg/L  | SW846 8240A |
| Chlorobenzene        | ND     | 0.050     | mg/L  | SW846 8240A |
| Chloroform           | ND     | 0.050     | mg/L  | SW846 8240A |
| 1,2-Dichloroethane   | ND     | 0.050     | mg/L  | SW846 8240A |
| 1,1-Dichloroethylene | ND     | 0.050     | mg/L  | SW846 8240A |
| Methyl ethyl ketone  | ND     | 0.20      | mg/L  | SW846 8240A |
| Tetrachloroethylene  | ND     | 0.050     | mg/L  | SW846 8240A |
| Trichloroethylene    | ND     | 0.050     | mg/L  | SW846 8240A |
| Vinyl chloride       | ND     | 0.10      | mg/L  | SW846 8240A |

| SURROGATE             | PERCENT  | RECOVERY   |
|-----------------------|----------|------------|
|                       | RECOVERY | LIMITS     |
| 4-Bromofluorobenzene  | 97       | (86 - 115) |
| 1,2-Dichloroethane-d4 | 100      | (76 - 114) |
| Toluene-d8            | 97       | (88 - 110) |

## NOTE(S):

> Parameter was not detected at or above the stated reporting limit.



CONOCO INC.

Client Sample ID: SAN JUAN AMINE WASHER WATER

## General Chemistry

Lot-Sample #: I6G120107 - 001

Work Order #: C424P

Matrix.....: WATER

Date Sampled.: 07/08/96 00:00

Date Received: 07/10/96 09:18

Percent Moist:

| PARAMETER              | RESULT | RL   | UNITS                  | METHOD      | PREPARATION-<br>ANALYSIS DATE | PREP<br>BATCH # |
|------------------------|--------|------|------------------------|-------------|-------------------------------|-----------------|
| Flashpoint             | >150   | >150 | deg F                  | SW846 1010  | 07/17/96                      | 6200111         |
|                        |        |      | DIL Factor....: 1      |             |                               |                 |
|                        |        |      | MS Run #.....: 6200005 |             |                               |                 |
| pH (liquid)            | 4.1    | 0.10 | No Units               | MCAWW 150.1 | 07/12/96                      | 6197132         |
|                        |        |      | DIL Factor....: 1      |             |                               |                 |
|                        |        |      | MS Run #.....: 6197016 |             |                               |                 |
| Total Solids (Residue) | 75000  | 10   | mg/L                   | MCAWW 160.3 | 07/15/96                      | 6198195         |
|                        |        |      | DIL Factor....: 1      |             |                               |                 |
|                        |        |      | MS Run #.....: 6198056 |             |                               |                 |
| Reactive Cyanide       | ND     | 200  | mg/L                   | SW846 7.3.3 | 07/16/96                      | 6198108         |
|                        |        |      | DIL Factor....: 1      |             |                               |                 |
|                        |        |      | MS Run #.....: 6198002 |             |                               |                 |
| Reactive Sulfide       | ND     | 200  | mg/L                   | SW846 7.3.4 | 07/16/96                      | 6198110         |
|                        |        |      | DIL Factor....: 1      |             |                               |                 |
|                        |        |      | MS Run #.....: 6198004 |             |                               |                 |

## NOTE(S):

RL Reporting Limit

ND Parameter was not detected at or above the stated reporting limit.

CONOCO INC.



Client Sample ID: SAN JUAN AMINE WASHER WATER

## TOTAL Metals

Lot-Sample #: I6G120107 - 001

Work Order #: C4R4P

Matrix.....: WATER

Date Sampled.: 07/08/96 00:00

Date Received: 07/10/96 09:18

Percent Moist:

| PARAMETER | RESULT | REPORTING<br>LIMIT | UNITS | METHOD      | PREPARATION-<br>ANALYSIS DATE | PREP<br>BATCH # |
|-----------|--------|--------------------|-------|-------------|-------------------------------|-----------------|
| Mercury   | ND     | 0.00020            | mg/L  | SW846 7470  | 07/15/96                      | 6197156         |
|           |        | Dilution Fact: 1   |       |             |                               |                 |
|           |        | MS Run #: 6197035  |       |             |                               |                 |
| Barium    | ND     | 2.0                | mg/L  | SW846 6010A | 07/15-07/19/96                | 6197182         |
|           |        | Dilution Fact: 10  |       |             |                               |                 |
|           |        | MS Run #: 6197048  |       |             |                               |                 |
| Cadmium   | ND     | 0.050              | mg/L  | SW846 6010A | 07/15-07/19/96                | 6197182         |
|           |        | Dilution Fact: 10  |       |             |                               |                 |
|           |        | MS Run #: 6197048  |       |             |                               |                 |
| Chromium  | 2.2    | 0.10               | mg/L  | SW846 6010A | 07/15-07/19/96                | 6197182         |
|           |        | Dilution Fact: 10  |       |             |                               |                 |
|           |        | MS Run #: 6197048  |       |             |                               |                 |
| Silver    | ND     | 0.10               | mg/L  | SW846 6010A | 07/15-07/19/96                | 6197182         |
|           |        | Dilution Fact: 10  |       |             |                               |                 |
|           |        | MS Run #: 6197048  |       |             |                               |                 |
| Arsenic   | ND     | 3.0                | mg/L  | SW846 6010A | 07/15-07/19/96                | 6197182         |
|           |        | Dilution Fact: 10  |       |             |                               |                 |
|           |        | MS Run #: 6197048  |       |             |                               |                 |
| Lead      | ND     | 1.0                | mg/L  | SW846 6010A | 07/15-07/19/96                | 6197182         |
|           |        | Dilution Fact: 10  |       |             |                               |                 |
|           |        | MS Run #: 6197048  |       |             |                               |                 |
| Selenium  | ND     | 2.5                | mg/L  | SW846 6010A | 07/15-07/19/96                | 6197182         |
|           |        | Dilution Fact: 10  |       |             |                               |                 |
|           |        | MS Run #: 6197048  |       |             |                               |                 |

## NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND: Parameter was not detected at or above the stated reporting limit.



## MATRIX SPIKE SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #: I6G120107  
Percent Moist: 100

MS Sample: I6G110105-001

Matrix: WATER

| <u>PARAMETER</u> | <u>PERCENT<br/>RECOVERY</u> | <u>RECOVERY<br/>LIMITS</u> | <u>RPD</u> | <u>RPD<br/>LIMITS</u> | <u>METHOD</u> | <u>PREPARATION-<br/>ANALYSIS DATE</u> | <u>BATCH #</u> |
|------------------|-----------------------------|----------------------------|------------|-----------------------|---------------|---------------------------------------|----------------|
| Mercury          | 115                         | (75-125)                   |            |                       | MCAWW 245.1   | 07/15/96                              | 6197166        |
|                  | 106                         | (75-125)                   | 7.5        | (0-20)                | MCAWW 245.1   | 07/15/96                              | 6197166        |
|                  |                             | Dilution Factor: 1         |            |                       |               |                                       |                |
|                  |                             | MS Run #:                  | 6197035    |                       |               |                                       |                |

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.



## MATRIX SPIKE SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #: I6G120107

MS Sample: I6G120161-003

Matrix: WATER

Percent Moist: 100

| PARAMETER | PERCENT<br>RECOVERY                     | RECOVERY<br>LIMITS | RPD<br>LIMITS | METHOD      | PREPARATION-<br>ANALYSIS DATE | BATCH # |
|-----------|-----------------------------------------|--------------------|---------------|-------------|-------------------------------|---------|
| Copper    | 84                                      | (80-120)           |               | MCAWW 200.7 | 07/15-07/19/96                | 6197182 |
|           | 99                                      | (80-120)           | 4.3 (0-20)    | MCAWW 200.7 | 07/15-07/19/96                | 6197182 |
|           | Dilution Factor: 1<br>MS Run #: 6197048 |                    |               |             |                               |         |
| Cadmium   | 91                                      | (80-120)           |               | MCAWW 200.7 | 07/15-07/19/96                | 6197182 |
|           | 93                                      | (80-120)           | 1.9 (0-20)    | MCAWW 200.7 | 07/15-07/19/96                | 6197182 |
|           | Dilution Factor: 1<br>MS Run #: 6197048 |                    |               |             |                               |         |
| Lead      | 115                                     | (80-120)           |               | MCAWW 239.2 | 07/15-07/16/96                | 6197182 |
|           | 120                                     | (80-120)           | 3.5 (0-20)    | MCAWW 239.2 | 07/15-07/16/96                | 6197182 |
|           | Dilution Factor: 1<br>MS Run #: 6197048 |                    |               |             |                               |         |
| Nickel    | 100                                     | (80-120)           |               | MCAWW 200.7 | 07/15-07/19/96                | 6197182 |
|           | 88                                      | (80-120)           | 11 (0-20)     | MCAWW 200.7 | 07/15-07/19/96                | 6197182 |
|           | Dilution Factor: 1<br>MS Run #: 6197048 |                    |               |             |                               |         |
| Silver    | 88                                      | (80-120)           |               | MCAWW 200.7 | 07/15-07/19/96                | 6197182 |
|           | 90                                      | (80-120)           | 2.8 (0-20)    | MCAWW 200.7 | 07/15-07/19/96                | 6197182 |
|           | Dilution Factor: 1<br>MS Run #: 6197048 |                    |               |             |                               |         |
| Zinc      | 95                                      | (80-120)           |               | MCAWW 200.7 | 07/15-07/19/96                | 6197182 |
|           | 97                                      | (80-120)           | 1.9 (0-20)    | MCAWW 200.7 | 07/15-07/19/96                | 6197182 |
|           | Dilution Factor: 1<br>MS Run #: 6197048 |                    |               |             |                               |         |
| Chromium  | 92                                      | (80-120)           |               | MCAWW 200.7 | 07/15-07/19/96                | 6197182 |
|           | 93                                      | (80-120)           | 1.2 (0-20)    | MCAWW 200.7 | 07/15-07/19/96                | 6197182 |
|           | Dilution Factor: 1<br>MS Run #: 6197048 |                    |               |             |                               |         |
| Arsenic   | 93                                      | (80-120)           |               | SW846 6010A | 07/15-07/19/96                | 6197182 |
|           | 95                                      | (80-120)           | 2.1 (0-20)    | SW846 6010A | 07/15-07/19/96                | 6197182 |
|           | Dilution Factor: 1<br>MS Run #: 6197048 |                    |               |             |                               |         |
| Selenium  | 90                                      | (80-120)           |               | SW846 6010A | 07/15-07/19/96                | 6197182 |
|           | 93                                      | (80-120)           | 2.4 (0-20)    | SW846 6010A | 07/15-07/19/96                | 6197182 |
|           | Dilution Factor: 1<br>MS Run #: 6197048 |                    |               |             |                               |         |

(Continued on next page)





## MATRIX SPIKE SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #: I6G120107

MS Sample: I6G120161-003

Matrix: WATER

| <u>PARAMETER</u> | <u>PERCENT<br/>RECOVERY</u> | <u>RECOVERY<br/>LIMITS</u> | <u>RPD</u> | <u>RPD<br/>LIMITS</u> | <u>METHOD</u> | <u>PREPARATION-<br/>ANALYSIS DATE</u> | <u>BATCH #</u> |
|------------------|-----------------------------|----------------------------|------------|-----------------------|---------------|---------------------------------------|----------------|
| Barium           | 87                          | (80-120)                   |            |                       | SW846 6010A   | 07/15-07/19/96                        | 6197182        |
|                  | 89                          | (80-120)                   | 2.0        | (0-20)                | SW846 6010A   | 07/15-07/19/96                        | 6197182        |
|                  |                             | Dilution Factor: 1         |            |                       |               |                                       |                |
|                  |                             | MS Run #: 6197048          |            |                       |               |                                       |                |

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.



## MATRIX SPIKE SAMPLE EVALUATION REPORT

## GC/MS Volatiles

Client Lot #: I6G120137 Work Order #: C4T6K112-MS Matrix: WATER  
 MS Lot #: I6G160116-001 C4T6K113-MSD

Date Sampled: 07/08/96 11:00 Date Received: 07/09/96 08:54  
 Prep Date: 07/17/96 Analysis Date: 07/22/96  
 Prep Batch #: 6200138 MS Run #: 6205027  
 Dilution Factor: 1 Percent Moist: 100

| PARAMETER            | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS | RPD  | RPD<br>LIMITS | METHOD      |
|----------------------|---------------------|--------------------|------|---------------|-------------|
| Vinyl chloride       | 76                  | (1.0-251)          |      |               | SW846 8240B |
|                      | 76                  | (1.0-251)          | 0.11 | (0-30)        | SW846 8240B |
| 1,1-Dichloroethylene | 107                 | (59-155)           |      |               | SW846 8240B |
|                      | 106                 | (59-155)           | 1.8  | (0-30)        | SW846 8240B |
| Chloroform           | 102                 | (51-136)           |      |               | SW846 8240B |
|                      | 104                 | (51-136)           | 1.6  | (0-30)        | SW846 8240B |
| 1,2-Dichloroethane   | 111                 | (49-155)           |      |               | SW846 8240B |
|                      | 110                 | (49-155)           | 0.90 | (0-30)        | SW846 8240B |
| Methyl ethyl ketone  | 134                 | (25-250)           |      |               | SW846 8240B |
|                      | 140                 | (25-250)           | 4.2  | (0-30)        | SW846 8240B |
| Carbon tetrachloride | 104                 | (71-240)           |      |               | SW846 8240B |
|                      | 108                 | (71-240)           | 4.2  | (0-30)        | SW846 8240B |
| Trichloroethylene    | 105                 | (71-157)           |      |               | SW846 8240B |
|                      | 108                 | (71-157)           | 2.7  | (0-30)        | SW846 8240B |
| Benzene              | 107                 | (37-151)           |      |               | SW846 8240B |
|                      | 110                 | (37-151)           | 3.0  | (0-30)        | SW846 8240B |
| Tetrachloroethylene  | 105                 | (46-157)           |      |               | SW846 8240B |
|                      | 108                 | (46-157)           | 3.0  | (0-30)        | SW846 8240B |
| Chlorobenzene        | 110                 | (37-160)           |      |               | SW846 8240B |
|                      | 112                 | (37-160)           | 2.0  | (0-30)        | SW846 8240B |
| 1,4-Dichlorobenzene  | 108                 | (75-137)           |      |               | SW846 8240B |
|                      | 109                 | (75-137)           | 0.49 | (0-30)        | SW846 8240B |

| SURROGATE             | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS |
|-----------------------|---------------------|--------------------|
| 4-Bromofluorobenzene  | 100                 | (86-115)           |
|                       | 99                  | (86-115)           |
| 1,2-Dichloroethane-d4 | 99                  | (76-114)           |
|                       | 95                  | (76-114)           |
| Toluene-d8            | 98                  | (88-110)           |
|                       | 98                  | (88-110)           |

## NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.



## MATRIX SPIKE SAMPLE EVALUATION REPORT

## General Chemistry

Client Lot #: I6G120107  
Percent Moist: 100

Matrix: WATER

| <u>PARAMETER</u> | <u>PERCENT<br/>RECOVERY</u> | <u>RECOVERY<br/>LIMITS</u> | <u>RPD<br/>LIMITS</u> | <u>METHOD</u>            | <u>PREPARATION-<br/>ANALYSIS DATE</u> | <u>BATCH #</u> |
|------------------|-----------------------------|----------------------------|-----------------------|--------------------------|---------------------------------------|----------------|
| Reactive Cyanide |                             |                            |                       | C4R4P10J-MS/C4R4P10K-MSD | MS Lot/Sample #: I6G120107-001        |                |
|                  | 2.5                         | (1.0-64)                   |                       | SW846 7.3.3              | 07/16/96                              | 6198108        |
|                  | 0.58 N                      | (1.0-64)                   | 105 (0-213)           | SW846 7.3.3              | 07/16/96                              | 6198108        |
|                  |                             | Dilution Factor: 1         |                       |                          |                                       |                |
|                  |                             | MS Run #: 6198002          |                       |                          |                                       |                |

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.



## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## Metals

Client Lot #: I6G120107

Matrix: WATER

| <u>PARAMETER</u> | <u>PERCENT<br/>RECOVERY</u> | <u>RECOVERY<br/>LIMITS</u> | <u>RPD</u> | <u>RPD<br/>LIMITS</u> | <u>METHOD</u> | <u>PREPARATION-<br/>ANALYSIS DATE</u> | <u>BATCH #</u> |
|------------------|-----------------------------|----------------------------|------------|-----------------------|---------------|---------------------------------------|----------------|
| Cadmium          | 103                         | (80-120)                   |            |                       | MCAWW 200.7   | 07/15-07/19/96                        | 6197182        |
|                  | 104                         | (80-120)                   | 1.5        | (0-20)                | MCAWW 200.7   | 07/15-07/19/96                        | 6197182        |
|                  |                             | Dilution Factor: 1         |            |                       |               |                                       |                |
| Lead             | 108                         | (82-127)                   |            |                       | MCAWW 239.2   | 07/15-07/16/96                        | 6197182        |
|                  | 106                         | (82-127)                   | 1.7        | (0-19)                | MCAWW 239.2   | 07/15-07/16/96                        | 6197182        |
|                  |                             | Dilution Factor: 1         |            |                       |               |                                       |                |
| Silver           | 101                         | (80-120)                   |            |                       | MCAWW 200.7   | 07/15-07/19/96                        | 6197182        |
|                  | 101                         | (80-120)                   | 0.03       | (0-20)                | MCAWW 200.7   | 07/15-07/19/96                        | 6197182        |
|                  |                             | Dilution Factor: 1         |            |                       |               |                                       |                |
| Chromium         | 101                         | (80-120)                   |            |                       | MCAWW 200.7   | 07/15-07/19/96                        | 6197182        |
|                  | 103                         | (80-120)                   | 1.3        | (0-20)                | MCAWW 200.7   | 07/15-07/19/96                        | 6197182        |
|                  |                             | Dilution Factor: 1         |            |                       |               |                                       |                |
| Barium           | 99                          | (80-120)                   |            |                       | SW846 6010A   | 07/15-07/19/96                        | 6197182        |
|                  | 100                         | (80-120)                   | 1.4        | (0-20)                | SW846 6010A   | 07/15-07/19/96                        | 6197182        |
|                  |                             | Dilution Factor: 1         |            |                       |               |                                       |                |
| Arsenic          | 103                         | (80-120)                   |            |                       | SW846 6010A   | 07/15-07/19/96                        | 6197182        |
|                  | 105                         | (80-120)                   | 1.2        | (0-20)                | SW846 6010A   | 07/15-07/19/96                        | 6197182        |
|                  |                             | Dilution Factor: 1         |            |                       |               |                                       |                |
| Selenium         | 104                         | (80-120)                   |            |                       | SW846 6010A   | 07/15-07/19/96                        | 6197182        |
|                  | 105                         | (80-120)                   | 0.92       | (0-20)                | SW846 6010A   | 07/15-07/19/96                        | 6197182        |
|                  |                             | Dilution Factor: 1         |            |                       |               |                                       |                |
| Mercury          | 87                          | (81-120)                   |            |                       | MCAWW 245.1   | 07/15/96                              | 6197166        |
|                  | 87                          | (81-120)                   | 0.04       | (0-21)                | MCAWW 245.1   | 07/15/96                              | 6197166        |
|                  |                             | Dilution Factor: 1         |            |                       |               |                                       |                |

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.



## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## General Chemistry

Client Lot #: I6G120107

Matrix: WATER

| <u>PARAMETER</u>       | <u>PERCENT<br/>RECOVERY</u> | <u>RECOVERY<br/>LIMITS</u> | <u>RPD</u> | <u>RPD<br/>LIMITS</u> | <u>METHOD</u>            | <u>PREPARATION-<br/>ANALYSIS DATE</u> | <u>BATCH #</u> |
|------------------------|-----------------------------|----------------------------|------------|-----------------------|--------------------------|---------------------------------------|----------------|
| pH (liquid)            |                             |                            |            |                       | C4RTH101-MS/C4RTH102-MSD |                                       |                |
|                        | 98                          | (90-110)                   |            |                       | MCAWW 150.1              | 07/12/96                              | 6197132        |
|                        | 98                          | (90-110)                   | 0.56       | (0-20)                | MCAWW 150.1              | 07/12/96                              | 6197132        |
|                        |                             | Dilution Factor: 1         |            |                       |                          |                                       |                |
| Total Solids (Residue) |                             |                            |            |                       | C4TA6102-MS/C4TA6103-MSD |                                       |                |
|                        | 101                         | (87-113)                   |            |                       | MCAWW 160.3              | 07/15/96                              | 6198195        |
|                        | 102                         | (87-113)                   | 1.4        | (0-20)                | MCAWW 160.3              | 07/15/96                              | 6198195        |
|                        |                             | Dilution Factor: 1         |            |                       |                          |                                       |                |
| Reactive Cyanide       |                             |                            |            |                       | C4T39102-MS/C4T39103-MSD |                                       |                |
|                        | 8.4                         | (1.0-64)                   |            |                       | SW846 7.3.3              | 07/16/96                              | 6198108        |
|                        | 4.5                         | (1.0-64)                   | 60         | (0-213)               | SW846 7.3.3              | 07/16/96                              | 6198108        |
|                        |                             | Dilution Factor: 1         |            |                       |                          |                                       |                |

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

CONOCO INC.



## Sample Duplicate Evaluation Report

## General Chemistry

Lot-Sample #: I6G120107 - 001 Work Order #: C4R4P-SMP

Matrix.....: WATER

C4R4P-DUP

Date Sampled.: 07/08/96

Date Received: 07/10/96

Percent Moist:

| PARAM                  | RESULT | DUPLICATE<br>RESULT | UNITS             | RPD  | RPD<br>LIMIT | METHOD      | PREPARATION-<br>ANALYSIS DATE | PREP<br>BATCH # |
|------------------------|--------|---------------------|-------------------|------|--------------|-------------|-------------------------------|-----------------|
| Reactive Sulfide       | ND     | ND                  | mg/L              | 0    | (0-20)       | SW846 7.3.4 | 07/16/96                      | 6198110         |
|                        |        |                     | Dilution Fact: 1  |      |              |             |                               |                 |
|                        |        |                     | MS Run #: 6198004 |      |              |             |                               |                 |
| Flashpoint             | >150   | >150                | deg F             | 0.0  | (0-20)       | SW846 1010  | 07/17/96                      | 6200111         |
|                        |        |                     | Dilution Fact: 1  |      |              |             |                               |                 |
|                        |        |                     | MS Run #: 6200005 |      |              |             |                               |                 |
| pH (liquid)            | 4.1    | 4.1                 | No Units          | 0.73 | (0-20)       | MCAWW 150.1 | 07/12/96                      | 6197132         |
|                        |        |                     | Dilution Fact: 1  |      |              |             |                               |                 |
|                        |        |                     | MS Run #: 6197016 |      |              |             |                               |                 |
| Total Solids (Residue) | 75000  | 75000               | mg/L              | 0.40 | (0-0.0)      | MCAWW 160.3 | 07/15/96                      | 6198195         |
|                        |        |                     | Dilution Fact: 1  |      |              |             |                               |                 |
|                        |        |                     | MS Run #: 6198056 |      |              |             |                               |                 |

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.



## METHOD BLANK REPORT

## Metals

Client Lot #: I6G120107

Matrix: WATER

|                  |               |                  |              |               |               |                 |
|------------------|---------------|------------------|--------------|---------------|---------------|-----------------|
| Work Order #:    | C4T12         | Prep Date:       | 07/15/96     | Prep Batch #: | 6197166       |                 |
| <u>PARAMETER</u> | <u>RESULT</u> | <u>REPORTING</u> | <u>LIMIT</u> | <u>UNITS</u>  | <u>METHOD</u> | <u>ANALYSIS</u> |
| Mercury          | ND            |                  | 0.00020      | mg/L          | SW846 7470    | DATE            |
|                  |               |                  |              |               |               | 07/15/96        |
|                  |               |                  |              |               |               | DIL             |
|                  |               |                  |              |               |               | FACT            |
|                  |               |                  |              |               |               | 1               |

|                  |               |                  |              |               |               |                 |
|------------------|---------------|------------------|--------------|---------------|---------------|-----------------|
| Work Order #:    | C4T1J         | Prep Date:       | 07/15/96     | Prep Batch #: | 6197130       |                 |
| <u>PARAMETER</u> | <u>RESULT</u> | <u>REPORTING</u> | <u>LIMIT</u> | <u>UNITS</u>  | <u>METHOD</u> | <u>ANALYSIS</u> |
| Arsenic          | ND            |                  | 0.30         | mg/L          | SW846 6010A   | DATE            |
| Barium           | ND            |                  | 0.20         | mg/L          | SW846 6010A   | 07/19/96        |
| Cadmium          | ND            |                  | 0.0050       | mg/L          | SW846 6010A   | 07/19/96        |
| Chromium         | ND            |                  | 0.010        | mg/L          | SW846 6010A   | 07/19/96        |
| Lead             | ND            |                  | 0.10         | mg/L          | SW846 6010A   | 07/19/96        |
| Selenium         | ND            |                  | 0.25         | mg/L          | SW846 6010A   | 07/19/96        |
| Silver           | ND            |                  | 0.010        | mg/L          | SW846 6010A   | 07/19/96        |
|                  |               |                  |              |               |               | DIL             |
|                  |               |                  |              |               |               | FACT            |
|                  |               |                  |              |               |               | 1               |

## NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND: Parameter was not detected at or above the stated reporting limit.



## METHOD BLANK REPORT

## General Chemistry

Client Lot #: I6G120107

Matrix: WATER

Work Order #: C4T39  
Analysis Date: 07/16/96  
Dilution Factor: 1

Prep Date: 07/16/96

Prep Batch #: 6198108

| PARAMETER        | RESULT |
|------------------|--------|
| Reactive Cyanide | ND     |

| REPORTING | LIMIT | UNITS | METHOD      |
|-----------|-------|-------|-------------|
|           | 200   | mg/L  | SW846 7.3.3 |

Work Order #: C4T3E  
Analysis Date: 07/16/96  
Dilution Factor: 1

Prep Date: 07/16/96

Prep Batch #: 6198110

| PARAMETER        | RESULT |
|------------------|--------|
| Reactive Sulfide | ND     |

| REPORTING | LIMIT | UNITS | METHOD      |
|-----------|-------|-------|-------------|
|           | 200   | mg/L  | SW846 7.3.4 |

Work Order #: C4TA6  
Analysis Date: 07/15/96  
Dilution Factor: 1

Prep Date: 07/15/96

Prep Batch #: 6198195

| PARAMETER              | RESULT |
|------------------------|--------|
| Total Solids (Residue) | ND     |

| REPORTING | LIMIT | UNITS | METHOD      |
|-----------|-------|-------|-------------|
|           | 10    | mg/L  | MCAWW 160.3 |

## NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND Parameter was not detected at or above the stated reporting limit.





## METHOD BLANK REPORT

## GC/MS Volatiles

Client Lot #: I6G120107  
Prep Date: 07/17/96  
Dilution Factor: 1

Work Order #: C4V4H101  
Analysis Date: 07/22/96  
Prep Batch #: 6200138

Matrix: WATER

| PARAMETER            | RESULT | REPORTING |       |             |
|----------------------|--------|-----------|-------|-------------|
|                      |        | LIMIT     | UNITS | METHOD      |
| Benzene              | ND     | 0.050     | mg/L  | SW846 8240A |
| Carbon tetrachloride | ND     | 0.050     | mg/L  | SW846 8240A |
| Chlorobenzene        | ND     | 0.050     | mg/L  | SW846 8240A |
| Chloroform           | ND     | 0.050     | mg/L  | SW846 8240A |
| 1,2-Dichloroethane   | ND     | 0.050     | mg/L  | SW846 8240A |
| 1,1-Dichloroethylene | ND     | 0.050     | mg/L  | SW846 8240A |
| Methyl ethyl ketone  | ND     | 0.20      | mg/L  | SW846 8240A |
| Tetrachloroethylene  | ND     | 0.050     | mg/L  | SW846 8240A |
| Trichloroethylene    | ND     | 0.050     | mg/L  | SW846 8240A |
| Vinyl chloride       | ND     | 0.10      | mg/L  | SW846 8240A |

| SURROGATE             | PERCENT  |                 |
|-----------------------|----------|-----------------|
|                       | RECOVERY | RECOVERY LIMITS |
| 4-Bromofluorobenzene  | 97       | (86-115)        |
| 1,2-Dichloroethane-d4 | 95       | (76-114)        |
| Toluene-d8            | 97       | (88-110)        |

## NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ND: Parameter was not detected at or above the stated reporting limit.

AUG 04 '96 08:38 OCD AZT NM  
Box 1980  
NM 88241-1980  
Box II - (505) 748-1283  
Box III - (505) 334-6178  
Box IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Form C-138  
Originated 8/8/95

Submit Original  
Plus 1 Copy  
to appropriate  
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

|                                                                                               |                |                                                               |
|-----------------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------|
| RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>         | by DGF and RCA | 4. Generator COOPER ENERGY                                    |
| Verbal Approval Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                | 5. Originating Site 3900 Bloomfield Hwy FARMINGTON N.M. 87401 |
| Management Facility Destination T-N-T CONSTRUCTION DISPOSAL WATER                             |                | 6. Transporter SCHMITZ CONSTRUCTION                           |
| Address of Facility Operator HURTY BOX 113 LINDRITH N.M. 87029                                |                | 8. State N.M.                                                 |
| Location of Material (Street Address or ULSTN)                                                |                |                                                               |

Circle One:

- (A) All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.
- B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved.

All transporters must certify the wastes delivered are only those consigned for transport.

BRIEF DESCRIPTION OF MATERIAL:

COMPRESSOR WASH DOWN WATER

RECEIVED

SEP 3 0 1996

Environmental Bureau  
Oil Conservation Division

RECEIVED

SEP 26 1996

OIL CON. DIV.  
DIST. 3

Estimated Volume 80 BBL cy Known Volume (to be entered by the operator at the end of the haul) cy

SIGNATURE: Tony Lee Schmitz TITLE: PRESIDENT DATE: 9/19/96  
Waste Management Facility Authorized Agent

NAME OR PRINT NAME: TONY LEE SCHMITZ TELEPHONE NO. 505-774-6504

This space for State Use)

APPROVED BY: Denny G. Fount TITLE: Geologist DATE: 9/26/96

APPROVED BY: Roger Chubb TITLE: Bureau Chief DATE: 9/30/96

Printed in City 9/30/96

T-n-T Construction, Inc.  
Soil Remediation  
HCR 74-Box 115  
Lindrith, New Mexico 87029  
505-774-6663

RECEIVED  
SEP 26 1996  
OIL CON. DIV.  
DIST. 3

### Certification of Waste Status

Originating location: 3900 Bloomfield Hwy FARMINGTON NM 87401  
Well name: N/A - WASH BAY SEPERATER  
Operator: COOPER ENERGY SERVICES  
Date: 9/19/96

Disposal location: T-n-T Construction, Inc. Soil remediation  
site, State Highway 537, mile marker 22.

"As a condition of acceptance for disposal, I hereby certify that  
this waste is oil field waste that has been certified non-hazard-  
ous by testing."

Name: JEFFREY T. BILLS  
Signature: Jeffrey T. Bills  
Title: CMS PROJECT ANALYST  
Address: 3900 Bloomfield Hwy, FARMINGTON, NM 87401  
Phone Number: 505-325-4949

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## SUSPECTED HAZARDOUS & SOLID WASTE ANALYSIS

|                |                        |                   |          |
|----------------|------------------------|-------------------|----------|
| Client:        | Cooper Energy Services | Project #:        | 96043    |
| Sample ID:     | Oil / Water Separator  | Date Reported:    | 08-29-96 |
| Lab ID#:       | A508                   | Date Sampled:     | 08-27-96 |
| Sample Matrix: | Liquid                 | Date Received:    | 08-27-96 |
| Preservative:  | Cool                   | Date Analyzed:    | 08-29-96 |
| Condition:     | Cool & Intact          | Chain of Custody: | 4861     |

| Parameter | Result |
|-----------|--------|
|-----------|--------|

**IGNITABILITY:** Did not ignite upon direct contact with flame.

**CORROSIVITY:** 9.78

**REACTIVITY:** Did not react violently with water, strong base (10N Sodium Hydroxide), or strong acid (6N Hydrochloric acid).

### RCRA Hazardous Waste Criteria

| Parameter | Hazardous Waste Criterion |
|-----------|---------------------------|
|-----------|---------------------------|

**IGNITABILITY:** Sample ignition upon direct contact with flame indicates hazardous waste status.

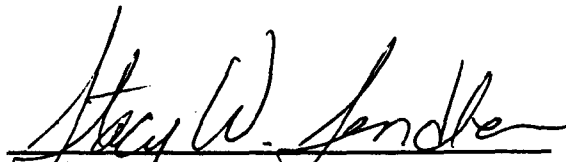
**CORROSIVITY:** pH less than or equal to 2.0 or pH greater than or equal to 12.5 indicates hazardous waste status.

**REACTIVITY:** Violent reaction with water, strong base (10N Sodium Hydroxide), or strong acid (6N Hydrochloric Acid) indicates hazardous waste status.

**Reference:** 40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.

**Comments:** 3900 Bloomfield Hwy.

  
Analyst

  
Review

**EPA METHOD 1311  
TOXICITY CHARACTERISTIC  
LEACHING PROCEDURE  
TRACE METAL ANALYSIS**

|                    |                        |                  |             |
|--------------------|------------------------|------------------|-------------|
| Client:            | Cooper Energy Services | Project #:       | 96043       |
| Sample ID:         | Oil / Water Separator  | Date Reported:   | 09-05-96    |
| Laboratory Number: | A508                   | Date Sampled:    | 08-27-96    |
| Chain of Custody:  | 4861                   | Date Received:   | 08-27-96    |
| Sample Matrix:     | Liquid                 | Date Analyzed:   | 09-05-96    |
| Preservative:      | Cool                   | Date Extracted:  | NA          |
| Condition:         | Cool & Intact          | Analysis Needed: | TCLP metals |

| Parameter | Concentration<br>(mg/L) | Det.<br>Limit<br>(mg/L) | Regulatory<br>Level<br>(mg/L) |
|-----------|-------------------------|-------------------------|-------------------------------|
| Arsenic   | 0.055                   | 0.001                   | 5.00                          |
| Barium    | 4.17                    | 0.01                    | 100                           |
| Cadmium   | 0.269                   | 0.001                   | 1.00                          |
| Chromium  | 0.785                   | 0.001                   | 5.00                          |
| Lead      | 2.03                    | 0.001                   | 5.00                          |
| Mercury   | ND                      | 0.001                   | 0.200                         |
| Selenium  | 0.014                   | 0.001                   | 1.00                          |
| Silver    | 0.017                   | 0.001                   | 5.0                           |

ND - Parameter not detected at the stated detection limit.

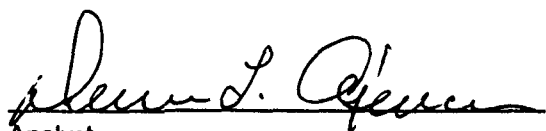
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

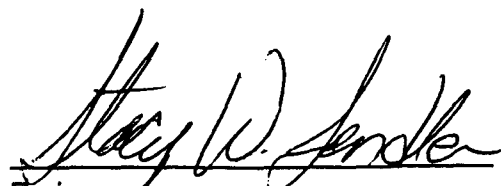
Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, July 1992.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: 3900 Bloomfield Hwy.

  
Analyst

  
Review

|                    |                        |                     |          |
|--------------------|------------------------|---------------------|----------|
| Client:            | Cooper Energy Services | Project #:          | 96043    |
| Sample ID:         | Oil/Water Separator    | Date Reported:      | 09-05-96 |
| Laboratory Number: | A508                   | Date Sampled:       | 08-27-96 |
| Chain of Custody:  | 4861                   | Date Received:      | 08-27-96 |
| Sample Matrix:     | Liquid                 | Date Extracted:     | NA       |
| Preservative:      | Cool                   | Date Analyzed:      | 09-03-96 |
| Condition:         | Cool & Intact          | Analysis Requested: | TCLP     |

| Parameter            | Concentration<br>(mg/L) | Detection<br>Limit<br>(mg/L) | Regulatory<br>Limits<br>(mg/L) |
|----------------------|-------------------------|------------------------------|--------------------------------|
| Vinyl Chloride       | ND                      | 0.0007                       | 0.2                            |
| 1,1-Dichloroethene   | ND                      | 0.0001                       | 0.7                            |
| 2-Butanone (MEK)     | 0.1408                  | 0.0001                       | 200                            |
| Chloroform           | ND                      | 0.0001                       | 6.0                            |
| Carbon Tetrachloride | ND                      | 0.0001                       | 0.5                            |
| Benzene              | 0.0053                  | 0.0001                       | 0.5                            |
| 1,2-Dichloroethane   | ND                      | 0.0001                       | 0.5                            |
| Trichloroethene      | ND                      | 0.0003                       | 0.5                            |
| Tetrachloroethene    | ND                      | 0.0005                       | 0.7                            |
| Chlorobenzene        | ND                      | 0.0003                       | 100                            |
| 1,4-Dichlorobenzene  | ND                      | 0.0002                       | 7.5                            |

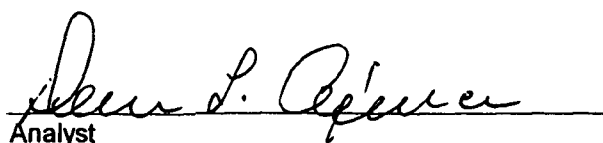
ND - Parameter not detected at the stated detection limit.

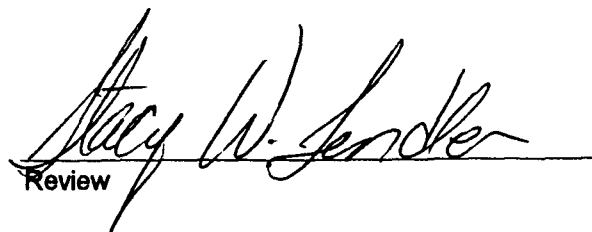
| QA/QC Acceptance Criteria | Parameter          | Percent Recovery |
|---------------------------|--------------------|------------------|
|                           | Trifluorotoluene   | 100%             |
|                           | Bromofluorobenzene | 98%              |

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.  
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.  
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.  
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: 3900 Bloomfield Hwy.

  
Analyst

  
Review

|                    |                        |                     |          |
|--------------------|------------------------|---------------------|----------|
| Client:            | Cooper Energy Services | Project #:          | 96043    |
| Sample ID:         | Oil / Water Separator  | Date Reported:      | 09-05-96 |
| Laboratory Number: | A508                   | Date Sampled:       | 08-27-96 |
| Chain of Custody:  | 4861                   | Date Received:      | 08-27-96 |
| Sample Matrix:     | Liquid                 | Date Extracted:     | NA       |
| Preservative:      | Cool                   | Date Analyzed:      | 09-04-96 |
| Condition:         | Cool and Intact        | Analysis Requested: | TCLP     |

| Parameter           | Concentration<br>(mg/L) | Det.<br>Limit<br>(mg/L) | Regulatory<br>Limit<br>(mg/L) |
|---------------------|-------------------------|-------------------------|-------------------------------|
| Pyridine            | ND                      | 0.020                   | 5.0                           |
| Hexachloroethane    | 0.155                   | 0.020                   | 3.0                           |
| Nitrobenzene        | 0.790                   | 0.020                   | 2.0                           |
| Hexachlorobutadiene | 0.301                   | 0.020                   | 0.5                           |
| 2,4-Dinitrotoluene  | 0.119                   | 0.020                   | 0.13                          |
| HexachloroBenzene   | 0.116                   | 0.020                   | 0.13                          |

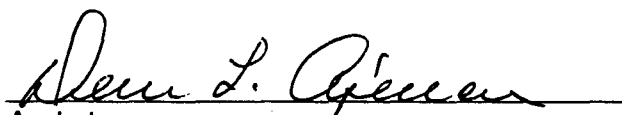
ND - Parameter not detected at the stated detection limit.

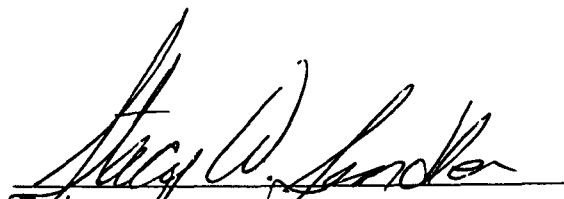
| QA/QC Acceptance Criteria | Parameter        | Percent Recovery |
|---------------------------|------------------|------------------|
|                           | 2-fluorobiphenyl | 97%              |

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.  
Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.  
Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: 3900 Bloomfield Hwy.

  
Analyst

  
Review

|                    |                        |                     |          |
|--------------------|------------------------|---------------------|----------|
| Client:            | Cooper Energy Services | Project #:          | 96043    |
| Sample ID:         | Oil / Water Separator  | Date Reported:      | 09-05-96 |
| Laboratory Number: | A508                   | Date Sampled:       | 08-27-96 |
| Chain of Custody:  | 4861                   | Date Received:      | 08-27-96 |
| Sample Matrix:     | Liquid                 | Date Extracted:     | NA       |
| Preservative:      | Cool                   | Date Analyzed:      | 09-05-96 |
| Condition:         | Cool & Intact          | Analysis Requested: | TCLP     |

| Parameter             | Concentration<br>(mg/L) | Detection<br>Limit<br>(mg/L) | Regulatory<br>Limit<br>(mg/L) |
|-----------------------|-------------------------|------------------------------|-------------------------------|
| o-Cresol              | ND                      | 0.020                        | 200                           |
| p,m-Cresol            | 0.166                   | 0.040                        | 200                           |
| 2,4,6-Trichlorophenol | 0.025                   | 0.020                        | 2.0                           |
| 2,4,5-Trichlorophenol | 0.408                   | 0.020                        | 400                           |
| Pentachlorophenol     | 0.319                   | 0.025                        | 100                           |

ND - Parameter not detected at the stated detection limit.

| Surrogate Recoveries: | Parameter            | Percent Recovery |
|-----------------------|----------------------|------------------|
|                       | 2-Fluorophenol       | 101%             |
|                       | 2,4,6-Tribromophenol | 97%              |

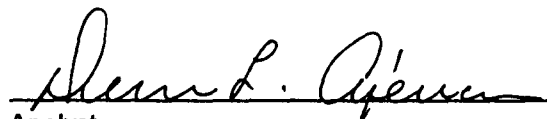
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

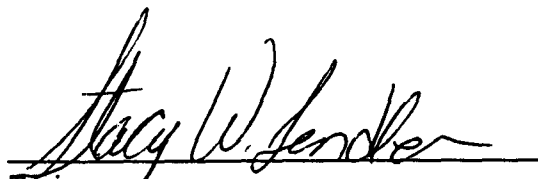
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 198

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: 3900 Bloomfield Hwy.

  
Analyst

  
Review



# **ENVIROTECH LABS**

**PRACTICAL SOLUTIONS FOR A BETTER TOMORROW**

## **QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION**

**EPA METHOD 1311  
TOXICITY CHARACTERISTIC  
LEACHING PROCEDURE  
TRACE METAL ANALYSIS**

|                     |              |                 |          |
|---------------------|--------------|-----------------|----------|
| Client:             | QA/QC        | Project #:      | N/A      |
| Sample ID:          | Blanks       | Date Reported:  | 09-05-96 |
| Laboratory Number:  | N/A          | Date Sampled:   | N/A      |
| Sample Matrix:      | TCLP Extract | Date Received:  | N/A      |
| Analysis Requested: | TCLP         | Date Analyzed:  | 09-05-96 |
| Condition:          | N/A          | Date Extracted: | N/A      |

| Parameter | Instrument<br>Blank<br>(mg/L) | Method<br>Blank<br>(mg/L) | Det.<br>Limit<br>(mg/L) |
|-----------|-------------------------------|---------------------------|-------------------------|
| Arsenic   | ND                            | ND                        | 0.001                   |
| Barium    | ND                            | ND                        | 0.01                    |
| Cadmium   | ND                            | ND                        | 0.001                   |
| Chromium  | ND                            | ND                        | 0.001                   |
| Lead      | ND                            | ND                        | 0.001                   |
| Mercury   | ND                            | ND                        | 0.001                   |
| Selenium  | ND                            | ND                        | 0.001                   |
| Silver    | ND                            | ND                        | 0.001                   |

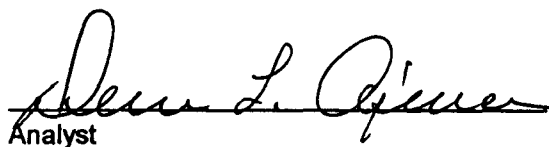
ND - Parameter not detected at the stated detection limit.

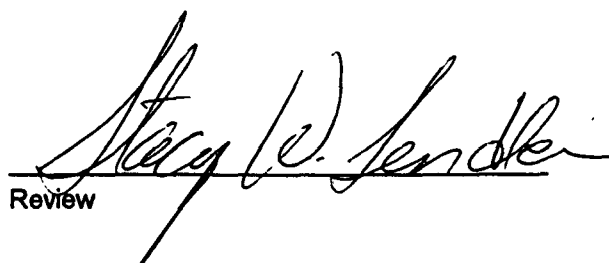
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, July 1992.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA.

Comments: QA/QC for samples A508 and A509.

  
Analyst

  
Review

**EPA METHOD 1311  
TOXICITY CHARACTERISTIC  
LEACHING PROCEDURE  
TRACE METAL ANALYSIS**

|                     |                  |                 |          |
|---------------------|------------------|-----------------|----------|
| Client:             | QA/QC            | Project #:      | N/A      |
| Sample ID:          | Matrix Duplicate | Date Reported:  | 09-05-96 |
| Laboratory Number:  | A509             | Date Sampled:   | N/A      |
| Sample Matrix:      | TCLP Extract     | Date Received:  | N/A      |
| Analysis Requested: | TCLP             | Date Analyzed:  | 09-05-96 |
| Condition:          | N/A              | Date Extracted: | 08-29-96 |

| Parameter | Sample Result (mg/L) | Duplicate Result (mg/L) | Percent Difference |
|-----------|----------------------|-------------------------|--------------------|
| Arsenic   | 0.007                | 0.007                   | 0.0%               |
| Barium    | 0.80                 | 0.81                    | 1.2%               |
| Cadmium   | 0.076                | 0.076                   | 0.0%               |
| Chromium  | ND                   | ND                      | 0.0%               |
| Lead      | 0.040                | 0.039                   | 2.5%               |
| Mercury   | ND                   | ND                      | 0.0%               |
| Selenium  | ND                   | ND                      | 0.0%               |
| Silver    | ND                   | ND                      | 0.0%               |

ND - Parameter not detected at the stated detection limit.

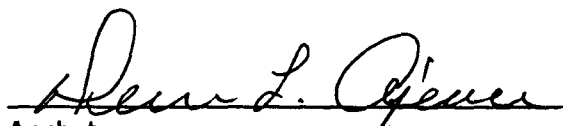
| QA/QC Acceptance Criteria: | Parameter    | Maximum Difference |
|----------------------------|--------------|--------------------|
|                            | Trace Metals | 30 %               |

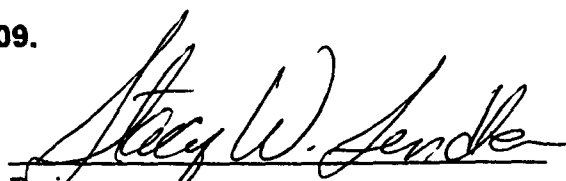
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, July 1992.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA.

Comments: QA/QC for samples A508 and A509.

  
Analyst

  
Review

**EPA METHOD 1311  
TOXICITY CHARACTERISTIC  
LEACHING PROCEDURE  
TRACE METAL ANALYSIS**

|                     |                  |                 |          |
|---------------------|------------------|-----------------|----------|
| Client:             | QA/QC            | Project #:      | N/A      |
| Sample ID:          | Laboratory Spike | Date Reported:  | 09-05-96 |
| Laboratory Number:  | A509             | Date Sampled:   | N/A      |
| Sample Matrix:      | TCLP Extract     | Date Received:  | N/A      |
| Analysis Requested: | TCLP             | Date Analyzed:  | 09-05-96 |
| Condition:          | N/A              | Date Extracted: | 08-29-96 |

| Parameter | Spike Added (mg/L) | Sample Result (mg/L) | Spiked Sample Result (mg/L) | Percent Recovery |
|-----------|--------------------|----------------------|-----------------------------|------------------|
| Arsenic   | 0.100              | 0.007                | 0.107                       | 100%             |
| Barium    | 1.00               | 0.80                 | 1.81                        | 101%             |
| Cadmium   | 0.050              | 0.076                | 0.126                       | 100%             |
| Chromium  | 0.050              | ND                   | 0.050                       | 100%             |
| Lead      | 0.100              | 0.040                | 0.139                       | 99%              |
| Mercury   | 0.025              | ND                   | 0.025                       | 100%             |
| Selenium  | 0.100              | ND                   | 0.101                       | 101%             |
| Silver    | 0.050              | ND                   | 0.051                       | 102%             |

ND - Parameter not detected at the stated detection limit.

| QA/QC Acceptance Criteria: | Parameter   | Acceptance Range % |
|----------------------------|-------------|--------------------|
|                            | TCLP Metals | 80 - 120 %         |

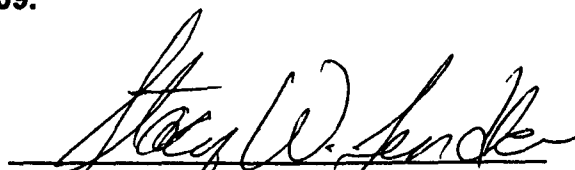
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, July 1992.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA.

Comments: QA/QC for samples A508 and A509.

  
Analyst

  
Review

EPA METHODS 8010/8020  
AROMATIC / HALOGENATED  
VOLATILE ORGANICS  
Quality Assurance Report

|                    |                  |                     |          |
|--------------------|------------------|---------------------|----------|
| Client:            | QA/QC            | Project #:          | N/A      |
| Sample ID:         | Laboratory Blank | Date Reported:      | 09-05-96 |
| Laboratory Number: | 09-03-TCV.BLANK  | Date Sampled:       | N/A      |
| Sample Matrix:     | TCLP Extract     | Date Received:      | N/A      |
| Preservative:      | N/A              | Date Analyzed:      | 09-03-96 |
| Condition:         | N/A              | Analysis Requested: | TCLP     |

| Parameter            | Concentration<br>(mg/L) | Detection<br>Limit<br>(mg/L) | Regulatory<br>Limits<br>(mg/L) |
|----------------------|-------------------------|------------------------------|--------------------------------|
| Vinyl Chloride       | ND                      | 0.0007                       | 0.2                            |
| 1,1-Dichloroethene   | ND                      | 0.0001                       | 0.7                            |
| 2-Butanone (MEK)     | ND                      | 0.0001                       | 200                            |
| Chloroform           | ND                      | 0.0001                       | 6.0                            |
| Carbon Tetrachloride | ND                      | 0.0001                       | 0.5                            |
| Benzene              | ND                      | 0.0001                       | 0.5                            |
| 1,2-Dichloroethane   | ND                      | 0.0001                       | 0.5                            |
| Trichloroethene      | ND                      | 0.0003                       | 0.5                            |
| Tetrachloroethene    | ND                      | 0.0005                       | 0.7                            |
| Chlorobenzene        | ND                      | 0.0003                       | 100                            |
| 1,4-Dichlorobenzene  | ND                      | 0.0002                       | 7.5                            |

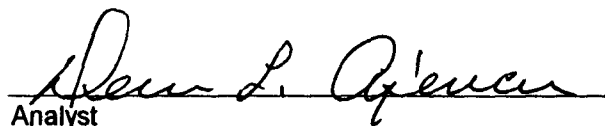
ND - Parameter not detected at the stated detection limit.

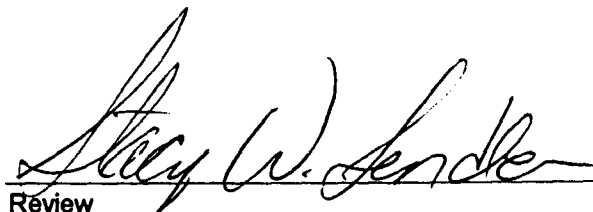
| QA/QC Acceptance Criteria | Parameter          | Percent Recovery |
|---------------------------|--------------------|------------------|
|                           | Trifluorotoluene   | 104%             |
|                           | Bromofluorobenzene | 97%              |

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.  
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.  
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.  
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: QA/QC for samples A508 and A509.

  
Analyst

  
Review

**EPA METHODS 8010/8020  
AROMATIC / HALOGENATED  
VOLATILE ORGANICS  
Quality Assurance Report**

|                    |              |                     |          |
|--------------------|--------------|---------------------|----------|
| Client:            | QA/QC        | Project #:          | N/A      |
| Sample ID:         | Method Blank | Date Reported:      | 09-05-96 |
| Laboratory Number: | 08-29-TCV.MB | Date Sampled:       | N/A      |
| Sample Matrix:     | TCLP Extract | Date Received:      | N/A      |
| Preservative:      | N/A          | Date Analyzed:      | 09-03-96 |
| Condition:         | N/A          | Date Extracted:     | 08-29-96 |
|                    |              | Analysis Requested: | TCLP     |

| Parameter            | Concentration<br>(mg/L) | Detection<br>Limit<br>(mg/L) | Regulatory<br>Limits<br>(mg/L) |
|----------------------|-------------------------|------------------------------|--------------------------------|
| Vinyl Chloride       | ND                      | 0.0007                       | 0.2                            |
| 1,1-Dichloroethene   | ND                      | 0.0001                       | 0.7                            |
| 2-Butanone (MEK)     | ND                      | 0.0001                       | 200                            |
| Chloroform           | ND                      | 0.0001                       | 6.0                            |
| Carbon Tetrachloride | ND                      | 0.0001                       | 0.5                            |
| Benzene              | ND                      | 0.0001                       | 0.5                            |
| 1,2-Dichloroethane   | ND                      | 0.0001                       | 0.5                            |
| Trichloroethene      | ND                      | 0.0003                       | 0.5                            |
| Tetrachloroethene    | ND                      | 0.0005                       | 0.7                            |
| Chlorobenzene        | ND                      | 0.0003                       | 100                            |
| 1,4-Dichlorobenzene  | ND                      | 0.0002                       | 7.5                            |

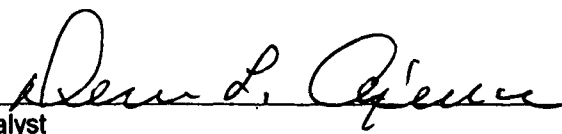
ND - Parameter not detected at the stated detection limit.

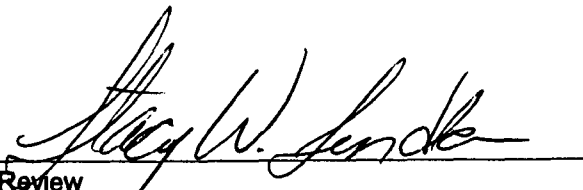
| QA/QC Acceptance Criteria | Parameter          | Percent Recovery |
|---------------------------|--------------------|------------------|
|                           | Trifluorotoluene   | 99%              |
|                           | Bromofluorobenzene | 99%              |

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.  
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.  
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.  
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: QA/QC for samples A508 and A509.

  
Analyst

  
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EPA METHODS 8010/8020  
AROMATIC / HALOGENATED  
VOLATILE ORGANICS  
QUALITY ASSURANCE REPORT

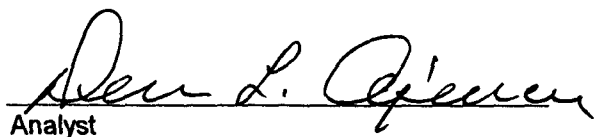
|                     |                  |                 |          |
|---------------------|------------------|-----------------|----------|
| Client:             | QA/QC            | Project #:      | N/A      |
| Sample ID:          | Matrix Duplicate | Date Reported:  | 09-05-96 |
| Laboratory Number:  | A509             | Date Sampled:   | N/A      |
| Sample Matrix:      | Soil             | Date Received:  | N/A      |
| Analysis Requested: | TCLP             | Date Analyzed:  | 09-03-96 |
| Condition:          | N/A              | Date Extracted: | 08-29-96 |

| Parameter            | Sample Result (mg/L) | Duplicate Sample Result (mg/L) | Detection Limits (mg/L) | Percent Difference |
|----------------------|----------------------|--------------------------------|-------------------------|--------------------|
| Vinyl Chloride       | ND                   | ND                             | 0.0007                  | 0.0%               |
| 1,1-Dichloroethene   | ND                   | ND                             | 0.0001                  | 0.0%               |
| 2-Butanone (MEK)     | 0.0079               | 0.0074                         | 0.0001                  | 6.8%               |
| Chloroform           | ND                   | ND                             | 0.0001                  | 0.0%               |
| Carbon Tetrachloride | ND                   | ND                             | 0.0001                  | 0.0%               |
| Benzene              | ND                   | ND                             | 0.0001                  | 0.0%               |
| 1,2-Dichloroethane   | ND                   | ND                             | 0.0001                  | 0.0%               |
| Trichloroethene      | ND                   | ND                             | 0.0003                  | 0.0%               |
| Tetrachloroethene    | ND                   | ND                             | 0.0005                  | 0.0%               |
| Chlorobenzene        | ND                   | ND                             | 0.0003                  | 0.0%               |
| 1,4-Dichlorobenzene  | ND                   | ND                             | 0.0002                  | 0.0%               |

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.  
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.  
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.  
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Comments: QA/QC for samples A508 and A509.

  
Analyst

  
Review

EPA METHODS 8010/8020  
AROMATIC / HALOGENATED  
VOLATILE ORGANICS  
QUALITY ASSURANCE REPORT

Client: QA/QC  
Sample ID: Matrix Spike  
Laboratory Number: A509  
Sample Matrix: Soil  
Analysis Requested: TCLP  
Condition: N/A

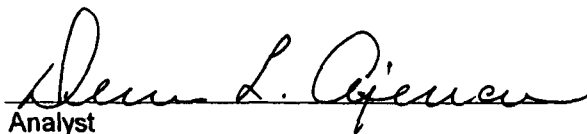
Project #: N/A  
Date Reported: 09-05-96  
Date Sampled: N/A  
Date Received: N/A  
Date Analyzed: 09-03-96  
Date Extracted: 08-29-96

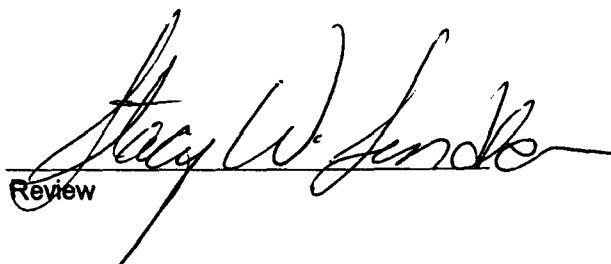
| Parameter            | Sample Result (mg/L) | Spike Added (mg/L) | Spiked Sample Result (mg/L) | Det. Limit (mg/L) | Percent Recovery | SW-846 % Rec. Accept. Range |
|----------------------|----------------------|--------------------|-----------------------------|-------------------|------------------|-----------------------------|
| Vinyl Chloride       | ND                   | 0.020              | 0.0191                      | 0.0007            | 92%              | 28-163                      |
| 1,1-Dichloroethene   | ND                   | 0.020              | 0.0230                      | 0.0001            | 95%              | 43-143                      |
| 2-Butanone (MEK)     | 0.0079               | 0.020              | 0.0268                      | 0.0001            | 96%              | 47-132                      |
| Chloroform           | ND                   | 0.020              | 0.0200                      | 0.0001            | 99%              | 49-133                      |
| Carbon Tetrachloride | ND                   | 0.020              | 0.0201                      | 0.0001            | 97%              | 43-143                      |
| Benzene              | ND                   | 0.020              | 0.0191                      | 0.0001            | 96%              | 39-150                      |
| 1,2-Dichloroethane   | ND                   | 0.020              | 0.0197                      | 0.0001            | 98%              | 51-147                      |
| Trichloroethene      | ND                   | 0.020              | 0.0198                      | 0.0003            | 99%              | 35-146                      |
| Tetrachloroethene    | ND                   | 0.020              | 0.0199                      | 0.0005            | 96%              | 26-162                      |
| Chlorobenzene        | ND                   | 0.020              | 0.0226                      | 0.0003            | 97%              | 38-150                      |
| 1,4-Dichlorobenzene  | ND                   | 0.020              | 0.0219                      | 0.0002            | 96%              | 42-143                      |

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.  
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.  
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.  
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Comments: QA/QC for samples A508 and A509.

  
Analyst

  
Review



**EPA Method 8090**  
**Nitroaromatics and Cyclic Ketones**  
**TCLP Base/Neutral Organics**  
**Quality Assurance Report**

Client: QA/QC  
Sample ID: Laboratory Blank  
Laboratory Number: 09-04-TBN.BLANK  
Sample Matrix: Hexane  
Preservative: N/A  
Condition: N/A

Project #: N/A  
Date Reported: 09-05-96  
Date Sampled: N/A  
Date Received: N/A  
Date Extracted: N/A  
Date Analyzed: 09-04-96  
Analysis Requested: TCLP

| Parameter           | Concentration<br>(mg/L) | Det.<br>Limit<br>(mg/L) | Regulatory<br>Limit<br>(mg/L) |
|---------------------|-------------------------|-------------------------|-------------------------------|
| Pyridine            | ND                      | 0.020                   | 5.0                           |
| Hexachloroethane    | ND                      | 0.020                   | 3.0                           |
| Nitrobenzene        | ND                      | 0.020                   | 2.0                           |
| Hexachlorobutadiene | ND                      | 0.020                   | 0.5                           |
| 2,4-Dinitrotoluene  | ND                      | 0.020                   | 0.13                          |
| HexachloroBenzene   | ND                      | 0.020                   | 0.13                          |

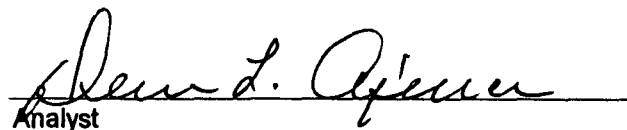
ND - Parameter not detected at the stated detection limit.

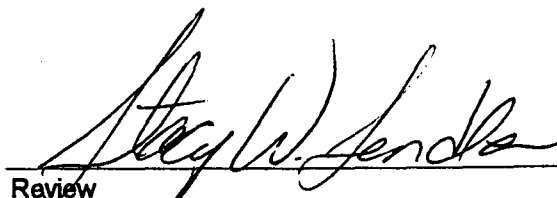
| QA/QC Acceptance Criteria | Parameter        | Percent Recovery |
|---------------------------|------------------|------------------|
|                           | 2-fluorobiphenyl | 99%              |

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.  
Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.  
Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: QA/QC for samples A508 and A509.

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

**EPA Method 8090**  
**Nitroaromatics and Cyclic Ketones**  
**TCLP Base/Neutral Organics**  
**QUALITY ASSURANCE REPORT**

Client: QA/QC  
Sample ID: Method Blank  
Laboratory Number: 08-29-TBN.MB  
Sample Matrix: Soil  
Preservative: Cool  
Condition: Cool and Intact

Project #: N/A  
Date Reported: 09-05-96  
Date Sampled: N/A  
Date Received: N/A  
Date Extracted: 08-29-96  
Date Analyzed: 09-04-96  
Analysis Requested: TCLP

| Parameter           | Concentration<br>(mg/L) | Det.<br>Limit<br>(mg/L) | Regulatory<br>Limit<br>(mg/L) |
|---------------------|-------------------------|-------------------------|-------------------------------|
| Pyridine            | ND                      | 0.020                   | 5.0                           |
| Hexachloroethane    | ND                      | 0.020                   | 3.0                           |
| Nitrobenzene        | ND                      | 0.020                   | 2.0                           |
| Hexachlorobutadiene | ND                      | 0.020                   | 0.5                           |
| 2,4-Dinitrotoluene  | ND                      | 0.020                   | 0.13                          |
| HexachloroBenzene   | ND                      | 0.020                   | 0.13                          |

ND - Parameter not detected at the stated detection limit.

| QA/QC Acceptance Criteria | Parameter | Percent Recovery |
|---------------------------|-----------|------------------|
|---------------------------|-----------|------------------|

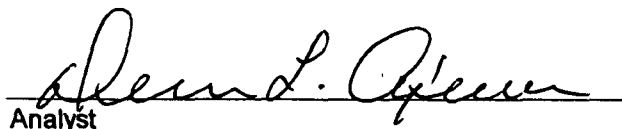
2-fluorobiphenyl

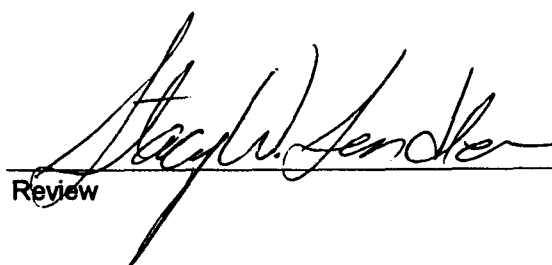
99%

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.  
Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.  
Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: QA/QC for samples A508 and A509.

  
Analyst

  
Review

**EPA Method 8090**  
**Nitroaromatics and Cyclic Ketones**  
**TCLP Base/Neutral Organics**  
**QA/QC Matrix Duplicate Report**

Client: QA/QC  
Sample ID: Matrix Duplicate  
Laboratory Number: A509  
Sample Matrix: Soil  
Preservative: N/A  
Condition: N/A

Project #: N/A  
Date Reported: 09-05-96  
Date Sampled: N/A  
Date Received: N/A  
Date Extracted: 08-29-96  
Date Analyzed: 09-04-96  
Analysis Requested: TCLP

| Parameter           | Sample Result (mg/L) | Duplicate Result (mg/L) | Percent Difference | Det. Limit (mg/L) |
|---------------------|----------------------|-------------------------|--------------------|-------------------|
| Pyridine            | ND                   | ND                      | 0.0%               | 0.020             |
| Hexachloroethane    | ND                   | ND                      | 0.0%               | 0.020             |
| Nitrobenzene        | ND                   | ND                      | 0.0%               | 0.020             |
| Hexachlorobutadiene | ND                   | ND                      | 0.0%               | 0.020             |
| 2,4-Dinitrotoluene  | ND                   | ND                      | 0.0%               | 0.020             |
| HexachloroBenzene   | ND                   | ND                      | 0.0%               | 0.020             |

ND - Parameter not detected at the stated detection limit.

| QA/QC Acceptance Criteria | Parameter | Maximum Difference |
|---------------------------|-----------|--------------------|
|---------------------------|-----------|--------------------|

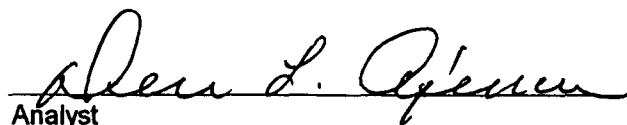
8090 Compounds

30%

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.  
Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.  
Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: QA/QC for samples A508 and A509.

  
Analyst

  
Review

Quality Assurance Report  
Laboratory Blank

|                    |                  |                     |          |
|--------------------|------------------|---------------------|----------|
| Client:            | QA/QC            | Project #:          | N/A      |
| Sample ID:         | Laboratory Blank | Date Reported:      | 09-05-96 |
| Laboratory Number: | 09-05-TCA.BLANK  | Date Sampled:       | N/A      |
| Sample Matrix:     | 2-Propanol       | Date Received:      | N/A      |
| Preservative:      | N/A              | Date Analyzed:      | 09-05-96 |
| Condition:         | N/A              | Analysis Requested: | TCLP     |

| Analytical Results    | Concentration | Detection | Regulatory |
|-----------------------|---------------|-----------|------------|
| Parameter             | (mg/L)        | Limit     | Limit      |
|                       |               | (mg/L)    | (mg/L)     |
| o-Cresol              | ND            | 0.020     | 200        |
| p,m-Cresol            | ND            | 0.040     | 200        |
| 2,4,6-Trichlorophenol | ND            | 0.020     | 2.0        |
| 2,4,5-Trichlorophenol | ND            | 0.020     | 400        |
| Pentachlorophenol     | ND            | 0.025     | 100        |

ND - Parameter not detected at the stated detection limit.

| Surrogate Recoveries: | Parameter            | Percent Recovery |
|-----------------------|----------------------|------------------|
|                       | 2-fluorophenol       | 100 %            |
|                       | 2,4,6-tribromophenol | 101 %            |

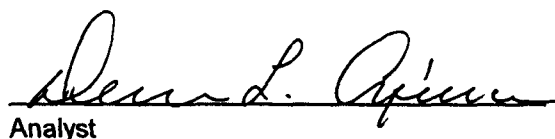
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

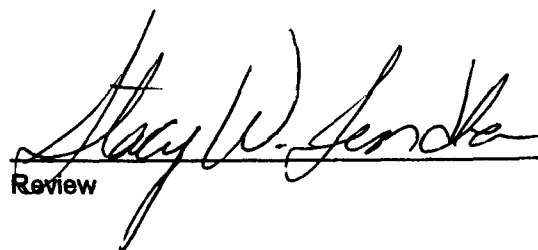
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 198

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: QA/QC for samples A508 and A509.

  
Analyst

  
Review

## EPA METHOD 8040

## PHENOLS

## Quality Assurance Report

|                    |               |                     |          |
|--------------------|---------------|---------------------|----------|
| Client:            | QA/QC         | Project #:          | N/A      |
| Sample ID:         | Method Blank  | Date Reported:      | 09-05-96 |
| Laboratory Number: | 08-29-TCA.MB  | Date Sampled:       | N/A      |
| Sample Matrix:     | Soil          | Date Received:      | N/A      |
| Preservative:      | Cool          | Date Extracted:     | 08-29-96 |
| Condition:         | Cool & Intact | Date Analyzed:      | 09-05-96 |
|                    |               | Analysis Requested: | TCLP     |

| Parameter             | Concentration<br>(mg/L) | Det.<br>Limit<br>(mg/L) | Regulatory<br>Limit<br>(mg/L) |
|-----------------------|-------------------------|-------------------------|-------------------------------|
| o-Cresol              | ND                      | 0.020                   | 200                           |
| p,m-Cresol            | ND                      | 0.040                   | 200                           |
| 2,4,6-Trichlorophenol | ND                      | 0.020                   | 2.0                           |
| 2,4,5-Trichlorophenol | ND                      | 0.020                   | 400                           |
| Pentachlorophenol     | ND                      | 0.025                   | 100                           |

ND - Parameter not detected at the stated detection limit.

| Surrogate Recoveries: | Parameter            | Percent Recovery |
|-----------------------|----------------------|------------------|
|                       | 2-Fluorophenol       | 99%              |
|                       | 2,4,6-Tribromophenol | 98%              |

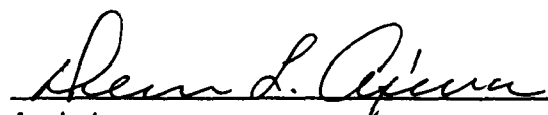
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

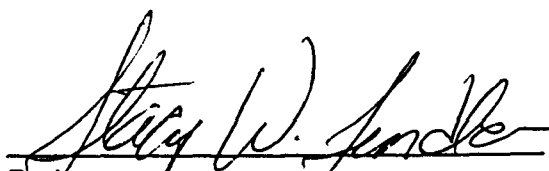
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 198

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: QA/QC for samples A508 and A509.

  
Analyst

  
Review

## EPA METHOD 8040 PHENOLS

### Quality Assurance Report

|                    |                  |                     |          |
|--------------------|------------------|---------------------|----------|
| Client:            | QA/QC            | Project #:          | N/A      |
| Sample ID:         | Matrix Duplicate | Date Reported:      | 09-05-96 |
| Laboratory Number: | A509             | Date Sampled:       | N/A      |
| Sample Matrix:     | Soil             | Date Received:      | N/A      |
| Preservative:      | Cool             | Date Extracted:     | 08-29-96 |
| Condition:         | Cool & Intact    | Date Analyzed:      | 09-05-96 |
|                    |                  | Analysis Requested: | TCLP     |

| Parameter             | Sample Result (mg/L) | Duplicate Result (mg/L) | Detection Limit (mg/L) | Percent Difference |
|-----------------------|----------------------|-------------------------|------------------------|--------------------|
| o-Cresol              | ND                   | ND                      | 0.020                  | 0.0%               |
| p,m-Cresol            | ND                   | ND                      | 0.040                  | 0.0%               |
| 2,4,6-Trichlorophenol | ND                   | ND                      | 0.020                  | 0.0%               |
| 2,4,5-Trichlorophenol | ND                   | ND                      | 0.020                  | 0.0%               |
| Pentachlorophenol     | ND                   | ND                      | 0.025                  | 0.0%               |

ND - Parameter not detected at the stated detection limit.

| QA/QC Acceptance Criteria: | Parameter      | Maximum Difference |
|----------------------------|----------------|--------------------|
|                            | 8040 Compounds | 30.0%              |

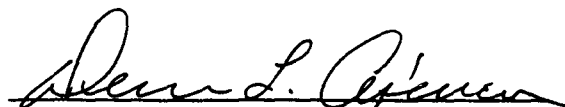
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

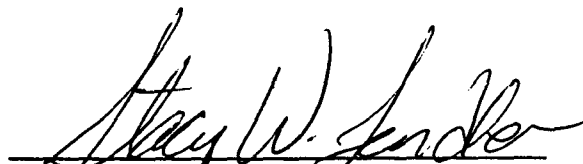
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: QA/QC for samples A508 and A509.

  
Analyst

  
Review



District I - (505) 393-6161  
P. O. Box 1980  
Hobbs, NM 88241-1980  
District II - (505) 748-1283  
811 S. First  
Artesia, NM 88210  
District III - (505) 334-6178  
1000 Rio Brazos Road  
Aztec, NM 87410  
District IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Roger Anderson  
Form C-138  
Originated 8/8/95

Submit Original  
Plus 1 Copy  
to appropriate  
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1. RCRA Exempt: <input checked="" type="checkbox"/> Non-Exempt: <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 4. Generator <u>D.N.M. GAS SERVICE</u>                            |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5. Originating Site <u>STAR LAKE</u><br><u>COMPRESSOR STATION</u> |
| 2. Management Facility Destination <u>EVAPORATION POND</u><br><u>T-N-T CONSTRUCTION INC.</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6. Transporter <u>INLAND TRANS.</u>                               |
| 3. Address of Facility Operator <u>HCR 74 - BOX 115 LINDRITH, N.M. 87029</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 8. State <u>N.M.</u>                                              |
| 7. Location of Material (Street Address or ULSTR) <u>UNIT N.W. 4 SEC. 34 T-20-N</u><br><u>R-6-W MCKINLEY COUNTY.</u>                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                   |
| 9. Circle One:<br>A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.<br>(B) All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved.<br><br>All transporters must certify the wastes delivered are only those consigned for transport. |                                                                   |

BRIEF DESCRIPTION OF MATERIAL:

COMPRESSOR BUILDING WASTE WATER.  
WASH DOWN WATER

**RECEIVED**

**JUL 24 1996**

Environmental Bureau  
Oil Conservation Division

Estimated Volume 2940 GAL. GAL. Known Volume (to be entered by the operator at the end of the haul) \_\_\_\_\_cy

SIGNATURE: [Signature] TITLE: PRESIDENT DATE: 7/15/96  
Waste Management Facility Authorized Agent  
TYPE OR PRINT NAME: TONY LEE SCHMITZ TELEPHONE NO. 505-774-6504

(This space for State Use)

APPROVED BY: [Signature] TITLE: Geologist DATE: 7/19/96  
APPROVED BY: [Signature] TITLE: Bureau Chief DATE: 7/24/96

Already has verbal in place.



**T-n-T CONSTRUCTION, INC.**  
Soil Remediation  
HCR74, Box 445  
Lindrieth, New Mexico 87029  
(505) 774-6663

RECEIVED  
JUL 18 1996

OIL CON. DIV.  
DIST. 3

**Certification of Waste Status**

Originating location: STAR LAKE COMPRESSOR STATION  
Well name: COMPRESSOR WASHDOWN WATER  
Operator: PNM- GAS SERVICES  
Date: 7-15-96

Disposal location: **T-n-T Construction, Inc. Soil Remediation Site, State Highway 337, mile marker 22.**

"As a condition of acceptance for disposal, I hereby certify that this waste is an exempt waste as defined by the Resource Conservation Recovery Act (RCRA)." —

Name: DENVER BEARDEN  
Signature: [Signature]  
Title: Administrator III  
Address: 603 W Elm Farmington, N.M. 87401  
Phone Number: 505-324-3763

# Quality Control Report

## PNM Gas Services

Date Reported: 07/12/98

| Quality Control Data |          |         |         |                   |
|----------------------|----------|---------|---------|-------------------|
| Arsenic              | Spex 18  | 0.0055  | 0.0050  | 0.0043 - 0.0058   |
| Barium               | Spex 18  | 2.07    | 2.00    | 1.80 - 2.20       |
| Cadmium              | Spex 18  | 0.548   | 0.500   | 0.450 - 0.550     |
| Chromium             | ERA 9970 | 0.00270 | 0.00241 | 0.00198 - 0.00284 |
| Lead                 | Spex 18  | 4.86    | 5.00    | 4.50 - 5.50       |
| Mercury              | ERA 9984 | 0.0048  | 0.0052  | 0.00398 - 0.00605 |
| Selenium             | Spex 18  | 0.00881 | 0.0100  | 0.00850 - 0.0115  |
| Silver               | Spex 7   | 1.92    | 2.00    | 1.80 - 2.20       |

Reference: Method 1311, Toxicity Characteristic Leaching Procedure; Method 70  
Absorption Methods; Test Methods for Evaluating Solid Wastes, SW-  
Environmental Protection Agency, Final Update I, July, 1982.

  
Review



**Volatile Organic Compounds**  
**EPA Method 8240**

**PNM Gas Services**

Project ID: Star Lake Plant  
Sample ID: Compressor Building Waste Water  
Lab ID: 4079  
Sample Matrix: Water

Report Date: 07/11/98  
Date Sampled: 08/25/98  
Date Received: 08/27/98  
Date Extracted: 08/30/98  
Date Analyzed: 07/08/98

| Target Analyte         |       | Concentration (mg/L) |
|------------------------|-------|----------------------|
| Benzene                |       | <0.005               |
| Carbon Tetrachloride   |       | <0.005               |
| Chlorobenzene          |       | <0.005               |
| Chloroform             |       | <0.005               |
| 1,2 - Dichloroethane   | (DCA) | <0.005               |
| 1,1 - Dichloroethylene | (DCE) | <0.005               |
| Methyl Ethyl Ketone    | (MEK) | 0.221                |
| Tetrachloroethylene    | (PCE) | <0.005               |
| Trichloroethylene      | (TCE) | <0.005               |
| Vinyl Chloride         |       | <0.010               |

**Reference:** Method 1311, Toxicity Characteristic Leaching Procedure; Method 8240, Volatile Organics By GC/MS; Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Final Update I, July, 1992.

  
Review



**Extracted Organic Compounds**  
**EPA Method 8270**

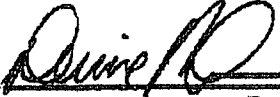
**PNM Gas Services**

Project ID: Star Lake Plant  
Sample ID: Compressor Building Waste Water  
Lab ID: 4079  
Sample Matrix: Water

Report Date: 07/11/98  
Date Sampled: 08/25/98  
Date Received: 09/27/98  
Date Extracted: 07/02/98  
Date Analyzed: 07/08/98

| Extracted Organic Compounds (mg/L) |        |
|------------------------------------|--------|
| o - Cresol                         | <0.010 |
| m,p - Cresol                       | 0.130  |
| 1,4 - Dichlorobenzene              | <0.002 |
| 2,4 - Dinitrotoluene               | <0.004 |
| Hexachlorobenzene                  | <0.002 |
| Hexachlorobutadiene                | <0.003 |
| Hexachloroethane                   | <0.003 |
| Nitrobenzene                       | <0.002 |
| Pentachlorophenol                  | <0.010 |
| Pyridine                           | <0.010 |
| 2,4,5 - Trichlorophenol            | <0.010 |
| 2,4,6 - Trichlorophenol            | <0.003 |

**Reference:** Method 1311, Toxicity Characteristic Leaching Procedure; Method 8270, Semivolatile Organics By GC/MS; Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Final Update I, July, 1992.

  
Review



## TCLP Metals Analysis

### PNM Gas Services

Project ID: Star Lake Plant      Date Reported: 07/12/96  
Sample ID: Compressor Building Waste Water      Date Sampled: 06/25/96  
Laboratory ID: 4079      Date Received: 06/27/96  
Sample Matrix: Water

| Parameter | Analytical Result (mg/L) | Regulatory Limit (mg/L) |
|-----------|--------------------------|-------------------------|
|-----------|--------------------------|-------------------------|

#### Trace Metals

|               |        |      |
|---------------|--------|------|
| Arsenic.....  | 0.067  | 5.00 |
| Barium.....   | 1.63   | 100  |
| Cadmium.....  | 0.026  | 1.00 |
| Chromium..... | 0.549  | 5.00 |
| Lead.....     | 0.760  | 5.00 |
| Mercury.....  | 0.011  | 0.20 |
| Selenium..... | 0.071  | 1.00 |
| Silver.....   | <0.050 | 5.00 |

Reference: Method 1311, Toxicity Characteristic Leaching Procedure; Method 7000 Series, Atomic Absorption Methods; Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Final Update I, July, 1992.

#### Comments:

  
Review

District I - (505) 393-6161  
P. O. Box 1980  
Hobbs, NM 88241-1980  
District II - (505) 748-1283  
811 S. First  
Artesia, NM 88210  
District III - (505) 334-6178  
1000 Rio Brazos Road  
Aztec, NM 87410  
District IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Form C-138  
Originated 8/8/95

Submit Original  
Plus 1 Copy  
to appropriate  
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 1. RCRA Exempt: <input checked="" type="checkbox"/> Non-Exempt: <input type="checkbox"/><br>Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                           | 4. Generator <u>P.N.M. GAS SERVICE</u><br>5. Originating Site <u>STAR LAKE COMPRESSOR STATION</u> |
| 2. Management Facility Destination <u>EVAPORATION POND</u><br><u>T-N-T CONSTRUCTION INC.</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6. Transporter <u>INLAND TRANS.</u>                                                               |
| 3. Address of Facility Operator <u>87029</u><br><u>HCR 74 - BOX 115 LINDRITH, N.M.</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 8. State <u>N.M.</u>                                                                              |
| 7. Location of Material (Street Address or ULSTR)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <u>UNIT N.W.-4 SEC. 34 T-20-N</u><br><u>R-6-W' MCKINLEY COUNTY.</u>                               |
| 9. Circle One:<br>A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.<br><input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved.<br><br>All transporters must certify the wastes delivered are only those consigned for transport. |                                                                                                   |

BRIEF DESCRIPTION OF MATERIAL: COMPRESSOR BUILDING WASTE WATER.  
WASH DOWN WATER

*Verbal approval given  
7-15-96 @ 245 pm*

APPROVAL CONDITION: Follow w/ original paperwork

Estimated Volume 2940 GAL. GAL. Known Volume (to be entered by the operator at the end of the haul) \_\_\_\_\_cy

SIGNATURE: [Signature] TITLE: PRESIDENT DATE: 7/15/96  
Waste Management Facility Authorized Agent  
TYPE OR PRINT NAME: TONY LEE SCHMITZ TELEPHONE NO. 505-774-6504

(This space for State Use)

APPROVED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_  
APPROVED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_



## TCLP Metals Analysis

### PNM Gas Services

|                |                                 |                |          |
|----------------|---------------------------------|----------------|----------|
| Project ID:    | Star Lake Plant                 | Date Reported: | 07/12/96 |
| Sample ID:     | Compressor Building Waste Water | Date Sampled:  | 08/25/96 |
| Laboratory ID: | 4079                            | Date Received: | 08/27/96 |
| Sample Matrix: | Water                           |                |          |

|           |               |      |
|-----------|---------------|------|
| Parameter | Concentration | Unit |
|-----------|---------------|------|

#### Trace Metals

|          |        |      |
|----------|--------|------|
| Arsenic  | 0.067  | 5.00 |
| Barium   | 1.63   | 100  |
| Cadmium  | 0.026  | 1.00 |
| Chromium | 0.549  | 5.00 |
| Lead     | 0.780  | 5.00 |
| Mercury  | 0.011  | 0.20 |
| Selenium | 0.071  | 1.00 |
| Silver   | <0.050 | 5.00 |

Reference: Method 1311, Toxicity Characteristic Leaching Procedure; Method 7000 Series, Atomic Absorption Methods; Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Final Update I, July, 1992.

#### Comments:

  
Review



# Volatile Organic Compounds

EPA Method 8240

## PNM Gas Services

Project ID: Star Lake Plant  
Sample ID: Compressor Building Waste Water  
Lab ID: 4079  
Sample Matrix: Water

Report Date: 07/11/98  
Date Sampled: 06/25/98  
Date Received: 06/27/98  
Date Extracted: 06/30/98  
Date Analyzed: 07/08/98

| Volatile Organic Compounds |       |        |
|----------------------------|-------|--------|
| Benzene                    |       | <0.005 |
| Carbon Tetrachloride       |       | <0.005 |
| Chlorobenzene              |       | <0.005 |
| Chloroform                 |       | <0.005 |
| 1,2 - Dichloroethane       | (DCA) | <0.005 |
| 1,1 - Dichloroethylene     | (DCE) | <0.005 |
| Methyl Ethyl Ketone        | (MEK) | 0.221  |
| Tetrachloroethylene        | (PCE) | <0.005 |
| Trichloroethylene          | (TCE) | <0.005 |
| Vinyl Chloride             |       | <0.010 |

### Reference:

Method 1311, Toxicity Characteristic Leaching Procedure; Method 8240, Volatile Organics By GC/MS; Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Final Update 1, July, 1992.

  
Review



# ANALYTAS

## Extracted Organic Compounds EPA Method 8270

### PNM Gas Services

Project ID: Star Lake Plant  
Sample ID: Compressor Building Waste Water  
Lab ID: 4079  
Sample Matrix: Water

Report Date: 07/11/98  
Date Sampled: 08/25/98  
Date Received: 06/27/98  
Date Extracted: 07/02/98  
Date Analyzed: 07/08/98

|                         |        |
|-------------------------|--------|
| o - Cresol              | <0.010 |
| m,p - Cresol            | 0.130  |
| 1,4 - Dichlorobenzene   | <0.002 |
| 2,4 - Dinitrotoluene    | <0.004 |
| Hexachlorobenzene       | <0.002 |
| Hexachlorobutadiene     | <0.003 |
| Hexachloroethane        | <0.003 |
| Nitrobenzene            | <0.002 |
| Pentachlorophenol       | <0.010 |
| Pyridine                | <0.010 |
| 2,4,5 - Trichlorophenol | <0.010 |
| 2,4,6 - Trichlorophenol | <0.003 |

Reference: Method 1311, Toxicity Characteristic Leaching Procedure; Method 8270, Semivolatile Organics By GC/MS; Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Final Update I, July, 1992.

  
Review

# Quality Control Report

## PNM Gas Services

Date Reported: 07/12/98

| Arsenic  | Spex 18  | 0.0055  | 0.0050  | 0.0045 - 0.0055   |
|----------|----------|---------|---------|-------------------|
| Barium   | Spex 18  | 2.07    | 2.00    | 1.80 - 2.20       |
| Cadmium  | Spex 18  | 0.545   | 0.800   | 0.450 - 0.550     |
| Chromium | ERA 9870 | 0.00270 | 0.00241 | 0.00188 - 0.00254 |
| Lead     | Spex 18  | 4.96    | 5.00    | 4.50 - 5.50       |
| Mercury  | ERA 9884 | 0.0048  | 0.0052  | 0.00388 - 0.00685 |
| Selenium | Spex 18  | 0.00501 | 0.0100  | 0.00350 - 0.0115  |
| Silver   | Spex 7   | 1.92    | 2.00    | 1.80 - 2.20       |

Reference: Method 1311, Toxicity Characteristic Leaching Procedure; Method 70 Absorption Methods; Test Methods for Evaluating Solid Wastes, SW-Environmental Protection Agency, Final Update I, July, 1992.

  
Review

-----  
**Fax Cover Sheet**  
-----

**From:** Schmitz Construction, Inc.

**Fax #:** 505-774-9116

**Date:** 7/15/96

**To:** OIL CON. DIV. (CRIS HOWES),

**Fax #:** 505-827-8177

6 pages were sent (including this cover page)

AAA \*\*\*\*\*

**T-n-T CONSTRUCTION, INC.**  
**Soil Remediation**  
**HCR 74, Box 445**  
**Lindrieth, New Mexico 87029**  
**(505) 774-6663**

**Certification of Waste Status**

Originating location: STAR LAKE Compressor Station  
Well name: Compressor Washdown Water  
Operator: PNM- GAS SERVICES  
Date: 7-15-96

Disposal location: **T-n-T Construction, Inc. Soil Remediation Site, State Highway 337, mile marker 22.**

"As a condition of acceptance for disposal, I hereby certify that this waste is an <sup>NP</sup> exempt waste as defined by the Resource Conservation Recovery Act (RCRA)."

Name: DENVER BEARDEN  
Signature: Denver Bearden  
Title: Administrator III  
Address: 603 W Elm Farmington, N.M. 87401  
Phone Number: 505-324-3763

| REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                   | XXXXXXXXXXXXXXXXXXXXXXXXXXXX |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/><br>Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/><br>(Submitting this form for oilfield exempt waste is optional)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 4. Name of Transporter<br>MOSS EXCAVATION         |                              |
| 2. Destination<br>T-N-T Construction, Inc. Land Farm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5. Generator<br>Meridian Oil Inc.                 |                              |
| 3. Address of Facility Operator<br>HCR 74 - Box 115 - Lindrieth, NM 87029                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 6. Name of Originating Site<br>Lindrieth Unit #68 |                              |
| 7. Originating Location of Material (Street Address or ULSTR)<br>UL-G / Sec 7 T 24 N R 3W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 8. State<br>N.M.                                  |                              |
| 9. Check One<br><input type="checkbox"/> A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.<br><input type="checkbox"/> B. All requests for approval to accept non-oilfield exempt wastes will be accompanied by a certification of waste status from the Generator and the New Mexico Environment Department or other appropriate government agency; two certificates per job.<br><input checked="" type="checkbox"/> C. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analyses to prove the material is non-hazardous and the Generator's certification of origin. No waste classified as hazardous by listing or testing will be approved.<br>All transporters must certify that the wastes delivered are only those consigned for transport. |                                                   |                              |
| Projected Date(s) for Transportation: 8/11/94<br>BRIEF DESCRIPTION OF THE MATERIAL:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                   |                              |

Dirt of unknown origin on location,  
Analyses attached.

RECEIVED  
NOV 10 1994  
OIL CON. DIV.  
DIST. 3

Estimated Volume: 17 yd<sup>3</sup> Known Volume (to be entered by the operator at the end of the haul): 17 yd<sup>3</sup>  
 I hereby certify that the information above is true and complete to the best of my knowledge and belief.  
 SIGNATURE: Darlene Schmitz TITLE: Sec. Tres DATE: 11/8/94  
 TYPE OR PRINT NAME: Darlene Schmitz TELEPHONE NO.: 505-774-6663

(This space for State Use)

APPROVED BY: Denny G. Fant TITLE: Geologist DATE: 11/14/94  
 APPROVED BY: C. E. Eubank TITLE: GEOLOGIST DATE: 11-15-94

CONDITIONS OF APPROVAL, IF ANY:

T-n-T Construction, Inc.

Soil Remediation

1000 1700A 110

Lindrieth, New Mexico 87029

505-774-6653

Certification of Waste Status

Originating location: Lindrieth unit #68 UL-G/Sec 7 T24 NR 2W

Well name: Same as above

Operator: Meridian Oil Inc.

Date: 11/1/84

Disposal location: T-n-T Construction, Inc. Soil remediation site, State Highway 537, mile marker 22.

"As a condition of acceptance for disposal, I hereby certify that this waste is oil field waste that has been certified non-hazardous by testing."

Name: Craig A. Beck

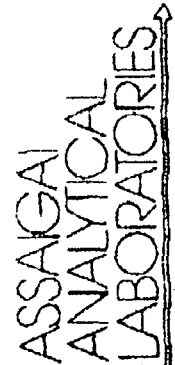
Signature: Craig A. Beck

Title: Assoc. Environmental Representative

Address: 20 1289, Farmington, New Mexico 87029-4389

Phone Number: (505) 836-2537

THESE ARE THE ONLY COPIES OF THIS CERTIFICATE OF WASTE STATUS THAT WILL BE MAINTAINED BY THE DISPOSING PARTY. THE DISPOSING PARTY SHALL MAINTAIN A COPY OF THIS CERTIFICATE OF WASTE STATUS FOR A PERIOD OF 10 YEARS FROM THE DATE OF DISPOSAL.



# Chain of Custody Record

ALBUQUERQUE, NEW MEXICO 87108  
 (505) 345-8864

3332 WEDGWOOD  
EL PASO, TEXAS 79825  
(915) 532-8500

MELOQUADES ALAMES  
6411 LOCAL UNO  
CIUDAD JUAREZ, CHIHUAHUA MEXICO 82220

Project Manager / Contact Kevin Meyers

Telephone No.

五

Sample no: 210705 (5/10/2016)

James H. Farnham

Contract / Purchase Order / Quote

| Sample Information |         | Date | Time | Received by: | Signature          | Printed | Company | Reason |
|--------------------|---------|------|------|--------------|--------------------|---------|---------|--------|
| 7408241305         | 8-24-94 | 1305 |      | Received by: | <i>[Signature]</i> |         |         |        |
| 802 GLASS          | ↓       |      |      | Signature    | <i>[Signature]</i> |         |         |        |
| 402 GLASS          | ↓       |      |      | Printed      |                    |         |         |        |
| 402 VOA            | ↓       |      |      | Company      | AAL                |         |         |        |
|                    |         |      |      | Reason       |                    |         |         |        |

After analysis, samples are to be:

☐ Disposed of (additional test)

☐ Stored (90 days max)

☐ Stored over 30 days (additional test)

☐ Returned to customer

Lab ID: 9408262-01B  
Sample ID: 9408241305

Collected: 08/24/94 13:05:00  
Matrix: SOIL

| TEST / METHOD                         | RESULT | UNITS | LIMIT | D_F | DATE ANAL | BATCH_ID  |
|---------------------------------------|--------|-------|-------|-----|-----------|-----------|
| TRPH/EPA 418.1<br>Total Petroleum HCs | 29,800 | mg/Kg | 5.0   | 200 | 08/29/94  | STRPH-195 |

Lab ID: 9408262-01C  
Sample ID: 9408241305

Collected: 08/24/94 13:05:00  
Matrix: SOIL

| TEST / METHOD        | RESULT    | UNITS          | LIMIT | D_F | DATE ANAL | BATCH_ID  |
|----------------------|-----------|----------------|-------|-----|-----------|-----------|
| MILEAGE              | N/A       | N/A            |       |     |           |           |
| pH/SW846 9045        | 6.2       | pH Unks        | 0.10  | 1.0 | 08/31/94  | sph-100   |
| REACTIVITY/SW846 7-3 | NON-REACT | mg/Kg of Waste | 500   | 1.0 | 09/01/94  | SREACT-43 |
| Sulfide              | NON-REACT | mg/Kg of Waste | 250   | 1.0 | 09/01/94  | SREACT-48 |
| Cyanide              | N/A       | N/A            |       |     |           |           |
| SAMPLING TIME        |           |                |       |     |           |           |

*Gloria A. Janello*  
for James A. Seely  
Operations Manager



## WORKORDER COMMENTS

DATE : 09/13/94  
WORKORDER: 9408262

### DEFINITIONS/DATA QUALIFIERS

The following are definitions, abbreviations, and data qualifiers which may have been utilized in your report:

- ND = Analyte "not detected" in analysis at the sample specific detection limit.
- D\_F = Sample "dilution factor"
- NT = Analyte "not tested" per client request.
- B = Analyte was also detected in laboratory method QC blank.
- E = Analyte concentration (result) is an estimated value or exceeds analysis calibration range.
- LIMIT = The minimum amount of the analyte that AAL can detect utilizing the specified analysis.

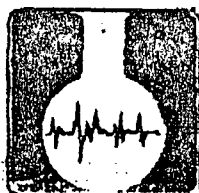
Please Note: Multiply the "Limit" value (AAL's Detection Limit) by Dilution Factor (D\_F) to obtain the sample specific Detection Limit.

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### REPORT COMMENTS

Results reflect TCLP metals analysis.

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# ASSAIGAI ANALYTICAL LABORATORIES

7300 Jefferson, N.E. • Albuquerque, New Mexico 87109 • (505) 346-8964 • FAX (505) 346-7259

3332 Wedgewood, E-5 • El Paso, Texas 79925

1910 N. Big Springs • Midland, Texas 79705

Report Generated:

September 13, 1994 13:04

## CERTIFICATE OF ANALYSIS RESULTS BY SAMPLE

SENT MERIDIAN OIL

TO: 3535 EAST 30TH STREET  
FARMINGTON, NM 87402

WORKORDER # : 9408262

WORK ID : T-N-T LAND FARM

CLIENT CODE : MER01

DATE RECEIVED : 08/26/94

ATTN: KEVIN MEYERS

Page: 1

Lab ID: 9408262-01A  
Sample ID: 9408241305

Collected: 08/24/94 13:05:00  
Matrix: SOIL

| TEST / METHOD                 | RESULT   | UNITS       | LIMIT   | D_F | DATE<br>ANAL | BATCH_ID          |
|-------------------------------|----------|-------------|---------|-----|--------------|-------------------|
| % SOLIDS(TCLP XT)EPA 160.3    | 100      | % (Percent) |         |     |              |                   |
| TCLP (FAA) DIG/1311/3005      | 08/31/94 | N/A         |         |     |              |                   |
| TCLP (GFAA)DIG/1311/3005      | 08/31/94 | N/A         |         |     |              |                   |
| TCLP EXTRACTION/TCLP 1311     | 08/29/94 | N/A         |         |     |              |                   |
| TCLP METALS/1311/SW846 AA     |          |             |         |     |              |                   |
| Arsenic, As                   | 0.008    | mg/L        | 0.0050  | 1.0 | 09/01/94     | WG152,WF198,WCV49 |
| Barium, Ba                    | 2.4      | mg/L        | 0.50    | 1.0 | 09/01/94     | WG152,WF198,WCV49 |
| Cadmium, Cd                   | ND       | mg/L        | 0.0030  | 1.0 | 09/01/94     | WG152,WF198,WCV49 |
| Chromium, Cr                  | ND       | mg/L        | 0.020   | 1.0 | 09/01/94     | WG152,WF198,WCV49 |
| Lead, Pb                      | ND       | mg/L        | 0.10    | 1.0 | 09/01/94     | WG152,WF198,WCV49 |
| Mercury, Hg                   | ND       | mg/L        | 0.00020 | 1.0 | 08/31/94     | WG152,WF198,WCV49 |
| Selenium, Se                  | ND       | mg/L        | 0.0050  | 1.0 | 09/01/94     | WG152,WF198,WCV49 |
| Silver, Ag                    | ND       | mg/L        | 0.010   | 1.0 | 09/01/94     | WG152,WF198,WCV49 |
| TCLP SVOA XT/1311/3520        | 09/01/94 | N/A         |         |     |              |                   |
| TCLP SVOA/METHOD 1311/8270    |          |             |         |     |              |                   |
| 2-Methylphenol / O-Cresol     | ND       | mg/L        | 0.0010  | 2.1 | 09/03/94     | TSVOA-085         |
| 3/4-Methylphenol / M/P-Cresol | ND       | mg/L        | 0.0020  | 2.1 | 09/03/94     | TSVOA-085         |
| Hexachloroethane              | ND       | mg/L        | 0.0010  | 2.1 | 09/03/94     | TSVOA-085         |
| Nitrobenzene                  | ND       | mg/L        | 0.0010  | 2.1 | 09/03/94     | TSVOA-085         |
| Hexachlorobutadiene           | ND       | mg/L        | 0.0010  | 2.1 | 09/03/94     | TSVOA-085         |
| 2,4,6-Trichlorophenol         | ND       | mg/L        | 0.0010  | 2.1 | 09/03/94     | TSVOA-085         |
| 2,4,5-Trichlorophenol         | ND       | mg/L        | 0.0010  | 2.1 | 09/03/94     | TSVOA-085         |
| 2,4-Dinitrotoluene            | ND       | mg/L        | 0.0010  | 2.1 | 09/03/94     | TSVOA-085         |
| Hexachlorobenzene             | ND       | mg/L        | 0.0010  | 2.1 | 09/03/94     | TSVOA-085         |
| Pentachlorophenol             | 6.2      | mg/L        | 0.0010  | 2.1 | 09/03/94     | TSVOA-085         |
| Pyridine                      | ND       | mg/L        | 0.0010  | 2.1 | 09/03/94     | TSVOA-085         |
| TCLP ZHR / TCLP 1311          | 08/31/94 | N/A         |         |     |              |                   |
| TCLP(CVAA)Hg XT/SW846 7471    | 08/31/94 | N/A         |         |     |              |                   |
| ZHE/VOA/METHOD 1311/8240      |          |             |         |     |              |                   |
| Vinyl Chloride                | ND       | mg/L        | 0.0050  | 5.0 | 09/03/94     | TVOA-122          |
| 1,1-Dichloroethene            | ND       | mg/L        | 0.0050  | 5.0 | 09/03/94     | TVOA-122          |
| Chloroform                    | ND       | mg/L        | 0.0050  | 5.0 | 09/03/94     | TVOA-122          |
| 1,2-Dichloroethane            | ND       | mg/L        | 0.0050  | 5.0 | 09/03/94     | TVOA-122          |
| 2-Butanone (MEK)              | ND       | mg/L        | 0.0050  | 5.0 | 09/03/94     | TVOA-122          |
| Carbon Tetrachloride          | ND       | mg/L        | 0.0050  | 5.0 | 09/03/94     | TVOA-122          |
| Trichloroethene               | ND       | mg/L        | 0.0050  | 5.0 | 09/03/94     | TVOA-122          |
| Benzene                       | ND       | mg/L        | 0.0010  | 5.0 | 09/03/94     | TVOA-122          |
| Tetrachloroethene             | ND       | mg/L        | 0.0050  | 5.0 | 09/03/94     | TVOA-122          |
| Chlorobenzene                 | ND       | mg/L        | 0.0010  | 5.0 | 09/03/94     | TVOA-122          |
| 1,4-Dichlorobenzene           | ND       | mg/L        | 0.0010  | 5.0 | 09/03/94     | TVOA-122          |



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

BRUCE KING  
GOVERNOR

February 26, 1991

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

CERTIFIED MAIL  
RETURN RECEIPT NO. P-327-278-092

Ms. Darlene Schmitz  
TnT Construction, Inc.  
Star Route  
Lindrith, New Mexico 87029

**RE: Disposal of Waste Water from #90-140-Mino  
Underground Storage Tank  
Remedial Action Site, Espanola**

Dear Ms. Schmitz:

We have received your letter of February 15, 1991, requesting permission to dispose of the above waste water at the OCD-approved TnT Disposal facility at Lindrith. The waste water includes drilling and development activities associated with ground water monitoring and up to 2000 gallons of water are expected to be disposed. Based on the information provided with your letter permission is hereby granted for TnT to receive and dispose of the above waste water.

If you have any questions regarding this letter, please call me at (505) 827-5812.

Sincerely,

David G. Boyer, Hydrogeologist  
Environmental Bureau Chief

DGB/sl

cc: Mr. Greg Lewis, Daniel Stephens & Associates, Albuquerque  
OCD Aztec Office